THE

BUFFALO

Medical and Surgical Journal.

EDITORS:

THOS. LOTHROP, M. D. A. R. DAVIDSON, M. D.

VOL. XXIV.

AUGUST, 1884, TO JULY, 1885.

BUFFALO:
MEDICAL JOURNAL ASSOCIATION.
1885.

THE

BUFFALO

Medical and Surgical Journal.

VOL. XXIV. AUGUST, 1884. No. 1.

Original Communications.

HÆMATURIA AS A SYMPTOM OF DISEASES OF THE GENITO-URINARY ORGANS.*

BY A. R. DAVIDSON, M. D.,

Professor of Medical Chemistry, Toxicology and Diseases of the Skin, Niagara University.

It is by no means a rare thing to find patients voiding bloody urine. If the blood is in small quantity, and especially if it comes from the kidney, the patient may not recognize it, and even a physician may easily overlook it; but when in sufficient quantity to give the urine its distinctive red color it never fails to cause great alarm to the patient and an immediate appeal for medical aid.

Although hæmaturia cannot be regarded as a distinctive disease, still its importance as a symptom, oftentimes, of the most formidable diseases of the urinary tract, and the greater importance of being able to recognize its origin and import, leads me to hope that a consideration of the subject may not be without interest to the members of the association. Those most familiar with urinalysis will be very willing to acknowledge that it is not always an easy thing to determine from what

*Read before the Buffalo Medical and Surgical Association.

point in that long and complicated organic apparatus, which commences in the malpighian body and terminates at the external meatus, the blood in question originates.

The term hæmaturia is commonly used to designate any condition in which blood is present in the urine. The name, however, should be restricted to those cases in which blood is present in its entirety, that is, including the red corpuscles. In many cases the absence of these is demonstrable by the microscope, when by the spectroscope and other means we show clearly the presence of the coloring matters of the blood, either in the form of hæmoglobin or hæmatin. The presence of the first is designated by by the term hæmoglobinuria, and the second by hæmatinuria. The distinction is important in regard to pathological significance. In hæmaturia a true hemorrhage has occurred in some part of the urinary tract. In hæmoglobinuria, or hæmatinuria, the inference from the absence of blood corpuscles is that a dissolution of them has taken place within the blood vessels and the coloring matter excreted by the kidney. This condition occurs especially with those diseases accompanied by a so-called dissolution of the blood, as scurvy, malignant intermittent fever, putrid typhus, hæmophilia, etc., and it may be observed after the transfusion of a considerable quantity of animal blood into the human organism. But this evening we will consider only true hæmaturia, or, rather, I will endeavor to recall to your minds those affections of the urinary apparatus with which hemorrhage is a frequent symptom, and show you how far the intelligent study of this symptom alone, may lead us in our diagnosis of the disease.

The blood may come from any part of the urinary apparatus, and we may conveniently divide it, according to its character, into two classes—profuse hemorrhage, from rupture of the larger vessels, and parenchymatous hemorrhage.

Profuse hemorrhage usually comes from the pelvis of the kidney, the urethra, or the bladder, rarely from the kidneys

themselves. The urine is colored red, or dark reddish yellow, and upon standing for some hours may deposit the entire blood, leaving the urine of a normal color. If the urine is ammoniacal there will be a solution of the blood-coloring matter. The reaction is usually neutral, or alkaline, and the specific gravity varying. Albumen is always present from the serum of the blood.

Parenchymatous hemorrhage usually comes from the kidney, and may come from the bladder and the entire urinary tract. The urine is red-brown, often coffee-colored. After standing for some time it deposits a slight sediment, but the supernatant liquid retains its high color, because the blood-coloring matters are partly in solution. The reaction is usually acid and the specific gravity lowered.

Profuse hemorrhage may be an accompaniment of the following conditions: In the urethra—polypoid growths, or vascular tumors, diseases of the prostate. In the bladder—varix, or hemorrhoids, calculus, and catarrhal ulceration of the neck, villous tumors, or papilloma. In the pelvis of the kidney—from cancer and renal calculi.

It, of course, also may accompany traumatic injuries, but it is rare that we look to the urine for a diagnosis in these cases, so we omit mention of them.

By the term "profuse hemorrhage" I do not mean you to understand that in all these cases mentioned there is necessarily a large amount of blood in the urine, but rather that the characteristics of the blood present point clearly to a bleeding from a vessel in contra-distinction to the oozing which takes place in parenchymatous hemorrhage. We are not always able to make this distinction hold, as, for instance, in bleeding from the prostate the blood may be regurgitated back into the bladder, and when voided present all the appearances of parenchymatous hemorrhage. The marked difference in the appearance of the urine, however, as before stated, caused the older practitioners to make the distinction between kidney and bladder hemorrhages

simply upon that, and the exceptions are so few that the division is a convenient one even now.

Having, then, a specimen of urine which falls into the class of "profuse hemorrhage," how are we to make our differential diagnosis? If the disease is anterior to the bladder it may usually be demonstrated by causing the patient to void his urine into two glasses. The first contains nearly all the blood, if its origin is in the urethra. The urine will contain blood corpuscles of normal size and no peculiar features. The sound and digital examination of the prostate by the rectum will settle our diagnosis.

If the blood proceeds from the bladder the diagnosis is not so easy. If it arises from bladder hemorrhoids the bleeding may be profuse. An instance occurred in the Hotel Dieu, Paris, in which the bleeding was so abundant as to prove fatal. The autopsy revealed the presence of several varices at the neck of the bladder, upon one of which was a large ulcer, from which the bleeding had evidently proceeded. The bladder was healthy in all other respects. The disease is most common in old age, but is sometimes met with in youth. The diagnosis is difficult and sometimes wholly impossible.

Calculus in the bladder is a common cause of hemorrhage, but rarely in sufficient quantity to require treatment. It usually comes on after some violent exercise. In these cases the well-known symptoms of stone are present, and an examination with the sound removes all doubt as to the cause.

The hæmaturia from catarrhal ulcerations, which occur in the neck of the bladder usually after gonorrhœa, exhibits itself toward the close of micturition, when the sphincter vesicæ begins to contract. The urine will be alkaline, and in the sediment we find, beside blood, pus corpuscles, crystals of ammonia, magnesium, phosphate and bladder epithelium. Villous tumors and papilloma rarely give rise to profuse hemorrhage, unless the cancer has existed for a long time and become ulcerated, or if by any cause there is produced strong muscular

contraction of the bladder, the blood vessels may be so violently compressed that the tension in the vessels of the villous tumor may be great enough to rupture them. In this case it is rare that we are able to find necrotic cancer tissue, and we may seek in vain for any indication in the urine to account for the hemorrhage. Villous cancer, however, usually involves the back and under wall of the bladder, so that the thickening, or tumor, may be felt by introducing the finger into the rectum. Papilloma of the bladder, on the contrary, is confined simply to the mucous membrane, and we are unable to find a thickening of the bladder wall or a tumor from rectal investigation. Hoffman states that papilloma frequently passes over into villous cancer. In the commencement of the disease there will be only a parenchymatous hemorrhage, and careful examination will always show branches of villous tissue with very thin epithelial covering.

Severe hemorrhages from the kidneys are very rare. When they do occur, from cancer, or ulcerations produced by renal calculus, the quantity of blood corpuscles present makes it very difficult to find the kidney epithelium, the recognition of which is essential to a diagnosis.

Parenchymatous hemorrhage may come from the kidney and its pelvis, or the bladder, or the entire urinary apparatus, and, as before stated, the urine is of a red-brown or brown-black color, because the blood mixes gradually, drop by drop, with the urine, the corpuscles remaining a long time with a relatively great amount of fluid. By this intimate mixing the urinary constituents have time to exert their destructive influence on the blood corpuscles and convert the red hæmoglobin to the brown methhæmoglobin. Such a hemorrhage we have in the majority of cases of acute or chronic parenchymatous nephritis; regularly with atheromatous degeneration of the kidney vessels, constantly with renal calculi, though no severe pyelitis may be present, and with cancer of the kidney.

Pathognomonic of renal hemorrhage, as parenchymatous hemorrhage, is, we must not forget, the exception with papilloma, as before stated, of the bladder, and with carcinoma villosum it is also present, and a slow bleeding from the prostate, in which the blood is regurgitated into the bladder, may give rise to all the appearances of this form of hemorrhage; and lastly, we may have a parenchymatous hemorrhage from the entire urinary apparatus. For example: If for some time a paralyzed bladder has been only partially emptied by micturition, and suddenly the entire amount is drawn off by a catheter, there arises, necessarily, a hyperæmia, *ex vacuo*, which is the more intense according as the muscles of the bladder have become hypertrophied, rendering complete contraction impossible. The kidney, also, is suddenly relieved from the secretory pressure necessary to overcome the weight of the residual urine in the bladder, and a parenchymatous hemorrhage ensues.

In the differential diagnosis of these hemorrhages microscopic analysis furnishes the greatest aid. If it is an accompaniment of acute or chronic parenchymatous nephritis, it is associated with casts and kidney epithelium, and is only one of a series of indications, the careful study of which will enable us, in most cases, to diagnose the conditions of the kidney in the formidable disease which, under the indefinite collective term of Bright's disease, embraces all the varieties of diseases of the renal parenchyma. Intensely interesting as the study of the indications by which we can acquaint ourselves with the condition of the kidney and form a reasonable prognosis, the limits of this paper forbid our entering into it.

With renal calculi, we find in the sediment, besides blood corpuscles of various sizes and kidney epithelium, jagged crystals of uric acid or calcium oxalate, and usually a more or less severe pyelitis is present. With cancer of the kidney, besides the parenchymatous hemorrhage, we may find carcinomatous tissues in the sediment, usually in the form of small masses,

aggregations of cells with thick walls or caudate and long spindle-shaped cells.

Cancer of the bladder is generally a so-called villous cancer, that is, it is made up of compound, branched villi, which are sometimes hollow and composed of fibrous stroma covered with a layer of variously shaped epithelial cells. It is a mistake to suppose that you will find this villous tissue unchanged, and presenting the beautiful forms represented in plates. Such can, however, be observed when, accidentally, a small fragment of the fresh growth has been detached and brought out in the orifice of a catheter, but necrotic, villous tissue may appear in various forms, which are sufficiently characteristic to enable us to diagnosticate such diseases of the bladder with certainty. The urine shows the following characteristics: It is red-brown or blackish in color. Undisturbed, there is present, in addition to the blood, pus corpuscles, which increase with the growth of the villous tumor. The excretion of normal matter is not altered. Albumen and blood-coloring matters are found in considerable quantity, and there is more albumen in the urine than is accounted for by the amount of pus and blood in the sediment. This condition depends upon the increased tension within the supplying vessels of the villous tissue.

One must be careful in such cases not to diagnose a kidney affection unless kidney cylinders are distinctly recognized, as the other indications are not unlike those of true albuminuria; and, indeed, it is easy for those unaccustomed to the appearances of them to mistake the single villous shreds for renal casts. Cancer of the kidney is usually much more difficult to diagnosticate. Sometimes when cancer cells are present in the urine we can determine the existence of the renal disease by negative signs, as all symptoms pointing to a disease of the bladder are wanting. In the early stages of the disease it is often impossible to discriminate between it and calculous pyelitis. In some cases there may be no hemorrhage, and the urine may be, from

first to last, healthy—due to the fact that the ureter of the affected side often becomes impervious at an early stage of the disease.

In locating the origin of the blood flow the blood coagula often give valuable information. If they are soft and of the color and consistence of freshly clotted blood, they must be of very recent formation. Clots which have been in the urinary apparatus for some time are harder and assume a dirty yellow color. If from the bladder, they are usually soft and irregular in form, while from the kidney they are apt to be long and rod-shaped. They are seldom present in parenchymatous hemorrhage, but the so-called blood cylinders and the hemorrhagically-tinged kidney epithelium are characteristics almost always present if it proceeds from the kidney. Blood casts consist of coagulated fibrin with blood corpuscles entangled.

There are very exceptional cases in which, even after a careful examination of the fluid from the bladder, we will be unable to entirely satisfy ourselves as to the source of the blood. In such cases we may remove all doubt by collecting the urine as it flows from the ureters. Sir Henry Thompson was, I think, the first to practice and recommend a mode by which this is easily accomplished, as follows: A soft rubber catheter of medium size is passed into the bladder, the patient standing; all of the urine is drawn off and the viscus repeatedly washed out by small injections of warm water. The urine is then permitted to pass, as it will do guttatim, into a test tube or other small vessel, for purposes of examination. The bladder ceases for a time to be a reservoir; it does not expand, but is contracted around the catheter, and the urine percolates from the ureters direct. A specimen can thus be obtained free from all admixture with products of the bladder or urethra, and will often furnish the only data previously wanting to accomplish an exact diagnosis.

Clinical Reports.

Membranous and Diphtheritic Conjunctivitis.

By A. A. Hubbell, M. D.,

Professor of Diseases of the Eye, Ear and Throat, in the Medical Department of Niagara University.

Case 1. Mr. C. H., aged 22, applied for treatment at the Good Samaritan Eye and Ear Infirmary in April, 1883, with the complaint that "something was in his right eye." His general appearance was anæmic, and he was debilitated and suffering from a chronic cough, the nature of which I did not investigate. His left eye was healthy. The right eye, which, he said, had "something in it that had been there three or four days," presented the external appearance of a simple conjunctivitis of a moderately severe type. There was muco-purulent discharge, with lachrymation and photophobia. The eyelids were somewhat swelled, and the ocular conjunctiva was reddened. On eversion, the palpebral conjunctiva of the lower lid was red and "papillated," and was secreting muco-pus. That of the upper lid was also red, and the papillæ at the retro-tarsal were enlarged, and over the portion covering the tarsal cartilage was a thin, pellucid, membraniform substance. While everting the lid this became slightly loosened and corrugated near the external canthus, and I took a forceps and gently removed it entire, leaving the conjunctiva with a more reddened appearance and bleeding slightly at two or three points. The pseudo-membrane was almost transparent, thin, and in size was about that of the tarsal cartilage, extending from the outer to the inner extremities and from the margin of the lid to near the upper retro-tarsal fold.

The eye was dressed with a compress moistened with a solution of boracic acid of the strength of ten grains to an ounce of water, an instillation of the same having also been made in the eye. The instillations were to be repeated every two hours, and the compress was to be kept constantly applied and wet with the solution.

The patient returned on the next day with all the symptoms abated. The pseudo-membrane had re-formed, however, but only over about one-half the inner surface of the tarsal portion of the upper lid toward the inner canthus. I again removed it with the forceps, easily, leaving one bleeding point, and the conjunctiva beneath reddened as before. The exudate was not as thick as before, and was less perfect in formation, although distinctly membranous. The treatment previously pursued was continued.

On the following day, the third, of treatment, the membranous formation could not be seen, and all the symptoms were much improved. The compresses, wet with the solution, were continued, and the instillations of the same were directed to be made every four hours.

In eight days after beginning treatment the patient was discharged, with the eye cured.

Case 2. J. W., aged 31, clerk in a grocery, presented himself at my office June 9, 1884, with an affection of his right eye, which began two days before. On examination, I found the eye much reddened from deep scleral injection, as well as from some injection of the vessels of the ocular conjunctiva. The lids were normal in appearance, with the exception of some redness of their inner surfaces. There was no muco-purulent discharge, but there was much lachrymation, and photophobia was intense. On the cornea, near the centre of its anterior surface, was an ulcer, circular in shape, somewhat excavated, and about two millimetres in diameter. The pupil was contracted, and but slightly responsive to light. The iris, however, was not discolored or otherwise abnormal in appearance. The eyeball was tender and the patient suffered some ciliary pain. The general appearance of the patient was healthy, and no disease could be discovered, besides the corneal ulcer of the right eye, except a slight gonorrhœa, which had been in progress a few days. The left eye was healthy.

I directed the eye to be carefully bandaged, and gave a solution of atropia, two grains to an ounce of water, to be instilled into the eye every four hours.

June 11th. The patient returned. The subjective symptoms were about the same as at the previous visit, but the objective symptoms were much changed and greatly out of proportion to the subjective ones. The discharge, which previously was lachrymal alone, was now muco-purulent, also, but only in a moderate degree. The lids were red and swelled, but not painful. The eyeball was of a deeper red color than before, and the ocular conjunctiva was considerably raised around the margin of the cornea. The ulcer at the central part of the cornea had enlarged in diameter a little, and added to this was another ulcer, at the lower edge of the cornea, about one millimetre in width, and extending along its margin for a distance of nearly one centimetre. The cornea was also considerably hazy, especially in its lower half. The iris had not responded to the action of the atropia, the pupil being yet contracted. On eversion of the upper lid, its inner surface was intensely red, and the papillæ were much enlarged, and the conjunctiva, particularly of the upper portion of the eyeball, was chemotic. The inner surface of the lower lid and the contiguous conjunctival covering of the eyeball were thickened, the thickening increasing toward the lower retro-tarsal fold, where it was greatest. The appearance was precisely like moistened chamois leather, yellowish-gray in color, and apparently non-secreting, with the grooved markings on the inner surface of the lower lid, usually seen when the conjunctival papillæ are enlarged, quite indistinct. In other words, the conjunctiva of the eyeball below the lower margin of the cornea and that of the lower lid and corresponding retro-tarsal fold looked as if it had been deeply seared with hot metal. I was greatly surprised to find the eye in this condition, and my prognosis was not very cheering.

As to treatment, I determined to use antiseptic remedies. Among those which can be applied to the eye, I regard boracic

acid as the best, by far. I therefore prescribed this for my patient, of the strength of ten grains to an ounce of water. I ordered a few drops to be instilled into the lower conjunctival sac every half hour, and to keep linen, folded two or three times, thoroughly wet with the solution and constantly applied over the lids. Strict cleanliness was also enjoined.

June 12th, 8.00 A. M. The eye is about the same. There is very little pain, and the muco-purulent discharge is a little more in quantity. The lower lid, on its inner surface, and the lower part of the eyeball, present the same thickened, soggy, ash-gray or yellowish-gray appearance. The condition of the cornea and its ulcers is unchanged. The boracic acid treatment is to be continued.

Patient was again seen at 7.00 P. M. The conjunctiva is less thickened and discolored near the edge of the lower lid and near the lower margin of the cornea. Other symptoms are about the same. The treatment is not changed. A slight conjunctivitis has begun in the left eye, for which I prescribe the same solution.

June 13th, 8.00 A. M. All the symptoms are better. The lids are less swelled, the corneal ulcers are healing, photophobia and lachrymation are diminished, no pain. The exudation is disappearing by a sort of breaking down or softening process, with an increased secretion of pus. The parts now covered by it are at the retro-tarsal fold and toward the inner canthus. Where it has disappeared, the conjunctiva seems almost destroyed. The left eye is better. No change is made in the treatment. Same day, at 7.00 P. M., the patient is still better in every respect.

June 14th. Patient was seen twice. The chemosis has subsided, the corneal ulcers are nearly healed, the lids are not swelled, and the exudation has entirely disappeared, apparently by softening and suppuration. At the lower retro-tarsal fold the conjunctiva is entirely destroyed, the mucous surfaces are granulating, and adhesions are taking place between the oppos-

ing surfaces of the lower lid and eyeball. This granulating process is confined to and near the retro-tarsal fold. There is considerable discharge of pus from the eye. The boracic acid solution is continued, but not instilled as frequently.

From this date the eye rapidly recovered. At the end of the next twenty-four hours the corneal ulcers were healed, the discharge was much diminished, and the lower conjunctiva was appearing more normal, except where entirely destroyed near and at the retro-tarsal fold. The patient was discharged June 19th, ten days after beginning treatment, with all diseased conditions removed, excepting obliteration of the lower conjunctival sac or fold, and a corresponding adhesion of the lid to the eyeball. The adhesion, however, was not sufficient to materially obstruct the movements of the eye and lids, the inner surface of the lower lid being free for one-fourth to one-third of an inch from the margin.

Remarks.—I present these two cases to my readers because of the infrequency of these forms of conjunctival inflammation, and because of the apparently remarkable effects of the boracic acid treatment.

The membranous formation, illustrated by the first case, may supervene upon an ordinary, or more generally, a purulent conjunctivitis, the attending secretion becoming to a degree plastic, and assuming an appearance varying from mere shreds or patches to a complete covering of the mucous membrane. It appears to be incidental in conjunctivitis to certain ill-defined, local and general conditions of the patient, being seen more frequently in strumous and anæmic children and adults.

The truly diphtheritic conjunctivitis, as shown in the second case, is more than a mere filmy, flaky or shreddy exudation upon the surface of the mucous membrane. It is a thorough, and often deep, infiltration of plastic matter into the conjunctival and contiguous tissues, and involves their integrity in proportion to its amount and extent. It is not, however, a diphtheria affecting the eye in the specific sense in which diphtheria is

usually understood; for, excepting when arising as a mere extension of the diphtheritic process in the throat or nose, it has nothing essentially specific, either in its general character or ætiology. It is simply an exudative inflammation of the conjunctiva, having the local, but not the general, expression of diphtheria, whence its name.

It is proper, furthermore, to distinguish membranous from diphtheritic conjunctivitis, as their characteristics, symptoms and complications are widely different, as seen by the above cases. The one is more like a collected secretion, while the other is an infiltration. The one is confined to the surface, and is not usually dangerous, while the other extends more or less deeply, compresses the blood vessels and lymphatics, and by the arrest of the supply of nutrition to the cornea and other structures, endangers their vitality.

The causes of the exudative forms of conjunctivitis are those of the catarrhal or purulent varieties. In the first case, above noted, the membranous formation was incidental, apparently, to an ordinary conjunctivitis; in the second, or the diphtheritic case, the gonorrhœal virus, it would seem, may have been a causative element. Whatever the cause of these forms of inflammation may be, it usually acts upon both eyes. In each of my cases, however, only one eye was effected, although in the second case the second eye began to become inflamed, but the disease was soon aborted, as I believe, by the boracic acid treatment applied to it.

The course and results of diphtheritic conjunctivitis are often very destructive, particularly to the cornea, and at one time in my case I feared that this structure would certainly become necrosed and end in perforation and loss of sight. The pain, which is genrally very severe, was not as great as would be expected with the two corneal ulcers, the amount of swelling of the lids and the chemosis which existed.

The treatment in this class of cases, which usually consists of cold or warm applications, quinine and carbolic acid

lotions, astringents, atropine, etc., does not always yield the most happy results. Boracic acid has been recommended, but it seems to me in too weak solutions.

For several years I have used this drug as an antiseptic in the treatment of diseases and wounds of the eye and ear with a great deal of satisfaction; but I find it of much greater benefit when employed in substance in impalpable powder, or at least in a saturated solution. As an antiseptic to the eye, especially, it has the advantage of not being irritating to its mucous membranes like carbolic acid, bichloride of mercury, etc. In cataract and other operations upon the eye, I constantly employ it, and, as I believe, advantageously.

In using it in the above cases, in the second particularly, its efficacy was most apparent. In both cases the disease was promptly arrested and an excellent recovery took place. In the diphtheritic case, which seemed to be growing worse rapidly, the disease was stayed at once on beginning its application, the infiltration and exudation ceased, the swelling of the lids and conjunctiva began to lessen within twenty-four hours, the corneal ulcers and haziness did not extend, but soon began to improve, the pain was less severe, and, indeed, the rapid recovery which followed was remarkable. Furthermore, the same treatment arrested a commencing conjunctivitis in the second case.

Society Reports.

Buffalo Medical and Surgical Association.

Adjourned Meeting, July 15th, 1884.

Dr. F. W. Bartlett, President, in the Chair.

The minutes of the last meeting were read and approved.

Dr. Roswell Park was proposed and elected a member of the association.

Dr. Irving M. Snow applied for membership.

Dr. John H. Pryor read a very interesting paper on "The Status of the Midwife in Buffalo," in which he took the ground that she is utterly incapacitated for the practice of obstetrics and should be abolished altogether.

Discussion—Dr. Rochester had seen a great many atrocities committed by midwives. They keep patients in the same unclean clothes for a week and do not know the use of water. They go from one patient to another, carrying diseases of various kinds. This condition of things is much worse here than in Europe, where a certain amount of education is required. Some women cannot be convinced that a midwife is not better than a man, and she is much cheaper. There should be some provision for the attendance of the poor by physicians at a moderate compensation; for instance, by dispensary service.

Dr. Coakley would add to some of the abuses practiced by midwives that of the use of alcohol in almost every case, without regard to the patient. He remembered a woman in another city who had the largest obstetrical practice in the city. She received $10 per case. She had attained to considerable dexterity in the treatment in some of the concomitant affections, such as the prevention of mammary abscess by manipulation and inunction.

Dr. Hartwig thought it as much a political as a medical question, the disposition of the midwife. If a patient desires aid, let her seek it where she will. This is a free country. In Germany they are also, at this time, discussing this matter, although there they are educated to a very high degree. They are especially taught the diagnosis of positions, and to know when to call in the doctor. The foreigners in America know very well the difference between the educated midwife of Germany and the self-made one of America. The real danger is in their freedom, their being responsible to no one. He mentioned one midwife who has had 1,000 successive successful cases, among which were fifty footling cases, one placenta prævia, fifty placentas to

remove by hand, and fifty cases of cross-presentation, where she had to turn. Only three times did she call a doctor to apply forceps. No mother nor child died during confinement. This he considers true. He thinks there is a place for the midwife in this country. She washes the child, makes soup, etc., which doctors cannot do. Parturition is a physiological process, and the midwife is the one to oversee it.

Dr. Weil stated that physicians already charge sufficiently small prices, the old ones, especially, so their services are within the reach of the poor. He mentioned instances.

Dr. Ring thought every woman entitled to treatment from a physician, because she is a woman and a mother. We owe it to her to abolish the midwife. Fees should be lowered to suit the conditions of patients.

Dr. Stockton formerly held the same bad opinion of midwives as the essayist, but he has changed his mind. He also knows of a midwife who has had 1,000 cases without a death, and has heard other physicians speak of similar cases. He thinks obstetrics should be the work of the midwife.

Dr. Hopkins was amazed to learn that the doctors take charge of but one-third of the births of this city. He could scarcely believe that the average midwife attended a thousand cases without death of a mother. He believed no physician present had had such experience. He thought the question of disposing of the midwife one of great importance, and that the society should could continue to study the matter, as one evening's discussion would not be sufficient. We might address a memorial to the State Society relative to this subject, and learn if in other parts of New York the midwives had two-thirds of the obstetrical cases.

Dr. Van Peyma has had much to do with midwives in his practice at East Buffalo. Although the paper showed the necessity for reform, he thought it one-sided. He himself had great respect for the midwives with foreign diplomas. In his own family he would certainly prefer a midwife to a district

physician. He thinks the statistics given the doctors by midwives not at all reliable. They call in a doctor in their bad cases, and he signs the death certificates; hence, no deaths occur in their practice. As to the case referred to by Dr. Pryor, where a midwife was washing out the vaginas of nine patients (one having puerperal fever) with the same syringe, he considered her one of the best midwives at East Buffalo.

Dr. Cronyn considered the midwife very useful. He has been brought much into contact with them. Like the essayist he had also noticed that they were all widows. They probably had followed this practice because of their own experience. He knew of one woman who had attended 5,000 cases of labor in twenty-five years. She is very ignorant. The following dialogue once took place between them: "Where did you learn the trade?" "I have read six books." "Who wrote them?" "My husband." Midwives should be admitted to lectures in this branch of medicine at our colleges. He has found many of them cleanly and many far from that. Some are acquainted with antiseptics.

Dr. Mann thought it would be much better to do away with the midwife and substitute the physician, but it was not practicable. Since it seems we must have the midwife, we must endeavor to make her good. It is the duty of the profession to educate her.

Dr. Bartlett mentioned several cases of maltreatment of patients by midwives and thought Dr. Hartwig's statistics wholly untrustworthy. He has heard of a number of physicians who charge less than the ordinary fee for obstetrical attendance in order to increase their practice. Some women prefer midwives, he thinks, because they are afraid the doctors will employ instruments in their hurry to get through. He thinks the midwife uses too much (and too ignorantly) ergot.

Dr. Pryor, in closing the discussion, said he had, in his paper, spoken of the one hundred midwives of this city collectively. He described the average midwife. The various speakers who had

extolled this creature did so merely from their one-sided experience with the single ones with whom they had been brought in contact. He would not be satisfied unless the society acted upon the suggestions of his essay. If Dr. Van Peyma considered the example he mentioned one of the best midwives at East Buffalo, we had a good criterion from which to form an opinion of the rest.

On a motion being carried to appoint a committee to consider this matter and report subsequently, the Chair named Drs. Hopkins, Ring, Hartwig, Pryor and Van Peyma to serve as such.

Prevailing Diseases—Dr. Hartwig reported measles and dysentery. Dr. Stockton reported whooping-cough. Dr. Van Peyma reported measles. Dr. Cronyn reported scarlet fever. Dr. Bartlett had noticed a marked increase in whooping-cough.

Reports of Committees—Dr. Coakley, chairman of the committee appointed to determine upon the plan of dividing the society into sections, stated that no formal meeting had been held, but that it had been agreed by those who favored this division to meet at the office of the President at an early day for organization.

Miscellaneous Business—A resolution was proposed to the effect that the BUFFALO MEDICAL AND SURGICAL JOURNAL be requested to publish the proceedings of this association regularly, and that the Secretary be required to transmit to the editors his record of each meeting for their columns.

Dr. Van Peyma, one of the Editors, remarked that he had failed to notice that the proceedings had not been regularly printed in the JOURNAL and that hereafter they should appear.

Dr. Hopkins thought the thanks of the editors due the society for calling their attention to the fact that the Secretary's report had not appeared in their columns for a long time.

The resolution was passed.

A letter of resignation from Dr. W. S. Tremaine was read.

A motion to lay the letter upon the table was carried, and the secretary was instructed to write the gentleman a note, calling his attention to Art. ii, Sec. 2, of the Constitution and By-Laws.

The meeting then adjourned.

FREDERICK PETERSON, M. D., *Secretary.*

Selections.

THE TREATMENT OF CHANCROID AND SYPHILIS.

If any constitutional treatment is demanded in chancroid, it is such as is indicated by the general condition of the patient. Chancroid requires local treatment, but as syphilis is a constitutional affection, its treatment is constitutional or general. Local treatment is required for certain manifestations of syphilis, but the treatment, *par excellence*, is constitutional.

Speaking first of the treatment of chancroid, we may recognize three plans which have been adopted:

First, that form of treatment which aims to abolish the whole thing at once, that is, by excision. There are certain maladies in which, by this plan, we can get rid of the disease entirely, as in the case of certain tumors. So a local disease, which has begun in one or more spots, should theoretically be removable by cutting away the diseased tissue. This plan has, however, been tried and found wanting. The great objection to it is that the wound almost inevitably becomes inoculated by the chancroidal matter, and that the resulting sore is larger than the first one was, thus rendering the ultimate condition of the patient worse instead of better.

The second form of treatment, and that which I advocate, is one which aims not to remove the disease at once, but to favorably modify its future progress. This is the treatment by cauterization. By destroying the surface of the chancroidal

ulcer we remove its virulent qualities and leave a healthy granulating sore. The caustic application removes the tendency to spread, and converts the ulcer into a healthy granulating surface. In speaking of this tendency to spread, I refer to one of the most prominent features of chancroid, its auto-inoculability, in which it differs from the initial lesion of syphilis. Chancroid is auto-inoculable indefinitely, and I believe that cauterization very much diminishes, if it does not destroy, this property, although the pus from the chancroid is still contagious. It seems to lose, after cauterization, to a great extent, that quality which causes it to spread to other parts on the same person. In the choice of a caustic, my preference is for fuming nitric acid, applied by means of a piece of soft wood, such as the end of a match-stick. Another plan is to apply the acid by means of a glass brush, but I do not think this as desirable. Every cranny should be cauterized. Any part that escapes retains its quality of furnishing auto-inoculable pus, and the whole surface may return to its former condition; therefore, cauterization must be thorough if it is practiced at all. When the slough, produced by the caustic, separates, the surface soon granulates and heals, but the pus is contagious to the last. If the fear of pain deter the patient from submitting to cauterization, general anæsthesia may be properly employed, or the surgeon may first make an application of carbolic acid, which produces local anæsthesia, and apply the nitric acid afterwards. It may be necessary to repeat the operation.

There are other modes of effecting cauterization. One is the use of the carbo-sulphuric paste, recommended by French surgeons. This forms a crust, which I think is a disadvantage, as concealing the parts beneath. The solution of acid nitrate of mercury may be used, but if applied over an extensive surface it may cause salivation. It is not as well adapted to the purpose as nitric acid. The actual cautery also has strong advocates; it may be employed either with the simple hot iron, or with the Paquelin's or the galvanic cautery. These modes of cauterization are

effective in cases of serpiginous chancroid—in the latter I think the hot iron the best application that can be made. The material used by many practitioners a few years ago, the nitrate of silver, is inefficient, and, in my judgment, has nothing to recommend it. Then for the after-dressing, after cauterization has been employed, we can use plain water, or lime water, or black-wash, or a solution of salicylic acid, or what is known as the "nitric acid wash" (nitric acid ƒ℥j; water Oj), which is much used as a dressing in New York. When the chancroid is on a mucous surface, as in the female organs, or in any situation in which it is kept moist, a simple dry dressing of absorbent cotton or dry lint may be used; but where the chancroid is exposed, dry dressings are apt to become adherent, and wet applications are better. The dressing above all others which I think deserves attention is iodoform. It is a comparatively recent remedy in these cases, and I think that it is the best application that can be made after thorough cauterization has been effected. It can be used in various ways, by simply dusting the finely-powdered drug over the surface, or as a wet dressing in the form of an alcoholic solution with glycerine, viz.: Iodoform ℥ss; alcohol ƒ℥ij; glycerine ƒ℥vj. Or it may be used in the form of an ointment, xv to xxx grs. to the ounce, or as an etherial solution which evaporates, leaving a thin film of iodoform over the surface. An old remedy, which formerly had great reputation in these cases, was aromatic wine, but I do not think it is as efficient as iodoform. Another re...edy, which is quite a novel one, is resorcin, an article of the phenol series. Great advantage has been claimed for it. Pyrogallic acid has also been used, as has the subnitrate of bismuth and various other dry powders. In the female, dressings, of course, must be applied with the aid of the speculum.

In chancroids at the meatus, I commonly use a solution of nitrate of silver (xxx grs. to ƒ℥j), since the contraction after the use of nitric acid might be objectionable in this situation. At the frænum some special precautions may be required. Deep

cauterization here may be followed by bleeding, and it has been proposed to prevent this by the previous application of ligatures, tying the frænum above and below the seat of disease, or by employing the actual cautery. For chancroids beneath the prepuce, when this can be retracted, the best plan is to cauterize the sores and dress them in the ordinary way, either replacing the prepuce afterwards, or allowing it to stay retracted, as may be thought most convenient. If, however, the prepuce cannot be retracted, then the surgeon may inject a strong solution of nitrate of silver, or, which I prefer when it can be done, may pack the space between the prepuce and glans penis with lint saturated with a solution of nitrate of silver (gr. xx to $\mathfrak{f}\,\mathfrak{z}$j). Whenever it is necessary to circumcise the patient, of course the wound should be cauterized, as it will otherwise become inoculated and itself converted into a large chancroid. As for urethral chancroids, which are very rare, cauterization cannot be employed, as increasing the risk of stricture; absorbent cotton may be used as a dressing, taking care to have a thread attached by which the dressing may be withdrawn. About the rectum and anus, chancroids may be treated by cauterization, with the subsequent use of emollient enemata and opium suppositories. For the phagedænic chancroid, constitutional treatment is desirable, as in all other cases of phagedæna. Opium—one grain at night and one grain in the morning—is, I think, more beneficial than any other single remedy. In some cases it may be of advantage to remove the surface of a phagedænic or serpiginous chancroid by scraping with a scoop and then using as a caustic, bromine, permanganate of potassium, or caustic potassa; but I think that the hot iron is the best local remedy in these cases. Syphilization has been used for chancroid, but it is of no value.

In regard to the principal complication of chancroid, the bubo, it may be of two kinds, the simple or inflammatory bubo, which is nothing but an adenitis, or the true chancroidal or virulent bubo. I believe it to be impossible, when a bubo first makes its appearance, for the surgeon to say of which variety it

is. Of late years I have seen many more examples of the simple than of the virulent bubo. Whether or not this is because the disease, like syphilis, is gradually becoming a milder affection than it was formerly, I cannot say.

In regard to the treatment of bubo, the surgeon should enforce rest in bed, if possible. Then counter-irritation should be employed very thoroughly. The best way is that suggested by Mr. Furneaux Jordan, of Birmingham, by applying the counter-irritant to the "next vascular area." The theory is that by irritating an adjacent part, the blood is caused to flow away from that originally affected. Counter-irritation is best effected by applying the tincture of iodine in the form of a broad horse-shoe around the inflamed gland, every day or every other day, so as to keep the part on the verge of vesication. The skin should, if possible not be broken, but if it is so, some soothing ointment must be applied, and the use of iodine suspended for a few days. Over the bubo itself, the dressing which I have found most satisfactory consists of equal parts of belladanna and mercurial ointments; it is a simple resolvent and anodyne application, and is agreeble to the patient. I have also used an ointment of iodoform over the part, but do not think it as efficient as the belladonna and mercury; nor do I think the application of blisters as satisfactory as the use of iodine. Pressure is another remedy which may be properly employed when the bubo is not painful, but which is ill-adapted to the acute inflammatory stage. If it is to be employed, pressure may be effected by applying a shot-bag over the bubo while the patient is in bed; or by fastening a soft sponge over the part with a spica bandage applied with the thigh flexed on the trunk. If the bubo suppurates, of course it should be opened. Various plans have been suggested, but I do not think there is anything as efficient as a moderately free incision; and the direction in which this is made is a matter of considerable importance. I find that practitioners generally open buboes in the line of Poupart's ligament, but I think that an incision in the long axis of the patient's

body is the best, supplemented, if necessary, by small transverse incisions on one or both sides. If the lips of the wound are kept apart, so as to allow the pus to flow out readily, the process of healing is much more rapid. Multiple punctures have been employed in opening buboes, and the introduction of a a seton has also been suggested; in case phagedæna attacks the bubo, the use of the continuous hot bath has been proposed. My experience is here, too, in favor of the use of opium, locally and internally, and, if cauterization is necessary, the application of the hot iron. I think that there is an advantage, as regards the bubo, in a thorough cauterization of the original chancroid at the beginning. Bumstead and Taylor recommend that cauterization should be employed if it can be done in the first ten days; but if it is desirable in the first ten days, it seems to me to be proper at any period. These gentlemen believe that by early cauterization the patient will escape virulent bubo, and that even if an inflammatory bubo exists, its course will be favorably modified. I am aware that a directly contrary opinion is held by some surgeons, who believe that the risk of bubo is increased by cauterization, but, as far as my own experience goes, it confirms the teaching of Bumstead and Taylor.

If the surgeon is satisfied that he is dealing with a chancroidal or virulent bubo, simple incision is not sufficient. Here suppuration occurs first in the periglandular areolar tissue, and it is of great advantage to enucleate the infiltrated glands before they become disintegrated and inoculate the surrounding tissues with chancroidal matter. If the case is not seen until the whole wound has become inoculated, then I would slit up all sinuses, remove the thinned, overhanging skin, and cauterize the whole surface with nitric acid, the patient being under the influence of ether.

The third plan of treatment, which is the fashionable treatment just now, is the use of simple dressings such as I have advised for the after-treatment, without employing caustics. There is no doubt that healing will, in most of the mild, super-

ficial chancroids met with at the present day, ultimately take place without cauterization, but I think the cure will be more certain, more rapid, and more likely to be free from complication, if the chancroid be cauterized in the way that I have recommended.

TREATMENT OF SYPHILIS.

Syphilis is a constitutional affection and demands constitutional treatment. The principal remedies are mercury and iodide of potassium. These have been given for many years, and yet it has never been satisfactorily determined in what way they produce their effects. Probably it is the safest to say they act by eliminating the syphilitic poison and producing absorption of the gummatous and inflammatory deposits. No doubt, according to modern theories, they might be supposed to act by destroying syphilitic germs, but that suggestion opens questions in transcendental pathology into which this is not the time to enter.

For the convenience of considering the treatment of syphilis, we may divide its course into the primary, secondary and tertiary stages.

The lesions of the primary stage are the initial lesion (or chancre) and the bubo which accompanies it. Now, in regard to the treatment of primary syphilis, I believe that the surgeon will do well to put his patient under mercurial treatment, provided that he is sure of his diagnosis. This view is opposed, however, by some authorities, for whom I have great respect. My practice is to give mercury, and the best form in which it can be given, in the primary stage, is the green iodide of protiodide. I have been in the habit of prescribing this preparation in pills with opium alone, or made up with a confection of opium as an excipient; it has the advantage that it can be used a long while without causing salivation, and it is, moreover, efficient. I think that this is the safest mode of treating syphilis in the primary stage, but no patient should be placed on a mercurial course unless the surgeon is well satisfied that syphilis is actually present.

In regard to the local treatment of primary syphilis, the principal point is cleanliness; but local treatment is not of much value. Iodoform may be used as a dressing for the chancre, as it may for the ulcerative lesions met with in the later stages of syphilis. Cauterization is of no service. I do not believe that secondary symptoms were ever prevented by cauterizing a chancre.

There is another form of treatment which has some evidence in its favor, and that is the excision of the chancre.

Until within a few years the view of surgeons was that a chancre should not be excised except under special circumstances, as when occurring on an elongated prepuce, but within recent years the excision treatment has been revived, particularly in Germany, and in this country it has been advocated by Dr. White and others. To those who, like myself, take the view that syphilis is a constitutional disease from the beginning, and that the initial lesion, chancre, is but its first manifestation, of course the excision treatment seems somewhat unphilosophical. I have no personal experience in this form of treatment, but the weight of evidence, from what I have been able to read concerning it, seems to me to be against it. This, moreover, appears to be the prevailing view among the leading specialists in venereal affections in New York.

As regards the bubo of syphilis, no special treatment is required, though I have sometimes thought that I have derived advantage from the application of iodoform ointment.

In the treatment of the secondary stage of syphilis, of course mercury is the great remedy. Iodide of potassium is used by some surgeons in the primary stage, but for secondary syphilis all are agreed to use mercury. It should be introduced gradually, to prevent salivation on the one hand and intestinal irritation on the other. I think the best way in which it can be used is by inunction. I recommend the patient to rub ordinary mercurial ointment, or an ointment of the oleate of mercury, into the inner side of the thighs, using fifteen grains each morning

and night, half a drachm altogether in the course of the day. If this seem too much, the remedy can be suspended for awhile, and then used in diminished doses. Another good plan is to apply the ointment to the soles of the feet, wearing woolen stockings; the place of application should be frequently changed, so as to avoid the occurrence of mercurial eczema. Before each application, too, the skin should be thoroughly washed and dried. In cases of infantile syphilis, Brodie's plan of putting the mercurial ointment on the belly-band is a good one.

If a patient objects to inunction, then mercury must be given by the mouth. The old-fashioned blue-pill is one of the most efficient preparations, if it is given cautiously, or the iodide may be used, or the bichloride, which, however, I think less useful than the others. Mercurial fumigation is a good method of treatment in certain obstinate forms of cutaneous syphilis, but is too troublesome for ordinary employment. Another mode of administering mercury is by hypodermic injections, usually of from $\frac{1}{12}$ to $\frac{3}{8}$ gr. of the corrosive chloride, though almost any preparation of mercury may be used hypodermically. I do not think that this plan presents enough advantages to counteract its disadvantages, and believe that it should be reserved for exceptional cases.

For mucous patches, constitutional treatment must, of course, be continued, and as a local remedy, the solution of acid nitrate of mercury may be applied, being then followed by some simple dressing, such as black-wash, and iodoform afterwards. Another plan, recommended by Conradi, is to use a strong solution of nitrate of silver, and then to apply metallic zinc. For syphilitic sore throat, gargles of chlorate of potassium may be employed, or cauterizations with the liq. hydrarg. pernitratis; or dilute hydrochloric acid may be applied with an atomizer. For syphilitic iritis, I have been favorably impressed with Carmichael's mode of treatment, which consists in the administration of oil of turpentine in large doses. I have often used this with great advantage, but have, on the other hand, sometimes

found it to fail, and have had to come back to mercury. The oil of turpentine is given in large doses (ƒ3j) three times a day, in emulsion with gum and sugar, with a few drops of the tincture of opium to prevent strangury. The most important point in the treatment of iritis, however, is the local use of atropia. For alopecia, cantharidal washes may be recommended.

In the tertiary stage of syphilis, iodide of potassium is the chief remedy. Mercury is useful in the treatment of the dry eruptions and of interstitial orchitis, but not in the gummatous affections, where iodide of potassium is preferable. At the same time tonics must be given, as indeed in the secondary and primary stages also. An expectant plan of treatment has been suggested for syphilis, but it is not to be recommended, nor would I favor hygienic and tonic treatment by itself, though in connection with specific treatment it is of great value. A patient who lives a regular life, avoiding the use of tobacco and alcohol, and at the same time pursuing a proper course of treatment, has a better chance of recovery from syphilis than one who neglects hygienic measures.

In giving mercury for syphilis, there are two plans of proceeding: one in which small doses are given continuously for a long time, as particularly advised by Dr. Keyes, of New York; and the other, which seems to me more philosophical, in which the drug is given "*coup sur coup*," that is, in successive courses with intervening intervals. The doses should be moderate, and salivation should be avoided. The best way is to give mercury cautiously until the symptoms are relieved, or a few weeks longer, and then to suspend it altogether. Then if there are any fresh symptoms the administration may be renewed.

It has been proposed by Mr. Venning, as a test to determine when syphilis has been removed from the system, to examine the condition of the inguinal glands. If there is any induration remaining, the patient is still syphilitic.

Iodide of potassium may be used very freely in syphilis. Formerly, five-grain doses were ordinarily given, but from eight

to ten grains is now considered a fair dose to begin with, and in some cases much larger quantities must be employed. I am convinced, however, that the drug is often given in excessive amounts in ordinary cases of syphilis. I do not recommend large doses unless the disease fails to respond to smaller ones, or unless the symptoms, as in some cases of cerebral syphilis, are immediately threatening to life. The iodide may be given simply in water, or with the compound syrup of sarsaparilla, or with fluid extract of gentian, viz.:

Pot. iod., gr. viii–x.
Ext. gent. fl. ℥ xv.

With enough water to make a teaspoonful. Iodoform has been given internally, and homœopathic practitioners have employed gold, but neither appears to have any special value. Sarsaparilla used to be looked upon as an important remedy for syphilis, but I have never found that it was of any use whatever. A remedy strongly recommended by the late Dr. Sims was stillingia. Dr. Taylor speaks favorably of the erythroxylon coca. Hot baths are undoubtedly of use sometimes in syphilis. For hereditary syphilis, mercury and iodide of potassium, in doses suited to the age of the patient, and combined with tonics, and especially iron, are of use. If a syphilitic woman is pregnant, she should undergo a mercurial course, in hope of preventing infection of the fœtus.—*John Ashhurst, Jr., M. D., in Maryland Medical Journal.*

An Unobjectionable Form for the Administration of Medicines.

Of all the various forms in which medicine is prescribed, there is none so well suited for the administration of drugs possessing a poisonous influence, unpleasant odor, or taste, as the manufactured pill form.

The advantages derived from prescribing remedies in this form are so apparent, that it was a matter of surprise to learn

that their use was not more general. It is on this account that I present this short article, hoping that it may lead to more extensive use and appreciation of this valuable method of prescribing.

Manufactured pills will become more popular with physicians as their value and advantages are recognized. They are so beautiful in appearance, so accurately compounded, so quickly dispensed, reducing the danger of making a mistake, on the part of the physician or druggist, to an almost impossibility.

They also enable the physician to carry with him, in a small and compact form, ready for administration, all the remedies that might be needed in emergencies, and night practice.

To the physician engaged in country practice, where his patients are at a distance from a drug store, they become of especial value.

In that class of pharmaceutical preparations which exhibits medicines in an elegant and palatable form, without the sacrifice of quality, uniformity or accuracy, American pharmacists have been doing excellent work, the result being that most of the objectionable features which formerly pertained to manufactured pills have been removed, being now produced in such a perfect and attractive form, that the most fastidious patient can find no objection to urge against their use.

There is little doubt but that much of the popularity of Hahnemann's system of cure, based upon the maxim *similia similibus curantur*, is due, not to the truth of the law, but to the preference for the tiny, tasteless and attractive pellets; and the sooner the medical profession recognizes this, the quicker will the public see that, aside from pleasant doses, there is nothing but fallacy and error in homœopathy.

There are some drugs used in practice that cannot be administered in pill form, and there are instances where solutions are preferable. Such is the case in treating the various types of fevers, and where tonics are employed; but in the greater number of cases, the object desired is a continued influence, rather

than an immediate impression upon the system, and for the accomplishment of this end pills are best suited.

In an article of this nature, it is not necessary or possible to dwell upon all the conditions to which the administration of remedies in the manufactured pill form are applicable, but to detail a few of the more frequent diseases, and specify instances where they have been used with success, during the past six or seven years.

The physician engaged in city practice sees no departures from health so frequently, as those associated with the digestion and assimilation of food. A majority of the patients presenting themselves for treatment, suffer from either a simple dyspepsia or some one of its many manifestations. The life led by people massed together in large cities is such an artificial one, the inhabitants being so subjected to the enervating influences surrounding them, that the indiscretions of diet, mode of living, anxieties, and the continual struggle for existence, become active factors in producing the large number of dyspeptic cases.

There are certain conditions that cannot be relieved by dietetic and hygienic treatment alone, but require the use of drugs, which should be given in the most pleasant and unobjectionable form; as there is no class of patients so prone to find fault with their medicines, being best suited by doses that are attractive, tasteless and not bulky.

It will not be a digression to dwell upon the treatment of this common affection, as it will enable me to mention more particularly the remedies suited for administration in the form under consideration.

The power of digestion being depressed, special aids to that function will be found in pepsin or alkalies; the anæmic condition may require iron, quinine or strychnia. Where remedies are needed, the action of which must be sedative, good results may be obtained from bismuth, opium, belladonna, arsenic or silver.

A very useful pill is that of aloin (gr. $\frac{1}{5}$) and strychnia (gr. $\frac{1}{60}$) given at bed-time; this will produce a mild, thorough, laxative effect, unloading the stomach and intestines, removing the fetid breath, the furred coating upon the tongue, and the cerebral congestion.

An error liable to be committed is the administration of cathartics of too active a nature; they are rarely called for, do little good, and might possibly do evil. Mild laxatives only are required, and care should be exercised as to their selection and frequency.

Formerly it was my custom to use pepsin and pancreatine more than at present, as recent investigation has led me to believe that as much benefit can be derived from the former agent alone, as when given in combination with the latter. Pancreatine has been shown to be itself digested by pepsin, so that its chance of getting through the stomach to the duodenum, where it normally exerts its function, is very slight, while when combined with pepsin, it must be digested as soon as the mixture becomes warm enough, in or out of the stomach, to carry on the process. Yet we see many preparations of which the chief virtue is supposed to be that they contain *all* the digestive pinciples. These can be active only so far as they contain pepsin, and have no advantage over the simple drug.

It has also been shown that certain substances combined with pepsin in solution render it inert. Alcohol is one, and even in moderation diminishes its action, while, in any quantity, the activity of pepsin is totally prevented. This is a point often lost sight of, and serves as a hint concerning the use of liquors at meals, by dyspeptics.

Pepsin and bismuth are frequently combined when treating dyspepsia, and should always be administered in pill form, owing to the difficulty of keeping both agents together in a permanent solution, one requiring a somewhat acid menstruum, the other a neutral or an alkaline one. Nothing is more common than to see elixirs of pepsin, bismuth and strychnia, which darken,

harden, and shrink the albumen placed in them. Liquid preparations are theoretically, if not practically, inconsistent, and will generally be found to be unsatisfactory.

In treating that form of dyspepsia met with in malarious districts and in persons who have passed the autumn months in the country, much good can be obtained from quinine, or a combination of quinine, iron and arsenious acid, given after meals and for a length of time. When using quinine, the pill form is the best that can be resorted to, the soluble-coated pill possessing many advantages over the solution, capsules or wafers. In an article upon quinine, published about four years ago, I called attention to the ready solubility of the bi-sulphate and urged its use, being the most soluble of the quinine salts used in medicine. On this account it is more active and better calculated for administration in pill form than the sulphate; but it should be borne in mind that as the bi-sulphate of quinine contains a smaller proportion of the pure alkaloid, the amount being only about 60 per cent., the dose should be one-fourth greater than that of the sulphate, in order to represent the same amount of alkaloid.

Iron is a most valuable remedy in the treatment of dyspepsia, but furnishes best results when given toward the termination of a course of treatment.

Active business men, brain-workers, and those who are snbjected to much mental anxiety or overwork, frequently suffer from what is termed "nervous indigestion." To meet this condition we possess a valuable remedy in phosphorus, which should be given in small doses, immediately after meals.

The best form of administering phosphorus is that afforded by the manufactured pill, which possesses many advantages over those made to order in the prescription room. A pill of this kind is exceedingly difficult to make, requiring especial care and skill. The phosphorus should be incorporated with the various ingredients, while in solution, so as to effect a thorough and uniform diffusion; they should also always be coated, in order

to prevent oxidation. I have made some interesting experiments with phosphorus pills manufactured by Schieffelin, of New York, proving that their coating entirely protected the enclosed mass. A pill that had been manufactured a year ago was cut open, and the mass found to be as soft as though made but a few days. Another pill, of the same manufacturer, made eight years ago, was found to be but little harder. Upon placing two of the latter pills in a small quantity of water, the coating was quickly dissolved, the mass broken up, and when placed in a dark room the vial was plainly perceived, owing to the unaltered luminous property of the phosphorus. This simple experiment goes to show that if properly made and coated, a manufactured pill does not become affected by age, nor do the various ingredients become so altered that they lose their medicinal properties. Experience has shown that such pills may be kept for years, even in a very warm climate, and still produce prompt and active effects when administered.

In treating the secondary forms of syphilis, the plan recommended by Dr. Keyes, "of administering mercurials in granules," possesses many advantages over the older method of prescribing the same substance in solution. Intestinal irritation seems to be later and less painful in its manifestations; it is an easier matter to regulate the quantity given when pursuing the "tonic treatment," and the granular form is the most convenient and portable for the patient. Certain cases will be encountered where the symptoms are so pressing that there is not time to get the patient quietly under the influence of the drug, when administered in granules, but fortunately such are not frequent, and can be met by resorting to the older methods until the urgent symptoms abate. The obstinate lesions occurring in the mouth are most successfully treated with granules, the patient being told to allow the little pill to slowly dissolve upon the tongue, thus obtaining the effect of a solution of corrosive sublimate upon the patches, while at the same time the general treatment is pursued.

In a case where the mucous patches in the mouth were very numerous and troublesome, no impression could be made upon them until the plan mentioned was tried, when they disappeared in a short time.

While pursuing the hyoscyamine treatment upon a patient afflicted with mental disease, the manufactured pills were of great advantage, as there was no doubt as to the accuracy of dose, and they were easy to administer.

In a recent conversation with one of the leading alienists of this city, I was informed that he was using pills of this form upon several cases, considering them preferable to the hypodermic method.

When prescribing a medicine so powerful in its influence that doses of from $\frac{1}{200}$ to $\frac{1}{25}$ of a grain are desired, it is almost impossible to obtain the exact amount in each pill, unless a large number are prepared at one time and great care exercised in the manipulation of the mass. With drugs like arsenious acid, aconitia, aloin, atropia, codeia, digitalin, hyoscyamine, morphia, phosphorus, strychnia, and the more powerful mercurials, accuracy of dose and the decreased possibility of a mistake are points in favor of the manufactured pill; while with such remedies as asafœtida, quinia, and others possessing a very unpleasant taste, the coating removes the objection to their use, which patients so frequently make. Little children who struggled and had to be forced to take quinine when prescribed in solution, powders or uncoated pills, will take the drug without objecting, when given in a coated pill.

In this article it has been my intention to point out a few of the advantages possessed by manufactured pills, over those prepared in the old and ordinary manner, and to speak of a few cases in my own practice, where the results from their use have been satisfactory. During the past seven years, the soluble-coated pills made by Schieffelin & Co., of New York, have been the ones prescribed, and I do not hesitate to recommend them to the profession.

The "coating" of pills is a subject of much importance and of especial interest to physicians.

In a future article I shall bring to their notice some facts, to add to those published a number of years ago.—*M. S. French, M. D., in Medical and Surgical Reporter.*

Gallic Acid in Hemorrhage from the Urinary Organs.

Of the styptics in ordinary use, gallic acid, according to my experience, is one of the most potent in relieving hemorrhage from the urinary organs. The reputation of this remedy would, I think, soon be greater than it is if those who try it would give it in sufficiently large doses, and persevere in it use for several days before replacing it by other astringents. As gallic acid probably acts according to the strength of its solution which bathes the bleeding tissue, it is necessary to insure the introduction of a certain quantity into the blood by the frequent administration of successive doses. We must remember that gallic acid soon passes away from the blood, being carried off in the urine. It is, therefore, only by administering frequent doses that we can hope to compensate for this continual draining away of the remedy, and we must give it in quantity and often enough to more than compensate for what is removed with excrementitious matters.

In chronic bleeding from the surface of the mucous membrane of the pelvis of kidney, ureters, bladder and urethra, and from villous growths, as well as in the very obstinate hemorrhage from large fungous tumors of the kidney and bladder, I have found gallic acid most valuable in a large number of cases, and for some years past I have been led to depend upon it more and more. In that spongy condition of the prostate, when the veins are large and the capillaries of the surface considerably dilated and forming here and there little pouches like aneurismal dilatations, hemorrhage is often not only very obstinate, but, from time to time, in such excessive quantity as to blanch and

weaken the patient. The remedy should be give in frequent doses, day and night, until the bleeding is very decidedly reduced in degree, when it may be ordered once in six hours, or less frequently, being again increased in frequency, if the patient ceases to improve, or the hemorrhage again increases in severity.

Gallic acid seldom disagrees in any way. Some patients complain of its taste, but it is generally well borne by the stomach. It does not cause constipation, and even when the crystals are swallowed in a state of suspension in water or mucilage, no inconvenience results, and the stomach is not disturbed by their presence. The glycerine of gallic acid is, however, the most pleasant form in which to prescribe the remedy. This contains one part of gallic acid in four. Forty minims will contain ten grains, and may be given in distilled water, peppermint, orange or other water. But it is most essential that the patient should persist in taking the doses regularly for several days. Gallic acid is absorbed by the blood, and passes away unchanged in the urine; and it is probable that it acts directly on the parts from which the bleeding is taking place, and therefore a certain strength of solution is necessary to get the good effects, and this can only be obtained by its persistent introduction into the stomach, and so into the blood, at short intervals of time. I have given gallic acid in ten-grain doses every three hours without intermission for three weeks, no objection having been made on the patient's part. Whether much larger doses would be absorbed I doubt, but I am not aware to what extent the remedy may be pushed, nor do I know in what respect very large doses would be deleterious. On these points I should be glad to learn the experience of other practitioners who have largely employed the remedy. I have generally found that the desired effect has resulted after ten-grain doses had been kept up for three or four days, and in cases where the bleeding did not actually cease it was certainly well under control. In several of those painful cases of

hemorrhage from fungous growth, the bleeding was much lessened, and the fatal result postponed; in some of my cases I should say that death was due rather to exhaustion and weakening of the general health than to the hemorrhage. I therefore commend this remedy in the cases of hemorrhage to which I have referred, and I prescribe it with confidence, so that its use may be steadily continued until its beneficial action is clearly established.—*Lionel S. Beale, M. B., F. R. S., in The Lancet.*

The Exact Value of the Electrolytic Method.

In a paper read before the American Academy of Medicine on the above-named subject (*Med. Record*, October 13th), the author, Dr. A. D. Rockwell, formulated the following conclusions: 1. The success met with in the treatment of malignant tumors is generally but trivial. In epithelioma, however, when superficial and easily reached, success may be had. 2. The electrolysis of *intramural* fibroids often reduces the size somewhat, and gives great relief. 3. For erectile and small cystic tumors electrolysis is a specific. 4. Goitres, if small and soft, may be reduced in size, even by external applications. Even when hard, electrolysis may be beneficial, but the results are variable. 5. Hairs can be permanently removed. 6. In many cases of stricture relief or cure can be obtained by electrolysis, but experience is not sufficient to speak of its value positively.

A Hospital with Circular Wards.

For some time past an attempt has been made to raise the funds needed to provide hospital accommodation for the town and district of Burnley, Lancashire. The plans approved of by the committee provide for the erection of a hospital with one story pavilion wards of the circular form, as suggested by Professor Marshall, President of the Royal College of Surgeons. Two of these wards are to be built at present, with an internal diameter of 60 feet, for the accommodation of twenty beds each.—*Ex.*

Editorial.

Volume XXIV.

The present number opens the twenty-fourth volume of the Journal. We have to note a change in the editorial management. Dr. Van Peyma, who has borne a full share in the labors and responsibilities of the Journal since it passed from the hands of Dr. Miner, voluntarily retires, thus placing the work entirely in the hands of the two remaining editors. The severance of the editorial relations which have existed during the five years in which we have been associated with our confrere is a matter of deep regret to us, as we are sure it will be to our patrons, who must have appreciated the vigorous honesty and superior ability which he brought to his editorial work. In assuming the labors involved in the management of the Journal, now devolving upon the two editors, we can only give assurance that the Journal will maintain the same independent attitude, upon professional and ethical questions, it has heretofore advocated, not allowing its columns to be the mouthpiece of any clique or school, or the advocate of any party in or out of the profession. The editors, though connected with the Niagara Medical College, and jealous of the interests of a movement which promises so much for the advancement of a higher standard of medical education, do not intend the Journal to be the organ of this or any other institution, but will utter words of "truth and soberness" whenever the interests of the profession here or elsewhere call for fearless expression. We have to reiterate the experience expressed on previous occasions, that this Journal is an exponent of the activity and zeal of the profession. No one pen can infuse earnestness and vigor into its pages, nor incite interest in scientific investigations. We can record the results of labor and diffuse their blessings and fruits to humanity through our wide constituency. Our city has already become an important commercial and medical centre. We will endeavor to be a faithful witness of its progress in scientific and

professional subjects. We ask our readers to help us in the important work, which, owing to the retirement of our much respected co-laborator, now devolves upon us.

Cholera and its Prevention.

The march of cholera in Europe, from the extreme East along the lines of commerce and of travel, is a warning that its progress may not be intercepted by the Atlantic unless vigorous measures are adopted. The experience of Southern Europe seems to expose the fallaciousness of quarantine as a means of prevention of the march of this terrible scourge. The English system, adopted after careful scientific investigations, of even inquisitional inspection of shipping and the personal examination of travelers and their effects, has thus far excluded the disease from England. The subject is one of great importance to health authorities. The port-offices of the large shipping centers on the Atlantic, as well as the Pacific, are entrusted with a grave responsibility, and only the strictest vigilance will guard our shores from an invasion. In view of the interest which the public as well as the profession naturally take in this matter, we have taken occasion to examine into the measures recommended for adoption by health authorities, and beg to present our readers a digest of such as we think will be of practical use. We regret that the National Board of Health have failed to take notice of this important matter, and to issue directions for the guidance of local health boards. The Michigan State Board of Health, which, under the direction of Prof. Kedzie, is always in the vanguard on sanitary matters, have issued a valuable circular containing ample rules and valuable suggestions, which we place before our readers:

"The investigations by Dr. Koch show that the bacillus of cholera can live and reproduce its kind indefinitely in certain, but not in all substances outside the body, namely, in certain alkaline but not in acid solutions; and as the normal condition of the stomach is acid, that it cannot live in the human stomach

in its normal condition. The intestinal juices being normally alkaline, the bacillus can, probably, reproduce itself therein without limit whenever it can pass through the stomach. This makes it of especial importance that in times of danger from cholera, the stomach should be kept in its naturally good condition.

" Because of the possibility that the cholera bacillus may find lodgment and multiply in various kinds of moist filth, it is important that everything about the house, cellars, barns, premises, alleys and streets, should be cleaned up and kept dry, and as clean as possible, and that there should be a general disinfection of all places liable to become infected. Especially should privy-vaults, sewers, cess-pools, drains, and similar places be thoroughly and often disinfected with a strong solution of copperas, which may be made acid by the addition of sulphuric acid. The cholera bacilli are said to thrive in nutritive alkaline solutions, and the contents of most privy-vaults are alkaline; hence, the importance of such thorough and frequent disinfection as shall kill any one of the germs which may find lodgment there.

RESTRICTION OF CHOLERA.

" One of the chief means of restricting cholera is to disinfec immediately and thoroughly all the discharges from those sick with cholera, or with the premonitory diarrhœa, and to disinfect or burn at once completely all their cast-off clothing, bedding, etc.

" The fecal discharges are not as infectious when first voided as they soon become, hence the importance of immediate disinfection. Thrown, without disinfection, into a privy-vault, cess-pool, or sewer, the fluids vomited, and especially the discharges from the bowels of a cholera patient, may soon infect all its contents, and render it a source of infection to those who approach.

"All the discharges from the body—the vomit, the discharges from the bowels, etc., should be received into vessels containing some concentrated disinfectant, such as chloride of zinc, cop-

peras, or sulphate of zinc, to which may be added sulphuric or other mineral acid.

"Clothing soiled by a cholera patient, if laid aside and allowed to remain moist, soon becomes especially dangerous. It is, therefore, important that all such articles be immediately burned or placed in a strong disinfecting solution until such time as they can be burned, or boiled, washed and dried. (Dr. Koch's experiments indicate that the bacilli of cholera are destroyed by being thoroughly dried for three hours or more.)

"The diarrhœa preceding cholera is frequently painless, and there is, therefore, during the occurrence of cholera, great danger of cholera being spread by the discharges of persons yet able to travel about. During the first stages of cholera, and especially during the initiatory diarrhœa, prompt medical treatment is important and useful, both for the benefit of the individual and as a means of checking the spread of the disease.

"It has been a practice in England, and should be the practice everywhere, when a man is found sick with cholera, to learn by inquiry what privies he has visited, and at once send an officer on the back track to disinfect them. For reasons just stated, notice should at once be sent to the board of health of a locality from which a case of cholera has come.

"Great care should be had to prevent the contamination of the water-supply by choleraic discharges, as by drainage into wells, springs, or other water-supply, from a privy-vault, sewer-drain, or cemetery. The use of water from a source liable to be infected with cholera excreta should be promptly stopped.

"Bodies of those dead from cholera should be wrapped in a cloth wet with a zinc solution, and at once buried; the zinc solution to be made in proportions as follows: Water, one gallon; sulphate of zinc, eight ounces; common salt, four ounces.

DISINFECTION OF CLOTHING, ROOMS, ETC.

"It is best to burn all articles which have been soiled by a person sick with cholera. In the glowing fire of a large furnace

is a good place to burn clothing. Great care should be taken to burn quickly and thoroughly whatever is burned, and not simply warm up and spread the infection.

"Articles too valuable to be destroyed should be exposed for one hour to a dry heat of from 240° F. to 250° F., or three hours at a temperature of 150° F., or be treated as follows:

"Cotton, linen, flannels, blankets, etc., should be treated with the boiling-hot zinc solution (one-half of the strength of that mentioned in the preceding paragraph), introducing them piece by piece, securing thorough wetting and boiling for at least half an hour. Heavy woolen clothing, silks, stuffed bed-covers, beds, and other articles which cannot be treated with the zinc solution, should be hung in the room during fumigation, pockets being turned inside out, and the whole garment being thoroughly exposed. Afterward they should be hung in the open air, beaten, and shaken. Carpets are best fumigated on the floor, but should afterward be removed to the open air and thoroughly beaten. In no case should the thorough disinfection of clothing, bedding, etc., be omitted.

"After a death or recovery from cholera, the room in which there has been a case of cholera, whether fatal or not, should, with all its contents, be thoroughly disinfected by exposure for several hours to strong fumes of burning sulphur, and then it should for several hours, if possible for days, be exposed to currents of fresh air.

"Because of the innumerable ways in which the infection may be scattered about the house and premises where there has been a case of cholera, the entire house and out-buildings, including cellar, wood-shed and privy, may well be disinfected.

"Rooms to be disinfected must be vacated. For a room abou ten feet square, at least two pounds of sulphur should be used; for larger rooms, proportionately increased quantities, at the rate of two pounds for each one thousand cubic feet of air-space.

"Close the rooms as tight as possible, place the sulphur in iron pans which will not leak, supported upon bricks, or over a sheet of zinc, set the sulphur on fire by hot coals or with the aid of a spoonful of alcohol lighted by a match, be careful not to breathe the fumes of the burning sulphur, and when certain the sulphur is burning well, leave the room, close the door, and allow the room to be closed for twenty-four hours.

"Privies, cess-pools, drains, water-closets, sewers, gutters, etc., should be frequently and liberally treated with copperas solution made in the proportion of one and one-half pounds of copperas to one gallon of water."

The King's and Queen's College of Physicians of Ireland have issued the following suggestions for the use of the public, as to the treatment of early or suspicious symptoms at seasons when cholera is threatened, or is epidemic:

"The College advise no alteration in the habits of living, where these have previously been moderate and regular. All excess should be carefully avoided, especially in the use of alcoholic drinks, as it is, of noted experience, the intemperate who most certainly fall victims to the most fatal type of cholera, as of other epidemic diseases.

"All food likely to cause indigestion or bowel complaint should be carefully avoided, particularly fruit in a large quantity or in an unripe, decayed, or unsound state; likewise, fish or meat when in the least tainted.

"Water should be used for drinking purposes only after being boiled; and, in consequence of the possibility of milk being diluted with infective water, it likewise should be boiled before use.

"Strict personal cleanliness should be practiced, and the clothing should be adapted to the season and weather.

"All debilitating causes should be carefully avoided, such as excessive and long-continued fatigue and fasting, overcrowding, exposure to moist, stagnant air, or to air loaded with organic effluvia.

"During the prevalence of cholera, any person affected by any of the following complaints should at once obtain medical advice: 1. Diarrhœa, or looseness of the bowels. 2. Vomiting or sickness of stomach. 3. Pains in the stomach or bowels. 4. Pains or cramps in the legs. While such aid is being obtained, the patient should be put to bed immediately, and warmth should be encouraged by the application of heat to the body and limbs. Also, in case of sickness of stomach, a large mustard poultice should be applied over the abdomen. In the event of cramps ensuing, diligent rubbing of the limbs should be resorted to.

"Hot brandy punch should be administered in small and repeated doses, and the diet should be restricted to rice, milk flavored with cinnamon and brandy, or arrow-root prepared with milk or port wine.

"Should relief not be shortly obtained, and the looseness of the bowels continue, ten grains of aromatic chalk-powder with opium, or twenty drops of dilute sulphuric acid, with five drops of laudanum, should be administered in a tablespoonful of water, to which a little brandy may be added. This dose, which is intended for an adult, may be repeated every hour for three doses.

"The discharges from the bowels should be disinfected, and disposed of as quickly as possible. A wineglassful of the following disinfectant mixture should be poured into the vessels used by the patient, namely: Common sulphate of iron (green copperas), one ounce; carbolic acid, a quarter of an ounce; water, twenty fluid ounces, or one imperial pint.

"Infected bedding, and all articles of clothing worn by the sick, should be destroyed by fire."

Editorial Notes.

It is said to have been proved that the cholera was imported into France by the French troops ships which had just arrived from the East (Tonquin Cochin China).

Chloral Hydrate as a Vesicant.—It is stated that powdered chloral hydrate, sprinkled upon adhesive plaster, which is then sufficiently heated to cause it to adhere to the skin, and immediately applied to the surface where a blister is desired, will as effectually accomplish the purpose in ten minutes as a cantharidal plaster will in six hours. The pain produced by it is but slight.

An ingenious application of the condom in the treatment of epistaxis was suggested by the late Prof. McDowell. For the purpose of arresting the hemorrhage the condom is tied to the end of a small flexible catheter and a piece of rubber tubing, with a clamp, connected with the catheter. The condom is then lubricated and introduced into the nostril from which the bleeding proceeds, and when in place inflated with air or water as desired.

A correspondent of the *Times* says that the treatment of cholera in Marseilles and Toulon is as follows: In the first stage twenty drops of laudanum are given with three grammes of ether, and ice in the mouth to stop the vomiting. In the second stage, from ten to fifteen grammes of acetate of ammonia, the same quantity of alcohol and injections of morphia are given. If the patient has embarrassed breathing, oxygen is inhaled and the limbs are rubbed with turpentine. The third stage is the coffin. At first nineteen-twentieths of the patients died—later the mortality became less frightful.

Reviews.

Female Hygiene and Female Diseases. By J. K. Shirk, M. D. Lancaster Publishing Company. 1884.

This little book of about one hundred pages is intended for the instruction of women. So far as we have examined it, the book seems worthy of commendation as one which contains much good advice and instruction.

Health Hints for Travelers. By JOHN C. SUNDBERG, M. D. D. G. Brinton, 115 South Seventh Street, Philadelphia. 1884.

It is bad enough to fall sick at home, but how much worse when among strangers. The object of this little book is a commendable one, and it may exert some influence, by the practical nature of its suggestions, in teaching the traveler to keep himself well.

Conversations Between Drs. Warren and Putnam on the Subject of Medical Ethics. With an Account of the Medical Empiricisms of Europe and America. By FRANK H. HAMILTON, M. D. Bermingham & Co., 28 Union Square, New York. 1884.

Anything from the pen of Dr. Hamilton is worth reading, and in this little book he has condensed and attempted to fairly represent the prevailing opinions of medical men in this country on the subject of the code. Knowing the author's positive opinion upon the subject, it is not surprising that he makes Dr. Putnam, the representative of the old code, get the best of the argument.

The Diseases of Children. A Handbook for Practitioners and Students. By ARMAND SEMPLE, M. R. C. P., London, Physician Northeastern Hospital for Children, Etc., London. G. P. Putnam's Sons, 27 and 29 West 23d Street, New York. 1884.

The economy of nature prescribes babies as its most constant and abundant blessing, and as long as there are babies the diseases of childhood will occupy a large share of the attention of medical men. Perhaps no class of diseases are more frequently encountered by the young medical man, and a book like the one before us he will find of the greatest value. While not a large book it yet covers the ground indicated by its title. The style is at once clear, interesting and concise. For the student we consider it the best book on its special subjects published.

THE

BUFFALO

Medical and Surgical Journal.

VOL. XXIV. SEPTEMBER, 1884. No. 2.

Original Communications.

SUPRA-PUBIC LITHOTOMY.*

BY W. S. TREMAINE, M. D.

Major and Surgeon, U. S. A. Fellow of the American Surgical Association. Professor of Surgery, Niagara University. Surgeon-in-Chief of the Buffalo Hospital of the Sisters of Charity, and of the Emergency Hospital, Buffalo, N. Y.

The *British Medical Journal* of March 12, 1881, in an editorial note, says:

"So rarely is the removal of vesical calculus attempted by the supra-pubic method that though all surgeons are familiarly acquainted with descriptions of the operation, but few can have witnessed its actual performance.

"On the afternoon of Friday, February 25th, Mr. Lister, at King's College Hospital, performed the operation twice. Both patients were males, and in each the strictest antiseptic precautions were observed."

The foregoing extract is my apology for presenting to the association the following case, with remarks thereon:

It is indeed true that the operation is rarely performed, and in the ordinary text books scarcely alluded to, or dismissed as only suitable for stones of very large size, and when the perineal operations are impracticable.

I confess these were my own views in regard to it until the necessity for the operation occurred, as evidenced by the case I now report.

* From a paper read before the American Surgical Association, Washington, D. C., May 3, 1884.

James McH., age 3½, one of thirteen children, born of healthy German parents, delicate looking, not larger than a child two years old, had never walked.

When eighteen months old his mother called a physician on account of retention of urine. This was relieved for the time. For the past two years, the mother states that the condition of the child has been deplorable. The urine passed drop by drop, constant pain was present, violent straining and prolapsus of the rectum frequently occurring.

Five physicians of the city saw him at different times and various remedies were prescribed without effect, as they evidently failed, one and all, to recognize the true state of the case, although, according to the mother's statement, one medical gentleman told her there was probably something the matter with the child's bladder.

Relief was then sought at the Buffalo Medical and Surgical Dispensary, when the calculus was discovered by Drs. Macniel and Davidson, attending physicians.

I was called by these gentlemen to operate. Accordingly, I went to the residence on November 1, 1883, expecting to perform the ordinary lateral operation.

After the child was etherized I examined it for the first time. The stone could be felt with the sound at the vesical neck, but the instrument could not be introduced into the bladder any distance. With the fingers in the rectum the stone gave the impression of being about the size of an ordinary hen's egg; it was immovable.

The distance between the "tuper ischii" was one and one third inches. It was quite evident that to attempt to extract so large a stone through the ordinary perineal section would probably prove impossible, and at any rate result in extreme and serious laceration of the parts.

I had no lithoclast with me, so fragmentation, before extraction, was out of the question, and, as I think the sequel proved, would have been impracticable and dangerous.

Therefore I decided upon the "high operation," an opinion which was concurred in by the medical gentlemen present, Professors Davidson and Lothrop and Doctors Macniel and Potter, the latter my clinical assistant.

About two ounces of a solution of borax was, with difficulty, injected into the bladder.

I then made an incision directly in the median line, commencing over the symphysis pubis and extending upwards for two and one-half inches through skin and superficial fascia; the linea alba sought for and the aponeurosis divided for one and one-half inches vertically.

The peritoneum was seen at the upper extremity of the incision and was carefully pushed up out of the way. An attempt was then made to protrude the anterior wall of the bladder with the point of the sound; this was found to be impossible, as the sound could not be manipulated in the bladder, owing to the large size and impaction of the calculus.

The bladder was then hooked up with a tenaculum and divided for about one inch vertically. Here the difficulty began —that of extraction. The stone was nearly three inches in length and acted to the bladder very much as a tent pole does to an ordinary wall tent, and the difficulties of extraction were very similar to an effort to detach and draw out said pole through a small opening in the wall of the tent.

The ordinary lithotomy forceps were introduced and the upper end of the shaft, so to speak, of the stone broken off. The lower portion of the stone resisted all reasonable efforts at extraction with the forceps.

The finger was then introduced, and the bladder, which was adherent to that portion of the stone occupying the *bas fond* of the viscus, stripped off, and, after cautiously enlarging the opening, the stone was removed. The condition of the bladder was bad from the long-continued cystitis, and it was impracticable to keep a soft catheter through the urethra, as the child would not allow it to remain.

I therefore decided to leave the wound in the bladder open for drainage and introduced a short rubber tube into it.

The upper two-thirds of the incision through the walls of the abdomen was closed with silver sutures; this healed by first intention. The urine escaped continuously through the wound.

Temperature ranged from 101° to 102° for several days. The bladder was daily washed out through the wound with a warm solution of boroglyceride, and occasionally by injection through a soft rubber catheter. Great attention was given to cleanliness. The groin and thighs were kept smeared with benzoated zinc ointment to prevent excoriation from the constant flow of ammoniacal urine over them.

The child gradually improved and the fistula healed in about five weeks.

The stone weighed nine drams, was two and seven-eighths inches in length and one and one-fourth inches at its largest diameter, of peculiar shape, as shown by the accompanying cut, *actual size.*

I believe this to be the largest stone ever extracted from a child of that age, with recovery. At least, in the tables of reported operations, to which I have access, I have been unable, so far, to find any recorded case of recovery after the removal of so large a stone from so young a child.

Notwithstanding the difficulties of this case, from the large size of the stone, I was struck with the ease and safety with which this operation, in an ordinary case, could be performed,

and particularly with the simplicity of the apparatus required —an ordinary pocket-case sufficing.

Our distinguished Fellow, Gouley, in his work on diseases of the urinary ogans, enumerates the following accidents of lateral lithotomy:

1st. Failure to reach the groove of the staff and consequent injury of adjacent parts. 2d. Wound of the rectum. 3d. Wound of the interior of the bladder. 4th. Hemorrhage. 5th. Urinary fever. 6th. Infiltration of urine. 7th. Laceration of neck of bladder during extraction. 8th. Cystitis. 9th. Peritonitis. 10th. Pyæmia. To which might be added, 11th, Impotence.

Of these the 1st, 2d, 3d, 4th and 7th may be absolutely eliminated from the supra-pubic operation, a clear gain for this method. *Cæteris paribus.*

The danger from the perineal section, viz., impotence, and not an imaginary one, either, as clearly shown by such authorities as Sir Henry Thompson, Teevan and others, is entirely obviated.

The "high operation" is an old one and is thus spoken of by Cheselden:

"Though the operation (supra-pubic) came into universal discredit, I must declare it as my opinion that it is much better than the old way, to which they all returned, except myself, who would not have left the high way but for the hope I had for a better." *

Endorsed so far back by such eminent authority, why, then, has this operation fallen into such disrepute. Chiefly, I believe, from a superficial examination of statistics, which show a mortality against it.

A closer scrutiny of statistical tables and an impartial investigation of the literature of the subject, a work which has been so thoroughly undertaken by Dulles (*American Journal of Medical Science*, July, 1875), and more recently by Helmuth, ("Supra-Pubic Lithotomy," by William Tod Helmuth, New

* A Treatise on High Operation for Stone, with seventeen copper plates. London, 1723.

York, 1882), will convince any candid mind that the operation has not received the consideration due to it, and that it should take its place among the cutting operations for stone as of equal, if not greater, safety in regard to mortality, and superior as to unpleasant consequences, such as impotence, etc.

Given, a foreign body to be removed from a viscus, the most direct and safest route to reach it would naturally suggest itself; that the "high operation" is the most *direct*, goes without saying; that it is anatomically the safest, needs no demonstration; that, apart from mortality, which, under like conditions, is in favor of epicystotomy, it is safer as regards after consequences, and is *the* method—the natural, safe, direct route to the interior of the bladder, when section is necessary, and the burden of proof is on the advocates of perineal section, to show wherein there are any advantages by the circuitous, dangerous, dark route over the safer and easier method by epicystotomy.

The supra-pubic operation is relatively easy—it gives more room than the perineal section, and enables the operator to see just what he is doing.

ADDENDUM.

Since the above was written, I have again performed supra-pubic lithotomy, or, more correctly speaking, supra-pubic cystotomy, or epicystotomy. We do not cut the stone, but, rather, the bladder.

Conrad F., aged 30, was sent to me by Dr. Cole, of Middleport, N. Y., with a history of ten years' suffering from symptoms of stone in the bladder.

Examination with the sound showed the presence of a large calculus.

The patient was etherized, and an attempt at litholopaxy made, when it was found that the stone was very large and firmly lodged above the symphisis pubis, forming, as it were, a lining to the anterior wall of the bladder. All attempts to dislodge and grasp the calculus were unsuccessful, but what

seemed to be a separate stone was crushed, and the detritus, to the amount of one ounce, was removed by Bigelow's improved evacuator.

This operation set up a violent cystitis; for a week or ten days fragments of stone passed the urethra. The man suffered greatly, and at times his condition seemed critical.

He gradually improved, and on June 4th, at the amphitheatre of the Buffalo Hospital of the Sisters of Charity, in presence of the medical class and Professors Cronyn, Davidson and Heath, with the assistance of Drs. Potter, Clark and Mickle, I operated, by epicystotomy.

About ten ounces of a warm solution of borax and glycerine was injected into the bladder.

An incision about three inches long was made in the median line, just above the pubes. The very slight bleeding from a few twigs in the skin was stopped by hemostatic forceps.

A sound was then introduced through the urethra, the anterior wall of the bladder pushed up, and seized and held by a tenaculum. An opening about one inch in length was made into the bladder, and a number of fragments of stone extracted by using the fore-finger and thumb (more intelligent and safer forceps than any yet devised). These fragments varied in size from one to two inches in diameter, and weighed, together, a little in excess of three ounces, including the nucleus, which was nearly round, seven-eighths of an inch in its longest diameter, and weighed fifty grains. The bladder and wound were washed out with a solution of mercuric bichloride, one part to fifteen hundred of water, the opening closed with four catgut sutures, the external wound united by silver sutures, a small drainage tube left in the lower angle of the wound, a pad of "sublimated gauze" applied, and over all a large gauze bag of sublimated peat. A soft rubber catheter was retained in the urethra. For a few days there was a slight flow of urine from the wound, but the patient recovered in ten days without a

single uncomfortable symptom, and three weeks after the operation stated that he "never felt better in his life."

I have been thus minute in describing the details of this case because I believe it is the careful attention to these so-called minor details that contributes largely to the success in modern surgery.

It has been suggested, as one of the objections to the operation, that the anæsthetic might cause vomiting, and so endanger the wounding of the peritoneum.

In this case there was a constant convulsive action of the abdominal muscles. To guard against any trouble from this source, Dr. Potter kept his finger covered with an antiseptic towel pressed on the upper angle of the wound.

I think, danger of wounding the peritoneum and descent of the intestines is purely theoretical, at any rate, not likely to happen in ordinarily skillful hands.

At a meeting of the Leeds and West Riding Medico-Chirurgical Society, May 2, 1884, Mr. T. Pridgin Teale related a case of rupture of the bladder, which he treated by abdominal section. Mr. Mayo Robinson also related a case of like nature, in which he had also performed abdominal section. Mr. McGill remarked, "that the case was of great interest as proving that healthy urine might be effused into the abdominal cavity without inducing peritonitis, a fact which had been doubted by some surgeons."

I neglected to state above that the bladder was daily washed out through the catheter with a solution of iodoform and starch.

As regards the relative merits of epicystotomy and litholopaxy, recently discussed by Dittel, in properly selected cases, and in *experienced and skillful* hands, the former will probably maintain its present position, but my own opinion is that supra-pubic cystotomy will prove by far the *safer* operation in the hands of the average surgeon.

With the experience already gained in the *technique* of the operation, I hope, in future cases, by careful suturing of the

bladder with a modification of the suture of Lembert, and using fine catgut, to obtain immediate union of the bladder, although, in many cases of long standing, and where chronic cystitis exists, it is probably more desirable that a fistula be established and kept open for a time, in order to drain and rest the diseased bladder.

In operations of this class it seems to me desirable to avoid, as far as practicable, the *genital* organs. By so doing there will be less reflex disturbance of the nervous system.

Epicystotomy accomplishes this—an argument in its favor that cannot be applied to any other operation for the relief of stone, either of the *crushing* or *cutting* variety.

BUFFALO, N. Y., July 3, 1884.

ENLARGED KIDNEY, PROBABLY SARCOMA.

A CLINICAL LECTURE DELIVERED AT THE HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

BY WILLIAM PEPPER, M. D., LL. D.
Provost of and Professor of the Theory and Practice of Medicine in the University of Pennsylvania.

REPORTED BY WILLIAM H. MORRISON, M. D.

GENTLEMEN—I have not yet had an opportunity of obtaining this man's history, and shall ask your attention to his account of himself. His age is 47. Nine years ago he had a slight attack of hæmaturia, but after that had no trouble until three years ago, at which time, that is, in the early part of 1881, he had a stoppage of his water for four days. During this time, he says that he did not pass a drop of anything. He was not seen by a physician and no catheter was passed. The stoppage was accompanied with great pain. At the end of four days he discharged large amounts of clotted blood, and after this passed blood more or less for a year. The presence of blood in the urine was not constant, but spells of hæmaturia, lasting from

ten days to two weeks, would occur at intervals of from two to four weeks. A month is, he thinks, the longest period that blood was absent from the urine during 1881. When these attacks occurred he had sharp pains running toward the groin, around the bladder and into the penis, and also had pain in the renal regions. Between the spells of hæmaturia he had no particular pain. He was at this time serving as night watchman of a cotton mill, and was not particularly exposed. He has never had chills and fever. This is an important point, for, as you are aware, the relations between malaria and hæmaturia are curious and interesting. This man has lived and worked in a central part of the city and has never suffered from ague. He is unable to trace the attacks of hæmaturia to anything that he did. They came at all seasons of the year.

In February, 1882, one year ago, he applied to the dispensary, and since then there has been no blood in the urine. He seemed to be relieved by the use of large doses of the astringent salts of iron. Two years ago he weighed 140 pounds; he now does not weigh more than 110 pounds. No blood has been passed for a year. A recent examination of the urine by Dr. William E. Hughes shows no tube-casts, but a small amount of albumen, and in the sediment a small amount of pus cells, the amount of pus being scarcely sufficient to account for the amount of albumen in the supernatant liquid. The specific gravity is normal and the reaction acid. Examination of the blood reveals nothing but slight anæmia.

In addition to this, we learn that in 1875, while on the police force, he had an attack of hæmatemesis. This came on after no unusual exposure, and while he was apparently in perfect health. He had lain down one afternoon, and, after sleeping for about ten minutes, was awakened with his mouth full of blood. He then began to vomit large quantities of blood. This vomiting continued for four days, and he says that he lost at least a "bucketful" of blood. He has never been a drinking man and never met with any injury.

Turning to the examination of the belly, we find it prominent in the umbilical region. This is more distinctly observed to the right of the median line. On palpation, a mass is immediately recognized below the margin of the ribs on the right side. It extends from the ribs down to the anterior-superior spinous process of the ilium, where its lower margin is felt. This body extends outwards to the median line, but it does not seem to be a continuous body, for there is a vertical groove into which I can introduce the tips of my fingers. This mass might readily be taken for a tumor growing from the liver, or for a portion of the right lobe of the liver, if it were not for this deep groove to which I have just referred. Is it possible that this is the transverse fissure of the liver, and this mass on the right an enlarged right lobe, while that to the left is a greatly hypertrophied left lobe? Or is this a mass loosely connected with the liver? Or is it distinct from the liver, pushing the enlarged organ to the left.

Let us first consider what the conditions are that could have caused the vomiting of blood which he tells us took place eight years ago. As you know, hæmatemesis is common in ulcer of the stomach, in cirrhosis of the liver and in malignant disease of the stomach; but in the latter affection, the blood is usually vomited in small quantities (the matters ejected being simply tinged with blood) and in the form of coffee-ground material. Copious hæmatemesis is rarely due to malignant disease. There are no symptoms justifying the diagnosis of ulcer of the stomach. It would, therefore, be altogether plausible to assume that he had cirrhosis of the liver and that the engorged gastric veins suddenly relieved themselves by the hæmatemesis. This is a symptom which not rarely occurs in the course of cirrhosis and may be one of the first to attract the attention of the patient. We might say that this man had an enlarged cirrhotic liver, but this would not account for the attacks of hæmaturia which recurred for twelve months, closing with February, 1882. These would point to some serious disease of the kidneys them-

selves. This is borne out by the pain in the renal regions, radiating along the course of the ureters and into the penis, which recurred with the attacks of hæmaturia, so that when we, to-day, find in the urine the evidences of pyelitis (pus and a small amount of albumen without tube-casts), it leads us to suspect that we have to deal with some serious affection of the kidneys, perhaps an impacted calculus, and we are forced to consider whether or not this mass on the right side may not be the right kidney greatly enlarged and pushing the liver to the left and downward. The supposition that this is the right kidney is strengthened by the history of the case, by the general feel and character of this mass, and by the fact that I can succeed in forcing my finger to a considerable depth between it and what seems to be the enlarged right lobe of the liver. When I examine for a similar enlargement on the left side, I fail to find it. I find the left lobe of the liver projecting downwards. The spleen does not appear to be enlarged.

From this examination I am compelled to suspect that we have here a great cystic kidney or a sarcoma of the right kidney. This mass is easily grasped by the fingers. It extends into the lumbar region and is slightly movable. I can force it backwards until it bulges out posteriorly. It seems to be more movable than a tumor of the kidney should be, but in all other respects it corresponds with that supposition.

It is of the greatest importance that we should know the exact nature of this mass, for if it is an enlarged kidney, the question of extirpating it must be considered. I propose, therefore, to introduce an exploring needle into the centre of this body to see if it contains liquid. That failing, I shall, by means of a delicate instrument, remove a shred of tissue for microscopical examination. If it proves to be an enlarged kidney, I shall call a consultation to consider the advisability of removing it. Taking advantage of the relaxation of the abdominal walls, I have succeeded in getting my finger between this mass and the liver above. There is a groove continuous with the one I

before pointed out. The right lobe lies above the margin of the ribs. This still further confirms the supposition that this mass is connected with the right kidney, and it justifies the exploratory puncture which I propose to make in order to determine more positively its exact character. If this be a cyst of the kidney, with, perhaps, a calculus obstructing the ureter, the organ should be removed. Even if it be a sarcoma, I should be in favor of the removal of the kidney.

The man's general condition seems to be pretty fair. The only complication would be the existence of secondary disease of the liver. Although we may presume that this mass has exerted a displacing effect upon the liver, yet we find that that organ extends so far above the margin of the ribs and so far below that we must conclude that the liver is enlarged. If we were sure that this was not merely a congestive enlargement, we should not think of any interference with this mass.

I shall try to persuade him to stay in the hospital for a few days, in order that we may make the exploratory puncture.

Society Reports.

Buffalo Medical and Surgical Association.

Regular Meeting, August 5, 1884.

President, F. W. Bartlett, in the Chair.

The minutes of the last meeting were read and approved, after correction by Dr. Stockton, who stated that he would rather not be considered as thinking that obstetrics should be the work of the midwife.

Dr. Irving M. Snow was elected a member of the society.

Dr. A. R. Davidson read a paper on "Hæmaturia as a Symptom in Diseases of the Genito-Urinary System." (Published in the Journal for August.)

Discussion—Dr. Frederick thought every one would find difficulty in diagnosing the source of blood in the urine. It is almost the same as the differentiation of epithelium from the various portions of the genito-urinary tract.

Dr. Hartwig doubted if urine could be drawn from one ureter for purposes of careful diagnosis. One German author states that he has accomplished it. It is possible in the female, he thinks, by using the Siemens urethral dilator and the Siemens catheter for the ureter. He has himself tried it, once in the cadaver and once in a living person. He was quite successful in the dead body and introduced it two inches into the living ureter. Siemens has introduced it into the pelvis of the kidney itself. It is said that the openings of the ureters can be distinguished by feeling, but he had had difficulty in doing this.

Dr. Coakley thought the paper good as far as it went. The literature on this subject is not great. He wished more had been said of the treatment. He had met with more cases of renal difficulty in this city in three years than in Richmond in twenty, with twice as large a practice. He believed the cause must lie in the water we drink. The Niagara water contains more phosphates than most waters. Had noticed a periodicity in renal affections. They were numerous in the spring, ran through short courses and terminated favorably.

Dr. Hopkins knew what was meant by the parenchyma of the kidneys, but would like to know what was the signification of parenchyma of ureters and bladder?

Dr. Cronyn said the doctor had nicely summarized the subject of hæmaturia. Naturally, it is very important to know the origin of the blood which we find in the urine, in order to be able to treat the case properly, which is still more important. The therapeutics will be plain after the diagnosis. Reno-cystic disease prevails the world over, and he did not think it limited so much to Buffalo as Dr. Coakley seemed to believe. The literature of these diseases is vast in every language.

Dr. Cary was sure that renal affections prevail to a much greater extent in northern than in southern climates, and referred to the hospital statistics of Genoa, where occurred but one case in 3,000, while in London there was one in thirty.

Dr. Davidson thanked the gentlemen of the association for the kindly reception of the paper. He had feared that it might be considered as more appropriate for undergraduates than for a learned body of physicians of experience, but he had been induced to write the paper from his experience in many cases which had been referred to him, and particularly by the case of an eminent physician, who had consulted him with marked hæmaturia. In this case the patient had consulted a number of physicians, both here and in New York. He had had prescribed for him gallic acid, tannin, lead, ergot, tr. iron, etc.; no two physicians agreed upon the treatment, and the origin of the blood was only guessed at. To ask for the treatment of hæmaturia was like asking for the treatment of dropsy. The term designates a symptom only, and not a disease, and as the bleeding may originate from any part of the urinary tract, a vaguer term than hæmaturia can hardly be employed. He agreed, however, with Dr. Coakley, as to the prevalence of renal calculi in this region, and particularly those composed of oxalate of lime. He believed that the calcareous waters of this vicinity had an influence, and referred to the importance of prescribing in such cases the purer mineral waters, or, when the expense was an obstacle, the employment of water which had been boiled.

In reply to Dr. Hopkins' objection to the use of the word "parenchymatous," as applicable to the entire urinary tract—if he remembers correctly, the word "parenchyma" was made up of Greek words, signifying *to pour out*, and was particularly applied to the texture of the glandular organs, because it was believed that it was formed of effused blood.

In the paper, the term "parenchymatous hemorrhage" was used to signify an effusion or oozing of blood from any part of

the urinary tract in contra-distinction to the term "profuse hemorrhage," by which was implied a rupture, however insignificant, of a vessel.

Voluntary Communications—Dr. Hayd exhibited the head and neck of a tænia mediocanellata. After using almost every remedy, he, at last, succeeded in bringing away the worm with a dose of pellitierin, the alkaloid of pomegranate. The patient had, at various times in the past few months, discharged pieces of the worm thirty, eighteen, twelve and twenty-eight feet in length, respectively.

Dr. Peterson asked if any of the members had met with the tænia solium, for all the heads sent to him for examination proved to be tænia mediocanellata. He would like to ask, further, if any gentleman present could affirm that he had seen a tape worm over sixteen feet in length, by his own actual measurement. The length given by German pathologists was not over sixteen feet.

Drs. Cronyn, Hayd and others were sure they had frequently seen them double that measurement. Dr. Cronyn said there were some in the museum at Toronto ninety feet in length. Dr. Hayd invited Dr. Peterson to come to his office and measure the one he had recently removed, which was thirty feet in length.

Dr. Davidson said that pomegranate had been tried by practitioners often, and, like most of the tænicides, with variable success in expelling the worm. Kooso was the best remedy for tænia, but the flowers must be perfectly fresh and the patient have abstained from food for at least twelve hours before taking the drug.

Dr. Hartwig had tried pellitierin three times. It was not only successful, but an agreeable drug to take.

Dr. Cronyn believed in the idiosyncrasies of people with regard to the effect of the various anthelmintics. Sometimes one remedy succeeds, sometimes another, owing to the difference of the person in susceptibility. He knew of one case cured by fasting and praying.

Dr. Hayd exhibited, also, a one-month ovum with the membranes complete.

Dr. Frank related the case of a man aged 62, ship-carpenter, who came to him two weeks ago, because of his vomiting everything. From the great pulsation in the epigastric region and other signs, he made a diagnosis of an abdominal aneurism, but found no aneurism at the autopsy. The heart was enlarged and there was some calcification of the abdominal aorta. On opening the stomach, which was greatly distended, he found an organized clot of blood as large as a fœtal head. The day before he died, the patient had vomited blood. He would like to ask how long this clot could have been in the stomach and where the blood came from, as the stomach seemed normal?

Dr. Park said there were often cases which simulated abdominal aneurism. He had seen two or three. The chief pathognomonic signs were the intense pain experienced in aneurism here, when pressure is made upon the iliacs, and the sensation of lateral expansion.

Dr. Peterson doubted if a clot could organize in the stomach, because of the presence of the gastric juice, and believed the blood had been in the stomach but a few hours, if so long. It evidently came from the rupture of a minute vessel in the gastric wall, which is not a very uncommon occurrence.

Reports on Prevailing Diseases—Dr. Weil reported dysentery; Dr. Hartwig, the same, and various forms of choleraic disease; Dr. Coakley, cholera infantum and morbus; Dr. Van Peyma, the same; Dr. Ring, the same, with dysentery; Dr. Cronyn, diarrhœa and dysentery, and Dr. Bartlett stated that he had not, in thirty years of practice, witnessed so much intestinal trouble, such as cholera infantum and morbus, diarrhœas and dysentery.

Miscellaneous Business—The following resolution was introduced, and after some discussion adopted, the Secretary being directed to send copies of the same to the leading newspapers:

WHEREAS, We feel that the pangs of private sorrow are not lightened by the parading of its details in the public press, and that such publicity, while at the cost of additional suffering to those already severely tried, merely panders to the vulgar and debasing desire for the perusal of personal items.

WHEREAS, The *Buffalo Morning Express*, of August 3d, contained an article under the heading of "Two Unfortunates," which called public attention to the private afflictions of two families of this city in a manner to cause added and unnecessary grief to worthy and innocent people.

WHEREAS, In sending our patients to institutions, where, from the nature of their cases, they are better cared for than at home, we still regard them in the light of private persons whose unhappy ailments are no more to be dragged before the public than are ordinary professional confidences; therefore—

Resolved, That the Buffalo Medical and Surgical Association censures the publication in the *Express* as an inexcusable, wanton and brutal invasion of the rights of the individual and of the home.

The meeting then adjourned.

FREDERICK PETERSON, *Secretary.*

Selections.

DR. KOCH ON THE CHOLERA.

An important and influential conference* upon cholera was opened in Berlin at the Imperial Board of Health on the evening of July 26th. There were present Drs. v. Bergmann, Coler, Eulenberg, B. Fränkel, Gaffky, Hirsch, Koch, Leyden, S. Neumann, Pistor, Schubert, Skreczka, Struck, Virchow and Wollfhügel. The conference had been called at the instance of the Berlin Medical Society, whose President, Prof. Virchow, explained that it was thought advisable Dr. Koch should, in the first instance, give a demonstration of his work before a smaller body than the whole society, so that the proceedings might be fully reported in the medical press. He mentioned that Herr Director Lucanus and President Sydow had expressed their regret at being unable to be present, as well as many others, including Drs. von Lauer, von Frerichs, Mehlhausen and

* A detailed report is published in the Berliner Klinische Wochenschrift of Aug. 4th.

Kersandt. Before the meeting Dr. Koch exhibited microscopical specimens and drawings of the cholera bacillus, and demonstrated the method of its preparation and cultivation. The preparations included specimens of choleraic dejections dried on covering glasses, stained with fuchsin or methyl-blue, and examined with oil immersion, one-twelfth, and Abbe's condenser; also sections of intestine preserved in absolute alcohol, and stained with methyl-blue. There were also cultures in gelatin, etc.

Dr. Koch commenced by remarking that what was required for the prevention of cholera was a scientific basis. Many and diverse views as to its mode of diffusion and infection prevailed, but they furnished no safe ground for prophylaxis. On the one hand, it was held that cholera is a specific disease originating in India; on the other, that it may arise spontaneously in any country and own no specific cause. One view regards the infection to be conveyed only by the patient and his surroundings; the other that it is spread by merchandise, by healthy individuals, and by atmospheric currents. There is a like discrepancy in the views on the possibility of its diffusion by drinking water, on the influence of conditions of soil, on the question whether the dejecta contain the poison or not, and on the duration of the incubation period. No progress was possible in combating the disease until these root questions of the etiology of cholera are decided. Hitherto the advances in knowledge upon the etiology of other infective diseases have done little towards the etiology of cholera. These advances have been made within the last ten years, during which time no opportunity—at least not in Europe—has occurred to pursue researches; and in India, where there is abundant material for such research, no one has undertaken the task. The opportunity given by the outbreak of cholera in Egypt last year to study the disease before it reached European soil was taken advantage of by various governments, who sent expeditions for the purpose. He had the honor to take part in one of these, and in accepting it he well knew the difficulties of the task before him, for hardly anything was known about the

cholera poison, or where it should be sought; whether it was to be found only in the intestinal canal, or in the blood, or elsewhere. Nor was it known whether it was of bacterial nature, or fungoid, or an animal parasite—*e. g.*, an amœba. But other difficulties appeared in an unexpected direction. From the accounts given in text-books he had imagined that the cholera intestine would show very slight changes, and would be filled with a clear "rice-water" fluid. He had not fully recollected the conditions met with in post mortem examinations he had formerly made, and was therefore at first surprised to meet with quite a different state of things. For he soon found that in a large majority of cases remarkably severe lesions were present in the intestines. In other cases the changes were slighter, and eventually he met with some which, to a certain extent, corresponded with the type described in text-books. But it was some time, and after many inspections, before he was enabled to correctly interpret the varied changes met with. In spite of a most careful examination of all other organs and of the blood, nothing was found to establish the presence of an infective material, and attention was finally concentrated on the intestinal conditions. There were cases in which the lower segment of the small intestine, most marked immediately above the ileo-cæcal valve, extending thence upwards, was of a dark reddish-brown color, the mucous membrane being covered with superficial hemorrhages. In many cases the mucous membrane appeared to be superficially necrosed, and covered with diphtheritic patches. The intestinal contents in such cases were not colorless, but consisted of a sanguinolent, ichorous, putrid fluid. Other cases showed a gradual transition to a less marked change. The redness was less intense, and was in patches, whilst in others the injection was limited to the margins of the follicular and Peyerian glands, giving an appearance which is quite peculiar to cholera. In comparatively few cases were the changes so slight as to consist in a somewhat swollen and opaque condition of the superficial layers of the mucous membrane, with

delicate rosy-red injection, and some prominence of the solitary follicles and Peyer's patches. In such cases the intestinal contents were colorless, but resembling meal-soup rather than rice-water. In only a solitary instance were the contents watery and mucoid. Microscopical examination of the intestine and its contents revealed, especially in the cases where the margins of Peyer's patches were reddened, a considerable invasion of bacteria, occurring partly within the tubular glands, partly between the epithelium and basement membrane, and in some parts deeper still. Then he found cases in which, besides bacteria of one definite and constant form, there were others also accumulated within and around the tubular glands, of various size, some short and thick, others very fine; and he soon concluded that he had to do here with a primary invasion of pathogenic bacilli, which, as it were, prepared the tissues for the entrance of the non-pathogenic forms, just as he had observed in the necrotic, diphtheritic changes in the intestinal mucosa and in typhoid ulcers. Passing to speak of the microscopical characters of the contents of the bowel, Dr. Koch said that owing to the sanguinolent and putrescent character of these in the cases first examined, no conclusion was arrived at for some time. Thus he found multitudes of bacteria of various kinds, rendering it impossible to distinguish any special forms, and it was not until he had examined two acute and uncomplicated cases, before hemorrhage had occurred, and where the evacuation had not decomposed, that he found more abundantly the kind of organism which had been seen so richly in the intestinal mucosa. He then proceeded to describe the characters of this bacterium. It is smaller than the tubercle bacillus, being only about half or at most two-thirds the size of the latter, but much more plump, thicker, and slightly curved. As a rule, the curve is no more than that of a comma (,) but sometimes it assumes a semi-circular shape, and he has seen it forming a double curve like an S, these two variations from the normal being suggestive of the junction of two individual bacilli. In cultures there always

appears a remarkably free development of comma shaped bacilli. These bacilli often grow out to form long threads, not in the manner of anthrax bacilli, nor with a simple undulating form but assuming the shape of delicate long spirals, a corkscrew shape, reminding one very forcibly of the spirochæte of relapsing fever. Indeed, it would be difficult to distinguish the two if placed side by side. On account of this developmental change, he doubted if the cholera organism should be ranked with bacilli; it is rather a transitional form between the bacillus and the spirillum. Possibly it is a true spirillum, portions of which appear in the comma shape, much as in other spirilla—*e. g.*, spirilla undula, which do not always form complete spirals, but consist only of more or less curved rods. The comma bacilli thrive well in meat infusion, growing in it with great rapidity. By examining, microscopically, a drop of this broth culture the bacilli are seen in active movement, swarming at the margins of the drop, interspersed with the spiral threads, which are also apparently mobile. They grow also in other fluids—*e. g.*, very abundantly in milk, without coagulating it or changing its appearance. Also in blood serum they grow very richly. Another good nutrient medium is gelatine, wherein the comma bacilli form colonies of a perfectly characteristic kind, different from those of any other form of bacteria. The colony, when very young, appears as a pale and small spot, not completely spherical as other bacterial colonies in gelatine are wont to be, but with a more or less irregular, protruding or jagged contour. It also very soon takes on a somewhat granular appearance. As the colony increases, the granular character becomes more marked, until it seems to be made up of highly refractile granules, like a mass of particles of glass. In its further growth the gelatine is liquefied in the vicinity of the colony, which at the same time sinks down deeper into the gelatine mass, and makes a small thread-like excavation in the gelatine, in the centre of which the colony appears as a small white point. This, again, is peculiar; it is never seen, at least so marked, with any

other bacterium. And a similar appearance is produced when gelatine is inoculated with a pure culture of this bacillus, the gelatine liquefying at the seat of inoculation, and the small colony continually enlarging; but above it there occurs the excavated spot, like a bubble of air floating over the bacillary colony. It gives the impression that the bacillus growth not only liquefies the gelatine, but causes a rapid evaporation of the fluid so formed. Many bacteria also have the power of so liquefying gelatine with which they are inoculated, but never do they produce such an excavation with the bladder-like cavity on the surface. Another peculiarity was the slowness with which the gelatine liquefied, and the narrow limits of this liquefaction in the case of a gelatine disc. Cultures of the comma bacillus were also made in Agar-Agar jelly, which is not liquefied by them. On potato these bacilli grow like those of glanders, forming a greyish-brown layer on the surface. The comma bacilli thrive best at temperatures between 30° and 40° C., but they are not very sensitive to low temperatures, their growth not being prevented until 17° or 16° C. is reached. In this respect they agree with anthrax bacilli. Koch made an experiment to ascertain whether a very low temperature not merely checked development but killed them, and subjected the comma bacilli to a temperature of 10° C. They were then completely frozen, but yet retained vitality, growing in gelatine afterwards. Other experiments, by excluding air from the gelatine cultures, or placing them under an exhausted bell jar, or in an atmosphere of carbonic acid, went to prove that they required air and oxygen for their growth; but the deprivation did not kill them, since on removing them from these conditions they again began to grow. The growth of these bacilli is exceptionally rapid, quickly attaining its height, and after a brief stationary period as quickly terminating. The dying bacilli lose their shape, sometimes appearing shrivelled, sometimes swollen, and then staining very slightly or not at all. The special features of their vegetation are best seen when substances

which also contain other forms of bacteria are taken—*e. g.*, the intestinal contents or choleraic evacuations mixed with moistened earth or linen and kept damp. The comma bacilli in these conditions multiply with great rapidity so as to far outnumber the other forms of bacteria, which at first might have been in far greater abundance. This state of affairs does not last long; in two or three days the comma bacilli began to die off, and the other bacteria to multiply. Precisely the same thing takes place in the intestine, where, after the rapid initial vegetation is over, and when exudation of blood occurs into the bowel, the comma bacilli disappear and putrefactive bacteria predominate. Whether the occurrence of putrefaction is inimical to the comma bacilli has not been proved, but from analogy it is very probable. At any rate, it is important to know this for certain, for if it be so, then the comma bacilli will not thrive in a cesspit, and then further disinfection would be unnecessary. These bacilli thrive best in fluids containing a certain amount of nutriment. Experiments have not yet shown the limits in this respect, but Koch has found them capable of growing in meat broth diluted ten times. Again, if the nutrient medium become acid in reaction their growth is checked, at least in gelatine and meat infusion; but, singularly enough, they continue to grow on the surface of boiled potato which has become acid, showing that all acids are not equally obnoxious to them. But here, as with other substances which hinder their growth, they do not kill the bacilli. Davaine has shown that iodine is a strong bactericide. He experimented with anthrax bacilli in water to which iodine was added, and the bacilli were destroyed. But practically the organisms have to be dealt with in the alkaline contents of the bowel, or in the blood or fluids of the tissues, where iodine cannot remain in the free state. Koch found that the addition of an aqueous solution of iodine (1 in 4,000) to meat infusion, in the proportion of 1 in 10, did not in the least interfere with the growth of the bacilli in that medium. He did not pursue this line of inquiry, seeing that in practice larger quantities of iodine

than that could not be given. Alcohol first checks the development of the comma bacilli when it is mixed with the nutrient fluid in the proportion of 1 in 10, a degree of concentration which renders it impracticable for treatment. Common salt was added to the extent of 2 per cent., without influencing the growth of the bacilli. Sulphate of iron, in the proportion of 2 per cent., checks this growth, probably by precipitating albuminates from the fluids, and possibly also by its acid reaction; certainly it does not seem to have any specific disinfecting action—*i. e.*, in destroying the bacilli. Indeed, Koch thinks that the admixture of sulphate of iron with fæcal matter may arrest putrefaction and really remove what may be the most destructive process to the comma bacilli. Hence he would distinguish between substances which merely arrest putrefaction and those which are bactericidal; for the former may simply serve the purpose of preserving the infective virus. Among other substances which prevent the growth of the comma bacilli may be mentioned alum, in solutions of the strength of 1 in 100; camphor, 1 in 300; carbolic acid, 1 in 400; oil of peppermint, 1 in 2,000; sulphate of copper, 1 in 2,500 (a remedy much employed, but how much would really be needed merely to hinder the growth of the bacilli in the intestine!); quinine, 1 in 5,000; and sublimate, 1 in 100,000. In contrast with the foregoing measures for preventing the growth of these bacilli is the striking fact that they are readily killed by drying. This fact is proved by merely drying a small drop of material containing the bacilli on a cover-glass, and then placing this over some of the fluid on a glass slide. With anthrax bacilli vitality is retained for nearly a week; whereas, the comma bacillus appears to be killed in a very short time. Thus it was found that although vitality was retained—depending largely upon the number of bacilli—for a short time, yet withdrawal of the nutrient fluid for an hour or even less often sufficed; and it never happened that the bacilli retained vitality after a deprivation lasting twenty-four hours. These results would seem to point to the fact that the comma bacillus

does not, like the organisms of anthrax and vaccinia, pass into the resting state (Daner-zustande) by drying; and if so it is one of the most important facts in the etiology of cholera. Much, however, remains to be done, especially with regard to the soiled linen of cholera patients being kept in a damp state. He found that in soiled articles, when dried for a time, varying from twenty-four hours and upwards, the comma bacilli were quite destroyed. Nor was the destruction delayed by placing choleraic excreta in or upon earth, dry or moist, or mixed with stagnant water. In gelatine cultures the comma bacilli can be cultivated for six weeks, and also in blood serum, milk and potato, where anthrax bacilli rapidly form spores. But a resting state of the comma bacilli has never been met with—a very exceptional thing in the case of bacilli, and another reason why the organism must be regarded rather as a spirillum than a bacillus, for the spirilla require only a fluid medium, and do not, like the anthrax bacilli, thrive in the dry state. It is quite unlikely that a resting state of the comma bacillus will ever be discovered; and, moreover, its absence harmonizes with our knowledge of cholera etiology.—*The Lancet.*

Radical Treatment of Hernia by Excision of the Sac.

The radical cure of hernia is a subject of much practical interest. It consists of the partial or complete excision of the hernial sac and the subsequent suturing of the pillars of the inguinal canal, and the closure, after a similar fashion, of the cervical ring. This plan is really very old, although it has been recently introduced under new conditions, and thus may be still considered on its trial. Sir William McCormac reports a series of sixteen cases in which this plan of operation was used, with the following results: In thirteen cases there was complete cure and in one case a recurrence of the hernia. There were, besides, two fatal cases, but these were from causes unconnected with the operation. In one of the fatal cases the patient was a

female, aged 50, who had suffered from femoral hernia of the right side for thirty years. She had symptoms of incomplete strangulation for five days preceding the operation, when, with antiseptic precautions, the hernia was reduced, and the sac and some surplus skin removed. She died six days afterwards from œdema of the lungs and slight incipient peritonitis. The other case was a man aged 69, who had had a left inguinal hernia for fifteen years, when, four days before the operation was made, in consequence of a sudden strain, a swelling appeared in the right groin, which proved to be a femoral hernia. Symptoms of strangulation followed immediately. The hernia was reduced and the sac ligatured with catgut at the neck and removed. Vomiting and hiccough supervened and continued until the death of the patient, two days afterwards, from peritonitis. A portion of the strangulated intestine was found to have sloughed. The bowel below was empty and collapsed.

Of the other cases, eleven were inguinal, including one double hernia, and three were femoral; twelve were males and two were females. The time when the permanence of the cure was examined into varied from a few weeks or months, in the two most recent, to four years and eight months in the oldest of the cases reported. In all of these cases, with one exception, the cure was complete, most of the patients going without a truss, and being able to attend to their usual vocations. In the case where the hernia returned, the operation had been successful and the patient discharged cured, but as he was leaving the hospital he had a severe fall and the rupture then and there reappeared, and has remained down ever since. In commenting upon this successful series of cases, the author concludes, first, that in all cases of strangulated hernia, the usual operation for the division of the stricture having been performed, partial or complete abcision of the sac should be likewise done as an ordinary part of the operation. Where the aperture is large, its margins should be drawn together by suture. Chromised or green catgut admirably suffices for the purpose, or, if preferred,

silver sutures may be used. The use of antiseptics is strictly enjoined in every step of the operation. Second, a similar operation is justifiable in cases of hernia, either femoral or inguinal, which cause the patient pain and inconvenience, or which are not retained by a truss when the individual is about his ordinary vocations. If the patient be in good general health it may be performed without serious risk, and with the result, probably, of permanently freeing the individual from the consequences of a debilitating infirmity.—*Sir William McCormac, in British Medical Journal, August* 2, 1884.

Chronic Joint Disease.

In a clinical lecture upon this subject, the author states that in its earlier phases a cure with perfect conservation of movement is possible, and that this termination should always be aimed at and can very often be obtained. The forms of malady referred to generally occur from the first to the twelfth year, and most often attack children of the strumous or scrofulous habit. This is very important. These diseases, arising in strumous children, are rarely of tubercular origin. Struma is a certain habit of body, a certain faulty method of forming and nourishing its tissues, which, thus produced and sustained, are not diseased, but are apt to respond to any slight irritation by sluggish and prolonged inflammations, the immediate products of which have no tendency to higher development, but rather to certain forms of degeneration—suppurative, fatty, caseous and tubercular. In certain parts of the body tubercle appears with great difficulty, and among these the synovial membrane is pre-eminent. Tubercle does sometimes occur in joints that have long been subject to chronic strumous inflammation, but when so found it is tubercle, not of the synovial membrane, but of old inflammatory products. Again, when tubercle appears in these situations, it is a late production—the terminal not the initial

point of a morbid process. These considerations are not mere pedantic hair-splitting, for they underlie the question whether treatment of strumous joint disease is of any great value; for, if the disease were the result of tubercle, the assertion that a cure could often be attained would be false.

In the treatment of these cases the first consideration is to recognize that we have to deal with a malady whose sluggish character depends on a state of bodily mal-nutrition, and one of the essentials toward improving this condition is to abstain from confining the children to one room or ward, and to give them plenty of fresh air and exercise. At the same time, the diseased joint must be kept at rest. The conditions are easily fulfilled when the affected joint is one of the upper extremity, but if it be one of the lower extremity, some difficulties present themselves. Not only must the joint be kept at complete rest, but we must see to it that while moving about no weight is thrown on the joint surface. A large number of splints have been invented for this purpose, and any one can be used that fulfills the conditions in each particular case. On the whole, the one that has given the best satisfaction in our hands is the splint invented by Dr. Dumbrowski, of Dorpat. This is of easy application, and by it the joint is placed in absolute rest, while the remainder of the body is in good exercise.—*Richard Barwell, in The Lancet, August* 2, 1884.

Rabies Inoculation.

It is now about four years since Pasteur commenced his experiments and researches into the nature of hydrophobia, the results of which have been recently given to the public. Although the profession and scientists generally may not be very sanguine as to the grand results which this distinguished *savant* claims, yet enough has been advanced to warrant the French government in appointing a commission of scientific men of indisputable authority to investigate the matter and to

test the value of the interesting experiments instituted by Pasteur. The names of Vulpian, Villemin, Bert and Bouley are a sufficient guarantee of the character and reliability of the proposed enquiry. Pasteur, in the course of his experiments, hit upon the expedient of inoculating the brain of the animal with the virus of rabies. The skull is trephined with a small instrument and the virus introduced. By this method the action of the virus is much hastened, the effects being manifest in a few days, instead of from twelve to fourteen days. In fact, Pasteur thinks he has in this way demonstrated that rabies is a malady of the brain. In the course of his experiments he found that the virus, after having passed through three monkeys in succession, becomes so attenuated that its introduction into a dog is harmless. But when the virus is passed through a rabbit and guinea pig in like manner, it increases in virulence, becoming more virulent than the virus of the rabid dog. The plan proposed is to take the virus from a rabbit dying after inoculation, and inoculate this successively in other rabbits, and finally in the dog, which is thus rendered refractory to the rabies.

The test experiments proposed by Pasteur consist, first, in causing twenty unprotected dogs and twenty "vaccinated" dogs (presumably protected thereby from the poison) to be bitten by dogs in a rabid state; and, second, in artificially inoculating with the virus of rabies two other sets of twenty dogs, respectively vaccinated and unvaccinated. "The twenty vaccinated dogs," says Pasteur, "will resist the poison, and the other twenty will all die of madness."

The importance of this discovery, if true, cannot be overestimated, but we must not be too ready to express unqualified approval and endorsement of Pasteur's views. It will be observed that he uses, contrary to what one would have supposed, the virus from rabbits, and not the attenuated virus from monkeys. Furthermore, he does not propose to apply the virus for the protection of human beings, although we have read in the press that persons applied to him for inoculation. The experi-

ments, so far, do not seem to us convincing, and we wait with considerably curiosity, mingled with not a little anxiety, the report of the commission. The result of these trials can hardly fail to be largely decisive of the question one way or the other, and will be an unequivocal illustration of the value of experimental pathology. Meantime, we agree with the man who said that the best way to prevent hydrophobia was "to shoot the dog before he went mad."—*Canada Lancet.*

Mr. Jonathan Hutchinson's Views on the Treatment of Senile Gangrene.

His paper, read before the Royal Medical and Chirurgical Society of London, began with the statement that the author's chief object was to urge the safety and expediency of amputating in senile gangrene, if the operation were done at a great distance from the disease. In the common form of gangrene of the toes and foot, the lower third of the thigh was the part suggested as the proper level of the amputation, and, in rarer cases, in which the hand was affected, the middle of the upper arm. After remarking on the fact that amputation had hitherto generally proved disappointing, owing to return of the disease, the author urged that this was owing to its having usually been done too low down. The calcification of the arteries, upon which, in the main, the disease depends, was usually greatest near the periphery, and hence the difficulty as to the supply of blood for the nutrition of the flaps. This source of danger was not met with if the amputation be done sufficiently high. In a series of cases, in very old patients, the author had not encountered the recurrence of gangrene, excepting in one. In three the stump had healed well. In a fourth, in which the patient, although not old, was prematurely senile, and the calcification of the arteries extreme, the recovery had also been excellent. In this instance the femoral artery was so rigid that it

stuck out from the face of the stump like a small bone. One of the patients, in whom the stump had healed without a drawback, was seventy years old. In two of the cases the other foot had been subsequently threatened with gangrene. As to the time to be selected, the author thought that as soon as the patient was so ill as to be confined to bed and the disease was well established, it was best to operate. Spontaneous cure was, he urged, very exceptional, and a great majority of such cases ended in death, after a long period of much suffering. The thinner the patient, the less was the risk of amputation. In a few cases in which the thigh was exceptionally fat and the tissue flabby, it might be wise to hesitate as to recommending it. In all cases, Lister's precautions had been carefully used, and in two or three, the patient had never experienced the slightest pain from the day of the operation.

Specific Treatment of Diphtheria by the Combustion of a Mixture of Oil of Turpentine and Coal Tar, or by the Oil of Turpentine Alone.

This specific treatment of diphtheria, which has given the author the best results in croup also, consists in igniting, in the sick chamber, a mixture of coal tar and oil of turpentine, in the average proportion of 200 gram. of the first to 80 gram. of the second (℥vi to ℥iiss), or even the oil of turpentine alone in default of the coal tar, for the Norwegian tar provokes cough.

It produces an intense smoke which has the power of softening and disintegrating the pseudo-membranes, which are afterward expelled as catarrhal secretions.

The amelioration is rapidly obtained, but it is necessary to prolong the fumigations more or less time according to the gravity of the cases.

Dr. Delthil considers this a heroic method at the start of the disease, but in croup, when the physician is called late, when

there is but the supreme resource of tracheotomy left, it is yet of advantage to use the fumigations in connection with the operation.

He reports a case of tracheotomy, in a child who had a general diphtheria and whose bronchial obstruction had been ascertained by other physicians. After the operation, fumigations were made during many hours, which had the effect to fluidify and eliminate the bronchial and tracheal pseudo-membranes.

The combustion of the turpentine and coal tar produces such a profusion of carburets and well divided carbon in the chamber, that the light is dimmed, yet, the patient and the assistants respire well in this atmosphere which provokes no cough.—*Ex.*

Specific Treatment of Diphtheria and Croup.

Dr. George A. Seynn, of Monongahela City, Pa., read a paper at the last meeting of the American Medical Association (*Jour. Am. Med. Association*) upon this subject. He recommended bichloride of mercury as a specific for diphtheria and chloride of gold for croup.

The bichloride of mercury should be used in the first stage of diphtheria, and in large and frequently repeated doses, and not after everything else has failed. The effect of large doses of this remedy in the early stage of the disease is to reduce the temperature, relieve pain in the head, back and limbs, unlock the secretions, lessen the soreness in the throat in time to relieve nausea and vomiting, restore appetite, and, most of all, to prevent the generation of the poison in the membrane, and to check the formation of the membrane, or to cause it, if formed, to speedily disappear. It is best given in solution, so that when excessive nausea is present, the dose may be gradually lessened and the time shortened, giving the stomach a chance to dispose of it, but at the same time keeping up full treatment.

The dose should be, for a child three years old, one-sixteenth to one-twelfth of a grain in a teaspoonful of elixir of bismuth

and pepsin every three hours, and for an adult one-twelfth to one-eighth of a grain every three hours. The remedy rarely disturbs the stomach, does not produce ptyalism and seldom acts on the bowels. Under its use, commenced early, an ordinary case is convalescent in three days, and it rarely needs to be given longer than five days.

In croup the chloride of gold acts as a specific. It should be given in solution in distilled water. As it is very deliquescent and difficult to weigh, the druggist may dissolve the contents of a fifteen-grain bottle in fifteen drachms of distilled water, and to a child five years old, one to three drops of this may be given in water every one to three hours. In other words, the dose may be one-fiftieth to one-twentieth of a grain. It should not be administered in silver or other metal spoons, but dropped into a glass with a little water. Remarkable effects are reported.

A New Method of Removing Nasal Polypi.

Dr. William Ralph Bell says: "I take the liberty of bringing the mode of treatment before the notice of your readers which I have practiced with the very best results in several cases. It obviates any trouble from hemorrhage, which is frequently the case when the forceps or hooks is used; it is painless and very simple. I get my patient to blow strongly through the affected nostril, closing the other with his finger. The polypus will be brought down so that it can be easily seen through the external nares; then with my hypodermic syringe charged with a solution of tannic acid in water (of the strength of twenty grains to the fluid drachm), I pierce the polypus with the needle, and inject ten, fifteen, or twenty minims of solution, according to size of tumor. In a few days the polypus shrivels and dries up (tanned); it comes away without any trouble or pain, and looks like a clot of dry blood, my patients usually removing it by blowing the nose or by their fingers. In only one case, that of

an old lady, had I occasion to remove it myself, and in her case I think she was afraid to do so, for when I seized it with dressing forceps, I required to make no traction to bring it away."—*Canada Med. Record.*

Digitalis to Prevent Excessive Desire for Copulation.

In the case of a man who had persistent desire to have intercourse with his wife, even during the day, Dr. Folsom reports in the *Med. World* the successful action of digitalis as a complete depressor of venereal appetite. He prescribed it in ten drop doses, but the efficient point was attained only after a teaspoonful at a dose was reached, which abolished the power to cause erections, though it did not prevent the amative desire. In another case a young man wanted something that would enable him to hold his passion in check. The digitalis was prescribed for him also, commencing with ten drops, gradually increasing the dose until the desired effect was obtained, which required teaspoonful doses, as in the previous case. Dr. Folsom prescribes it in insanity resulting from self-abuse.

The Treatment of Lupus.

Believing the lupus is just as much a manifestation of scrofula as phthisis, or bone or gland disease, Mr. J. W. Taylor (*Birmingham Med. Review*) makes certain suggestions in accordance with that belief for the treatment of this disorder. The residence should be in a warm and dry climate, the house should be well ventilated, but free from draughts, out-door exercise should never be taken when the weather is cold and wet. The food should be good and varied. Cod-liver oil, when it can be taken, is strongly recommended, and Parrish's food has proved very useful. For local treatment Mr. Taylor recommends scraping with the curette in preference to caustics or scarifica-

tion. It is best to attack a small part at a time, and remove the disease thoroughly; this treatment is best adapted to those cases where the new growth and ulceration proceed equally; when the latter is in excess, the disease generally gets well without any local remedy; when the former is in excess, free removal is the best treatment.—*London Medical Times.*

An Overdose of Chloral During Parturition.

To a young and healthy patient, in her third labor, one hundred grains of chloral hydrate were given, in divided doses, in the course of forty-five minutes, in mistake for three doses of fifteen grains each. The patient became heavy and drowsy, but could be temporarily roused. The pulse was between sixty and seventy per minute. The pains became slow and ineffective. Fifteen minutes after the administration of the last dose of chloral, the membranes were ruptured, and twenty-five minutes later the child was feebly expelled by natural efforts. It was excessively pale, but began to breathe and cry after moderate efforts on the part of the accoucheur, but the skin did not exhibit its natural color for several hours. The placenta soon followed the child. Two drachms of fluid extract of ergot were given, and half an ounce of brandy. An hour after the birth, the mother was in a fairly good condition, and both she and the child made a good recovery.—*Boston Med. and Surg. Jour.*

A Dangerous Adulteration of Iodoform.

Dr. Biel, of St. Petersburg, calls attention to a commercial adulteration of iodoform with picric acid, which cannot be detected by the tests of Pharmacopœia. This mixture is not only poisonous, but is explosive when rubbed up in a mortar. It can be detected by the citron-yellow color it yields to a watery filtrate. If a solution of cyanide of potassium be added to the filtrate, no reaction will follow if iodoform be pure; but if there

be a trace of picric acid present, the solution will, in the course of ten minutes, become brownish red (isopurpuric acid), and in a short time deposits an insoluble precipitate of isopurpurate of potassium.—*Deutsch-Amerikan. Apotheker Zeitung.*

Editorial.

Uræmic Amaurosis.

Uræmic amaurosis, a loss of vision more or less completely seen in cases of uræmic "intoxication," but not showing any changes in the fundus of the eye recognizable by the ophthalmoscope, is a subject that receives but a passing notice in the text-books on ophthalmology.

Dr. A. Friedenwald, in the *Medical News* for August 8, 1884, says that transient loss of vision is observed among other symptoms of uræmic intoxication, but that pathology does not satisfactorily explain just how the eye becomes involved. It may occur in cases where it would be least expected, and, on the other hand, it may be absent in cases in which uræmic symptoms are most exaggerated. In some cases it is the only prominent symptom. The same irregularity is observed in the appearance of amaurosis as in that of other symptoms of uræmia. We find it equally difficult to explain the absence of all uræmic symptoms in many cases of kidney disease, in which the urinary analysis and the very pronounced dropsy testify to the existence of grave lesions; while, on the other hand, we are sometimes suddenly confronted with very threatening uræmic manifestations, when the urine may show but a trace of albumen.

This anomaly of vision, like all other signs of uræmia, is characterized by the suddenness of its invasion, the loss of vision from the first, or in a very short time, being complete. The ophthalmoscopic examination will yield entirely negative results,

except where retinal degeneration pre-existed. The amaurosis is not restricted to any special form of kidney disease, but occurs in all forms, although, perhaps, more frequently in those met with in pregnancy and scarlet fever. Other uræmic symptoms may precede the amaurosis, such as headache and vomiting, and the patient may arouse from a convulsion or a state of coma with sight gone. Or, on the other hand, the loss of sight may be the first and most prominent symptom of uræmic "explosion."

The prognosis, so far as the sight is concerned, is favorable, if the patient does not succumb. It may be re-established as suddenly as it disappeared, or it may return gradually, several days elapsing before full vision is regained. Sometimes vision remains somewhat impaired, permanently. In some cases there are several attacks of blindness.

The diagnosis is to be made between albuminuric retinitis and amaurosis without any apparent changes in the retina or optic nerve, dependent upon uræmia.

Treatment consists in free diaphoresis and purgation, the use of jaborandi and other means of combatting kidney disease, and in pregnancy in inducing premature labor in certain cases with severe uræmic symptoms.

The author concludes:

"1. That when amaurosis suddenly overwhelms a patient in both eyes with no ophthalmoscopic change, uræmia should be suspected, even in the absence of any other prominent uræmia symptom.

"2. That uræmic amaurosis will continue only as long as the uræmia exists, and will disappear when the function of the kidney is re-established. When permanent injury to sight is observed, it may be due to pre-existing retinal changes, not at all uncommon in Bright's disease.

"3. That the chances for a full return of sight are somewhat impaired when the patient has been the subject of recurring attacks.

"4. That by exhibiting jaborandi and other means for inducing free diaphoresis, and by free purgation, a catastrophe may be averted in the general forms of uræmia; but when it occurs in pregnancy, premature labor is the only remedy which promises safety to the patient."

The Niagara Medical College.

The second annual session of this institution opens October 1st under most flattering auspices. The opposition, received from numerous enemies connected with an institution with which the promoters of the new school have never designed to enter into competition, have so widely advertised the college among the profession that whatever anticipations of success may have been held are sure to be more than realized. This is especially encouraging, and demonstrates that the current sentiment of the profession throughout the country is in accord with the higher standard, to which the college is fully committed, both by its charter and by the oft-repeated declarations of its trustees and faculty. Thorough didactic and clinical instruction will be given, and students, arranged in classes, according to their proficiency and the period of their pupilage, will receive the most complete drilling which it is possible for its corps of instructors to give. The success of this course cannot be doubted, and the results will be felt both here and elsewhere. As to the facilities offered to students, no institution outside of the great medical centres will be able to surpass those provided by the Niagara school; and whatever diplomas may be granted will not be the exponent of so much time ostensibly devoted to study by the recipient, but, rather, the certificate for qualifications, upon which an able independent body of examiners have sat in judgment.

We ask the profession to examine the methods and principles upon which this institution is based. We anticipate a warm endorsement, and we are able to give assurance that the college will warrant the fullest confidence that can be bestowed.

The Disinfection of Mail Matter.

While Asiatic cholera is prevailing to such an alarming extent in Europe, the advisability of disinfecting mail matter is being considered by our sanitary authorities. In some German States, the foreign mail is carried in tarred bags, numerous holes are pierced in letters and packages and the whole lot is fumigated. This means of disinfection has been ridiculed by Prof. Pettenkofer in his report on the subject to the Bavarian government. He claims that there is no evidence whatever to prove that contagious germs are imported by the mails, and characterizes all attempts in this direction as "Love's labor lost." In proof of his statements he shows that although the postal service has been greatly extended and accelerated during the last few years, the disease is not disseminated more rapidly than formerly. In spite of the increased communication with Calcutta and Bombay, places where cholera is never extinct, Europe is not visited by cholera more often than formerly. Besides this, men who handle the mails are not especially liable to infection. England, in 1872–4, was free from cholera, although the disease prevailed in many Continental countries, and the mails were not submitted to sanitary inspection. Pettenkofer's views seem to coincide with those of Florence Nightingale, who, although ignorant of the gyrations of germs, has had ample experience with cholera, and claims that disinfection is almost worthless, purity and cleanliness being the only means of resisting the invasions of this disease.

Death of Prof. Ed. Jæger.

The city of Vienna, and, indeed, the whole medical world, has to deplore the death of Prof. Ed. Jæger, which occurred July 5th. He was born in Vienna in 1818, and was the son of Frederick Jæger, a famous oculist of that time. Prof. Ed. Jæger was most eminent in ophthalmology, and by one of his pupils was called the master of all the masters in ophthal-

moscopy. His reputation was not limited to his own city or pupils, but he was well known abroad for his great scientific attainments and work. His ophthalmoscope, his atlas and his test-types are known to every oculist.

We have been favored with a copy of Dr. Charles Parkes' masterly address on the subject of gun-shot wounds of small intestines, read at the meeting of the American Medical Association, last May.

Dr. Parkes' conclusions, based on the results of thirty-seven experiments on the bodies of etherized dogs, the wounds being produced by the ordinary Smith & Wesson revolver, of calibres 22, 32, 38 and 44, and by a 22-calibre rifle, by which one or more perforations of some portion of the intestines were inflicted, are worthy of careful note:

"First. Hemorrhage, following shot wounds of the abdomen and the intestines, is very often so severe that it cannot be safely controlled without abdominal section; it is always sufficient in amount to endanger life by secondary septic decomposition, which cannot be avoided in any other way than by the same treatment.

"Second. Extravasations of the contents of the bowel after shot injuries thereof are as certain as the existence of the wound.

"Third. No reliable inference as to the course of a bullet can be made from the position of the wounds of entrance and exit.

"Fourth. The wounds of entrance and exit of the bullet should not be disturbed in any manner, except to control bleeding or remove foreign bodies when present. They need only to be covered by the general antiseptic dressing applied to the abdomen.

"Fifth. Several perforations of the intestines close together require a single resection, including all the openings. Wounds destroying the mesenteric surface of the bowel always require resection.

"Sixth. The best means of uniting the wounded intestine after resection is by the use of fine silk thread after Lembert's method. It must include at least one-third of an inch of bowel tissue, passing through only the peritoneal and muscular coats, never including the mucous coat. The everted mucous membrane must be carefully inverted, and needs no other treatment.

"Seventh. Wounds of the stomach, small perforations and abrasions of the intestines, can be safely trusted to the continued catgut suture.

"Eighth. Every bleeding point must be ligated or canterized and especial care devoted to securing an absolutely clean cavity.

"Ninth. The best method of treating the stumps of divided mesentery is to save the mesenteric surface of the bowel as above indicated.

"Tenth. *Primary abdominal section* in the mid-line gives the best command over the damage done, and furnishes the most feasible opening through which the proper surgical treatment of such damage can be instituted. Further, its adoption adds but little, if anything, to the peril of the injury.

"Eleventh. Is not the moral effect of the assurance to the patient that he will be placed in a condition most likely to lead to his recovery, a good substitute for the mental depression accompanying the general and popular conviction that these wounds mean certain death?"

Dr. Parkes insists on abdominal section as giving the best chance of controlling hemorrhage, the greatest danger to avoid in injuries of this class. He states that the great tendency to excessive hemorrhage from the severance of even small abdominal vessels is probably due to (*a*) "laxity of tissues through which these vessels course, (*b*) absence of pressure from surrounding soft parts, (*c*) lack of the peculiar influence of the atmosphere, either from its weight or clot-producing power;" and that "these conditions are very quickly altered after air is admitted through the abdominal section. Clots rapidly seal up the

smallest vessels; the smaller arteries spurt less forcibly and soon cease beating; the larger ones contract and retract just as occurs in the wounds of soft parts in other regions of the body."

THE epitomized article on "Chronic Joint Disease," which will be found among our selections, from a clinical lecture delivered by Dr. Richard Barwell, one of the ablest of English surgeons, emphasizes the great rarity of tubercular diseases of joints in children, and the frequency of occurrence of the strumous or scrofulous habit of body, upon which these joint diseases depend. This is essentially the English view of the question. Tubercle selects rather the internal organs, as, for instance, the lungs, and when found in joints is generally the product of old chronic strumous inflammations, "the terminal and not the initial point of a morbid process." It will be seen from these opinions issued by the highest of English authority, that "the habit of body" is an important factor in the problem. In confirmation of this position the experiments of Schüller in injecting tuberculous matter into lungs of dogs and rabbits, and at the same time injuring their joints, are very important. While as a result of the injections, the internal organs were thickly beset with tubercle, but limited manifestations of tuberculous deposits were found in the injured joints. The author concludes, therefore, that the tuberculous state of body does not produce joint disease. These statements are interesting in view of opinions lately advanced from a local source, that joints were the frequent seat of tuberculous deposits, and that ignipuncture was a successful method of treatment. The English, rather than the more theoretical opinions of the German authorities, coincide with the experience of American surgeons. It would seem that the doctrines of English surgeons should have great weight on this subject, in view of the prevalence of tuberculous disease in that country, and any question that may arise in the profession on the pathology of joint disease would be likely to find in their large and varied experience an authoritative opin-

ion. An eminent writer says that "if we are to restrict the term tubercle to pathological changes in which the tubercle-bacillus is found, then a great number of cases of so-called scrofulous diseases of joints are not tuberculous." We refer to this question at this time in order to correct certain erroneous views which have been advanced on this subject, and to emphasize the conviction that in England, in which tubercle prevails more widely than in any other country, affording the profession a wide and varied experience in its treatment, the sentiments put forth by eminent men should guide American surgeons in their treatment of strumous disease of joints which are more or less prevalent in our large cities.

Dr. Cuming, in his address as President of the British Medical Association, at its meeting in Belfast, protests against the tendency to allow the results of anatomical investigation to eclipse the facts gained by clinical observation. The principal interest in regard to the progress of medical science is, as he says, at present concentrated on the study of minute organisms as causes of disease. And while not in the least undervaluing the results obtained by this line of research, he states that their interpretation may be misleading unless viewed in their relation to the clinical phenomena of disease. There are certain racial proclivities and individual tendencies, about which more must be known before we can properly understand the influence of these micro-organisms upon the body. Questions of this kind come within the scope of every practitioner of medicine, while, naturally, the investigation into the part these parasites play in the economy must be reserved for those who have leisure and aptitude for original research. It is in respect to these questions that the best results are looked for from the labors of the Committee for the Collective Investigation of Disease, now actively at work in Great Britain, and Dr. Cuming recommended that an International Committee be formed, to embrace all civilized countries, for the purpose of carrying on this inves-

tigation. This is a subject that should interest every physician, and we feel sure that if such a committee were organized, its efforts would be heartily seconded by the profession of this country. The value of a systematic attempt to understand the influence of race and climate, for instance, upon the origin and course of the epidemic diseases cannot be over-estimated. We have particular advantages for this investigation here, on account of the diversity of our people and the variety in our climate, and we trust that an organization for the purpose of carrying out the suggestions of Dr. Cuming will not long be delayed.

THE Buffalo Medical College opens its next course Thursday, September 25th. The announcement for the session of 1884-85 furnishes ample information in regard to the facilities offered by this institution. We notice many important changes in its faculty, which we fully commend, noticeable among which is the promotion of its corps of lecturers to the position of professors, a change which it is but justice to these able gentlemen, who have added so much to the reputation of the college, should have been made long ago. The older alumni will miss the honored names of Hadley, Eastman, White and Moore, whose fame has, in the past, given the college much of its reputation. With the stimulus imparted by the events of the past year in the city, we trust we shall witness the inauguration of a graded course of instruction and a higher standard for graduation, innovations in its curriculum, which will place this college *en rapport* with the spirit of the age.

THE present number of the JOURNAL receives a fresh impetus from the labors of an able corps of co-laborators, who have undertaken the work of editorial assistance with a view to add new interest to the JOURNAL, and to relieve the editors who are burdened with professional labors which have heretofore interfered with the efficient performance of their duties as journalists.

It is our purpose to make the JOURNAL a faithful exponent of current medical opinions, so that the present volume will prove the most valuable of any in its history. We anticipate ample encouragement from our readers, in frequent contributions and in an enlarged circulation.

WE were desirous of making a report of the sanitary condition of this city, but were disappointed on learning, at the office of the Board of Health, that no mortality reports have been made since April 12, 1884. Reports from New York, Albany, Rochester, and even from English cities, could be obtained almost to date; but the Board of Health of Buffalo, from negligence or some other cause, fails to inform the medical profession of the prevailing diseases in the city.

WE intended to publish, in this number of the JOURNAL, the proceedings of the meeting of the Erie County Medical Society, held to discuss the cholera question. The absence of the Secretary *pro tem.* from the city delayed the transfer of the minutes to our hands until it was too late for the printer. We hope to furnish a synopsis of the discussion in our next number

---

Reviews.

Post Nasal Catarrh and Diseases of the Nose, Causing Deafness. By EDWARD WOAKES, M. D., Aural Surgeon and Lecturer on Diseases of the Ear, London; Senior Surgeon, Hospital for Diseases of the Throat, London. Illustrated with wood engravings. Philadelphia: P. Blakiston, Son & Co. 1884.

The volume before us deals with a department of disease subsidiary to that which is usually considered the special domain of the aural surgeon. It treats of those catarrhal diseases of the

naso-pharynx of which ear diseases and deafness are secondary and later issues. The author is an able writer and a teacher of great experience, and he has embodied in the present work the results of a wide field of practical observation. This is one of the many books which have lately appeared on this subject, and we would heartily commend it. The chapters on post nasal vegetations, and on the treatment of nasal stenosis, are peculiarly good. The publishers have issued it in excellent form, and it is sufficiently illustrated.

Diseases of the Throat and Nose. Including the Pharynx, Larynx, Trachea, Œsophagus, Nose and Naso-pharynx. By MORELL MACKENZIE, M. D., London. Volume II. Diseases of the Œsophagus, Nose and Naso-pharynx, with index of authors and formulæ for topical remedies. Illustrated. Philadelphia: P. Blakiston, Son & Co., 1,012 Walnut Street. 1884.

Dr. Mackenzie has been twelve years in completing this work, and it is a monument of his genius and ability in the special department of medical science to which he has devoted his life. He writes, in the preface: "Had I foreseen how much time and trouble the work would have cost me I should never have had the courage to undertake it."

The author devotes a chapter to the gullet, its anatomy, the instruments used in its examination, and the diseases to which it is subject; a chapter to the nose, its anatomy, rhinoscopy, nasal instruments, the diseases of these organs and the treatment; a chapter to "Diseases of the naso-pharynx and its diseases." The appendix gives special formulæ for topical remedies, etc.

We need not say that it is the most complete work published on diseases of the nose and throat; and every page bears the evidence of the distinguished ability which the author has devoted to its preparation. Those interested in this special class of diseases should possess such a work for study and reference.

Surgical Applied Anatomy. By FRED. TREVES, F. R. C. S., Senior Demonstrator of Anatomy at the London Hospital. Illustrated with 61 engravings. H. C. Lea's Son & Co., Philadelphia.

Materia Medica and Therapeutics. An Introduction to the Rational Treatment of Disease. By J. M. BRUCE, M. A., M. D., Lecturer on Materia Medica and Therapeutics, Charing Cross Hospital, London. Philadelphia: H. C. Lea's Son & Co.

Elements of Human Physiology. By HENRY POWERS, M. B., F. R. C. S., St. Bartholomew's Hospital, London. Illustrated with 47 engravings. Philadelphia: H. C. Lea's Son & Co.

The Dissector's Manual. By W. BRUCE CLARKE, M. A., M. B., F. R. C. S. Demonstrator of Anatomy and Operative Surgery, St. Bartholomew's Hospital, London, etc., etc., and C. B. LOCKWOOD, F. R. C. S. Illustrated with 49 engavings. Philadelphia: H. C. Lea's Son & Co.

The above are the last four issues of the "Students' Series of Manuals" which the enterprising house of H. C. Lea's Son & Co. are now publishing. These volumes are admirably calculated to meet the growing demands for concise and authoritative manuals on the various branches of medical science in a cheap and portable form. The authors are well-known teachers, who have presented their subjects in concise and clear language. So far as issued we have most heartily to commend the volumes. Not only will they prove of immense value to students, but they will serve the practitioner well, as works for quick reference. The volumes are of convenient size to carry in the pocket, and contain from 400 to 500 pages each. They are accurately and profusely illustrated, and bound in red limp cloth. The other volumes already issued are—

Elements of Histology. By E. KLEIN, M. D., F. R. S., Joint Lecturer on General Anatomy and Physiology in the Medical School of St. Bartholomew's Hospital, London.

Surgical Pathology. By A. J. PEPPER, M. B., M. S., F. R. C. S., Surgeon and Lecturer at St. Mary's Hospital, London.

Pathological Chemistry. By CHARLES H. RALFE, M. D., F. R. C. P., Assistant Physician at the London Hospital.

These have been already favorably noticed in our columns, and we would again commend the entire series as by far the best of any works of this character which have been published.

THE

BUFFALO

Medical and Surgical Journal.

VOL. XXIV. OCTOBER, 1884. No. 3.

Original Communications.

PNEUMONIA.

A CLINICAL LECTURE DELIVERED AT THE HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

BY WILLIAM PEPPER, M. D., LL. D.,
Provost and Professor of Theory and Practice of Medicine in the University of Pennsylvania.

REPORTED BY WILLIAM H. MORRISON, M. D.

GENTLEMEN—The patient now before you is convalescing from an attack of pneumonia. I showed him to you one week ago on the fourteenth day of his attack, completely apyretic. He has not come up after this attack as quickly as we should like to have seen him. His past history has not been altogether satisfactory. In the first place, we find that he is the subject of constitutional syphilis, and, in addition, he has been exposing himself. When seized with pneumonia, he was not in a good state of health, and this has undoubtedly retarded convalescence; for he has been completely free from fever for ten days, with a pulse about normal and respirations not over twenty per minute; nor have the physical conditions progressed as rapidly as we desired; while the critical fall of temperature, the failure to rise, the slow pulse, the easy respiration, the tranquil face and the return of appetite, indicate that the process

is practically at an end. There are still traces of infiltration along the anterior border of the right lung, showing that the elements of the tissues do not throw off all traces of the morbid action and return to the healthy state, but that the morbid condition is lingering in the epithelial lining of the alveoli. Whether or not this is dependent upon the constitutional infection which he presents is a question which has been discussed, and which we have endeavored to meet by adding iodide of potassium to the treatment, which, for the past few days, has consisted in the administration of carbonate of ammonia. The treatment of the acute stage consisted in the use of carbonate of ammonia, a moderate amount of quinine and stimulus in moderation.

The physical signs would be of interest, if I could demonstrate them to you. There has been, throughout the course of the case, low down on the right side, an area of unusual clearness on percussion, almost tympanitic. There was pseudo-tympany like that which is constantly found over a portion of the lung when the remainder is compressed by a pleural effusion, and which we sometimes find over the upper part of the lung when the lower part has become solid. The alteration of the tension of the vesicles, and in the pressure of the inspired air, give rise to a modification of resonance closely simulating that found over a cavity. To this modification, the name pseudo-tympany has been given to distinguish it from true tympany.

I indicated to you, in this case, the unusual distribution of the pneumonia. It began at the apex, and extended through to the back and downwards, until, perhaps, three-fourths of the right lung was involved, the lower part of the lower lobe in front remaining unaffected. It began as an apex pneumonia the posterior part next became affected, while the anterior part of the lower lobe remained intact. By far the majority of cases of pneumonia, present affection of the lower lobe, and in the majority of cases it remains limited to the lower lobe, but in a large number of cases, the disease extends from the lower to the upper lobe, and the whole lung becomes affected.

There are peculiarities about apex pneumonia to which I shall refer. It is far more eommon in children than in adults, and this occasionally leads to pneumonia in children being overlooked, from the failure to study the whole lung and the restriction of our attention more particularly to those points in which we are more apt to find consolidation in the adult. Not rarely little children will have true croupous pneumonia, running through its stages and terminating just as we see it in the adult, but limited throughout to the upper portion of one lung. Let me, in this connection, impress upon you the fact that there appear to be closer cerebral sympathies with this type of pneumonia than with the common basic pneumonia, and that partly because the nervous system of the child is extremely susceptible and partly from the reason that I have mentioned, there is apt to be developed cerebral symptoms of a marked type, so that this is known as the cerebral form of pneumonia, and these nervous symptoms are apt to still further obscure the recognition of the inflammation of the lung, and these cases are apt to be treated as cases of tubercular meningitis, or simple meningitis, and the pulmonary condition not recognized. In children with nervous symptoms, if cough or chest pain is noticed the chest should be examined with extreme care, front and back, from top to bottom. In these cases cerebral symptoms of the most alarming character may be present and pass away as the pneumonia diminishes.

Apex pneumonia is more common in young adults than it is either in children or mature people. It is apt to occur in those diposed to phthisis. There is trouble in securing complete resolution in such cases, which are apt to run into a sub-acute form and eventually develop into phthisis.

Again, apex pneumonia is met with under the influence of constitutional disturbances ; thus, when pneumonia appears as a complication of malarial fever, I have often seen it involve the apex. In typhoid fever, I have seen the inflammation involve the apex more frequently than is the case in frank, idiopathic pneumonia.

These are the three most important peculiarities of apex pneumonia: In the first place, its occurrence in a somewhat obscure form in children, being associated with marked cerebral symptoms. In the second place, its disposition to be followed by phthisis, and in the third place, its existence as a complication of some general specific disease.

I cannot say that syphilitic pneumonia, by which term I mean something different from pneumonia in the syphilitic, for those who have constitutional syphilis may have a frank pneumonia in the same way as one free from that taint, while, on the other hand, there is a special form of pneumonia which may be called syphilitic pneumonia, which is a syphilitic affection of the lungs with the infiltration of the tissue of the lungs with a special plasma, rich in epithelial cells, preventing, by its large amount and by the pressure which it exerts on the alveoli, the proper circulation of the blood, and giving rise to hepatization, which is very pale, dry and friable, being made up largely of epithelial elements, I cannot say that this syphilitic pneumonia especially involves the apex. It is as likely to affect the lower as the upper lobes.

I have already stated that there is, in the present case, an area over which pseudo-tympany is heard on percussion. In addition to this, careful percussion will develop at about the third interspace, a cracked pot sound. This is not to be attributed to a cavity, for none of the lung tissue has broken down. It is dependent on the fact that there still remains, at a considerable depth, infiltration and partial consolidation in the neighborhood of a large bronchial tube. This condition is similar to that which is present when there is a small cavity. By placing the body against a firm support, and percussing with more emphasis than usual, we communicate a shock to the air in the cavity, and express a part of it from the bronchus, giving rise to the peculiar chinking, which is known as the cracked pot sound. The same thing may be produced in certain conditions of partial consolidation in the neighborhood of a large bronchial

tube, particularly if the ribs are at all flexible. The presence of this sound is one of the things that disturbs me in reference to this case, for it shows that while the morbid process has ended, there is still a deep infiltration of the lung, which is probably associated with the constitutional taint. I have no doubt that by a continuance of the treatment which I have mentioned, particularly by the use of specific remedies, we shall secure the removal of this infiltration, but it is a warning to us that although the temperature and pulse are normal, we should be careful how we allow these patients to expose themselves, until we are satisfied that the local conditions have entirely passed away.

We have all been taught, by sad experience, to be careful during the convalescence of certain specific diseases, notably typhoid fever, but I fear that we are not nearly so careful in the management of convalescence from local affections, particularly those of the chest. It is one thing for the temperature to fall to normal, the pulse to come down and the breathing become easy, and quite another thing for the local lesions to be entirely removed. Under such circumstances the patient, if allowed to expose himself, is in danger of a relapse. Even if a relapse does not take place, something which is worse may develop. If a slight trace of inflammatory process be overlooked and the patient be allowed to return to his ordinary occupation, it will remain and slowly take on a chronic degenerative change. The great majority of chronic troubles result from imperfectly cured local affections. This is pre-eminently true in regard to catarrhal pneumonia. It is true to a less degree as regards croupous pneumonia, and it is also true in regard to pleurisy. The criterion by which we are to judge when it is proper for the patient to rise, take exercise and expose himself, is solely the result of physical examination, showing that all trace of local disease has passed away. We cannot be governed by the general symptoms, for these may subside in a most satisfactory manner, and yet the patient be far from being entirely cured. The care which has been insisted on in the acute stage should never be relaxed until the physical

examination shows that all local change has passed away, unless, after pursuing a judicious course, and keeping up this care for a reasonable time, we find that the patient, in consequence of some constitutional defect or peculiarity, is passing into a chronic stage. Under such circumstances further confinement, instead of being a benefit, would probably injure the constitution. The patient is then to be treated as one with a serious chronic disease, and although he is allowed to go about, it is under a most rigid hygienic regimen.

The consideration of the treatment of pneumonia demands more time than we can devote to it to-day. This man was treated in a way in which I think that you will treat most cases of this disease. When he was admitted, the disease had passed beyond the stage where depletion would be admissible. When the case is seen early, it is often well to use quite positive depletion, even if it is only local. In this case, there was no need for cardiac sedatives, but in many instances, when the patient is seen early, you will secure admirable results in limiting the inflammation and curtailing the inflammatory process by the use of veratrum viride or aconite. In order to assist the liquefaction of the exudation and stimulate expectoration, I know of no remedy equal to the carbonate of ammonia, especially if there is considerable vital depression. I consider quinine an almost essential element of the treatment of pneumonia, not in immense doses except when there is hyperpyrexia, but in doses of from eight to sixteen grains per day, given by the mouth if the stomach is perfectly tolerant, or by the rectum if it is not so. The diet is to be nutritious and the food given in small quantities and at short intervals. We are to be governed in the use of stimulants by the same considerations which control their use in other diseases. Many cases of pneumonia do very well without stimulants, and they should not be used as a matter of routine. We should wait for the development of symptoms, and when they are used, their effect should be carefully watched to see if they

are doing what we wish before we continue them or increase the dose.

The treatment of this case will be continued as I have indicated, and I shall report the results.

The Influence of Season on Diseases in Buffalo.

By F. R. Campbell, A. M., M. D.

Lecturer on Hygiene, Niagara Medical College.

Ever since the celebrated Arbuthnot, in 1733, published his article on "The Effects of Air on the Human Body," the influence of season on disease has been quite generally recognized. The difficulties attending an accurate investigation of this subject are quite manifest. Not only do atmospheric pressure, moisture and temperature, all of which influence the progress of disease, vary greatly in the different seasons, but in the same season of different years show remarkable differences. Sudden variations in temperature, which are extremely common in our climate, have far worse effects than uniform high or low temperature. A sudden fall of temperature is more dangerous than a rapid rise. Dr. Farr concludes that the danger of dying from a sudden decline of temperature doubles every nine years after a person has passed his twentieth year. Drs. Richardson and Farr have deduced, from the vital statistics of the United Kingdom, some very interesting conclusions regarding the relation of season to disease. In this State, and especially in Buffalo, vital statistics are of so recent a date that the results obtained are not so valuable as they would be could our observations extend over a greater number or years. In studying the relations of season to disease in Buffalo we have divided the year into quarters, observations being extended over a period of three years, from 1881 to 1883 inclusive.

First, in regard to general mortality. This is quite uniform during the first, second and fourth quarters, being 21.8, 21.1,

20.9 per 1,000 respectively. But there is a marked increase in the death rate in the third quarter, reaching 29 per 1,000, on an average, for the three years. The maximum death rate is reached in August. This remarkable increase in the death rate is due to the prevalence of bowel diseases in Buffalo during this period. In England the death rate is greatest in the fourth quarter, 28 per cent. of the deaths occurring during that period, while the minimum number occur during the second quarter.

In order to show the effects of seasons on the more common diseases, and on infant mortality, the following table has been constructed, showing the death rate per 1,000 during each of the four periods into which we have divided the year. Among zymotic diseases are included cholera infantum, dysentery and malarial diseases. In the class of constitutional diseases we include rheumatism, phthisis, cancer, etc.:

Quarter.	Under 5 yrs.	Zymotic.	Constitutional.	Local.	Scarlet Fever.	Diphtheria.	Cholera Infantum.	Dysentery.	Pneumonia & Bron'tis.	Gene'l death rate.
1st	9.2	5.8	3.15	8.9	1.7	1.75	....	....	3.35	21.8
2d	7.9	5.4	3.60	7.9	1.4	.55	0.11	0.21	2.80	21.1
3d	18.0	13.5	3.30	7.6	1.0	.48	7.13	2.35	1.57	29.0
4th	9.4	7.2	2.90	6.4	1.9	1.62	.53	0.40	1.97	20.9
Average	11.1	8.0	3.24	7.7	1.4	1.10	2.00	0.75	2.68	23.2

In the first quarter pulmonary diseases and diphtheria are most prevalent, while intestinal diseases are almost unknown.

In the second quarter the deaths from constitutional diseases seem to be greater. Phthisis appears to be most fatal at this time. But in June the general death rate is lower than at any other period of the year.

In the third quarter there is a sudden increase of cholera infantum and dysentery, so remarkable that these diseases may be said to be confined to this period of the year. Scarlet fever, pulmonary diseases and diphtheria are now at their minimum.

In the last quarter scarlet fever is at its maximum, while diphtheria and respiratory diseases greatly increase.

We have constructed the following comparative table to show the periods of greatest and least intensity of the more common diseases observed in London, New York City and Buffalo:

City.	Scarlet Fever.		Diphtheria.		Cholera Infantum.		Pneumonia.	
	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Mini'm.	Max'm.	Mi'm.
London	Sept. to end of y'r.	Feb. to 1st of Aug.	Sept. to end of y'r.	March to Sept.	July & Aug.	March & April.	Dec.	Aug.
New York	April.	Sept.	Dec.	Aug.	July & Aug.	Feb & March.	March.	Aug.
Buffalo	Dec.	Sept.	Jan.	Aug.	Aug.	1st q'r.	Feb.	Aug.

On referring to the above table it will be observed that scarlet fever increases in severity later in this country than in England, while it assumes its mildest form in London in April, the very month when it is most severe in New York. Diphtheria is most severe in this State in the coldest months, while in England it is most fatal in the fall and early winter, a period characterized by dampness and cold. Pneumonia is also with us most fatal in the coldest months, and not most severe in damp weather, as in England. Cholera infantum and dysentery begin, as a rule, about a month later in Buffalo than in New York, or about the same time the disease is most prevalent in England.

Clinical Reports.

Rapid Dilatation of the Female Urethra for the Cure of Cystitis.

Reported by A. R. Davidson, M. D.

Professor Medical Chemistry, Toxicology, etc., Niagara University. Physician to the Buffalo Hospital of the Sisters of Charity.

Mrs. B., aged 60, mother of twelve children, had enjoyed excellent health up to eighteen months ago, when she commenced to experience pain in the bladder and frequent painful micturition. The irritability of the organ gradually increased, and for the last six months she has been tormented by the imperative necessity of making water every fifteen minutes to one-half hour, enjoying no rest day or night. She had been

in the hands of several physicians, and had received the usual treatment for chronic cystitis without obtaining relief, and at last consulted an eminent practitioner of this city, who kindly referred the case to me.

The urine at this time was found to be highly ammoniacal and to contain much blood and pus intermingled with numerous crystals of triple phosphates. The microscope showed, also, soft flocculent masses made up of spindle-shaped cells with very distinct nuclei. Every day the patient passed, per urethra, considerable masses of triple phosphates, very rough and having many branched projections. The quantity of pus, blood and debris from the bladder made it impossible to distinguish kidney epithelium or casts with certainty. The considerable albumen present might be accounted for by the quantity of pus and blood. At the first examination, the extreme sensitiveness of the bladder made a careful sounding impossible, but it was easy to find many small calculi, such as she was daily voiding. A decided thickening and rigidity of the base of the bladder could be felt by vaginal examination, but she complained of so great pain upon any pressure that I deferred a more careful examination until she was etherized.

The patient willingly consented to any operation which would promise a relief from her torment, and on the 13th of August, having placed her under the influence of ether, the sound and vaginal examination of the walls of the bladder quickly demonstrated the absence of any large stone. I therefore proceeded to dilate the urethra, using the little finger first, and following it with the index finger. The base of the bladder was then found to be coated with a phosphatic concretion deposited upon small, reddish, flesh-like masses, which were easily scraped off with the finger nail. The bleeding was not great; as the growth seemed to be confined to the mucous membrane; I have little doubt that it was an innocent villous growth. As Ultzman points out, these do not give rise to a thickening of the coats of the bladder, that is, there is no infiltration of the tissues. Villous

cancers, on the other hand, give rise to tumors of the bladder or to thickening, which may be felt through the rectum or the abdominal walls. The patient made a rapid recovery. She complained of some soreness during micturition, and blood and pus were present in the urine for a few days, but the severe pain and frequency of micturition were absent from the moment of the operation. Subsequent treatment consisted of milk diet, regulation of the bowels, iron internally, and, for a week, daily washing out of the bladder. At that time all blood and pus had ceased; the urine was clear and normal in its reaction, and up to the present time (six weeks after the operation) she is free from all untoward symptoms.

The treatment of chronic cystitis by drugs, and its local treatment by injections, are almost always tedious, often unsatisfactory, and not rarely altogether unsuccessful. The treatment here adopted, viz., the rapid dilatation of the urethra, has been condemned by many excellent authorities, and as highly commended by others. It is by no means new, having been recommended and described by Marianus Sanctus in the sixteenth century. Douglass and Bertrandini, in 1769, performed the operation gradually, by tents made from the roots of plants or by sponge covered by parchment, but these early operations were for the extraction of calculi and foreign bodies. Sir Astley Cooper devised a metallic expanding dilator, but modern impetus to the employment of the operation was chiefly given by the late Prof. Simon, of Heidelberg. He recommended the dilatation of the female urethra for the following objects:

1. The diagnosis of diseases of the mucous membrane of the bladder, and of calculus and other foreign bodies.

2. The removal of calculi and foreign bodies.

3. For applying various remedies to the internal surface of the bladder and for treating fissures of the urethra.

4. For the diagnosis of the position and attachment of tumors in the vesico-vaginal septum, and for the removal of tumors, especially papillary growths, from the walls of the bladder.

5. For the discovery and removal of calculi from the vesical extremity of the ureters.

6. For the opening of hæmato-metra, the evacuation of which, between the bladder and rectum, is impossible or dangerous, as, for example, in the case of congenital absence, either partial or complete, of the vagina.

7. For the treatment of vesico-intestinal fistula.

According to Dr. Simon, in adult females the urethra may be safely dilated by means of plugs, having a diameter not exceeding two centimeters. In two cases he carried the dilatation one centimeter further (about one and one-half inch) with the result of having incontinence of urine, though not permanent, in both cases.

The principal opponent to the operation, at the present time, is one whose opinion is entitled to the utmost respect, from his vast gynecological experience. Dr. Emmet, of New York, reports that in eleven cases operated on by himself, two had permanent incontinence and that he had seen this misfortune to follow the operation in at least half a dozen cases in the hands of other surgeons. Moreover, he knew of no benefit from the proceeding in chronic cystitis. On the other hand, Noeggerath, Munde, Goodell, Cronyn of this city, and others, strongly advocate and frequently practice it. It has been suggested as an explanation of the ill results of the operation in Emmet's hands that his index finger has a considerable greater diameter than two centimeters.

The experience of many operators would seem to show that the operation is free from danger of subsequent permanent incontinence of urine, if the urethral tissues are fairly healthy, and the dilatations be not carried to an extent greater than is necessary for the introduction of an index finger of medium size. The ability to thus examine the entire internal surface of the bladder with the finger (by perineal section of the urethra, the male bladder may be almost as easily examined as the

female) offers a valuable addition to the means ordinarily employed for the more difficult and otherwise intractable cases of urinary diseases which come before us.

Society Reports.

Buffalo Medical and Surgical Association.

Regular Meeting, Sept. 2, 1884.

President, F. W. Bartlett, in the Chair.

The minutes of the last meeting were read and improved.

Corrigenda—In Dr. Hartwig's remarks change the name *Siemens* to *Simon;* in Dr. Cronyn's remarks upon tape-worm erase the last sentence.

Dr. William B. Hawkins was elected a member of the society.

No essayist having been announced, a discussion of some of the prevailing diseases took place. The most important points brought before the association were those relative to the intestinal diseases of children and the dietetic treatment to be followed in such cases.

Dr. Charles G. Stockton led the discussion by the following remarks:

"Among prevailing diseases, that which appears most conspicuous is the gastro-enteric disturbance in young children. Since unwholesome nourishment is the most important causative factor in this disorder, it seems to me worth while to call your attention to a diet that, so far as I can learn, is unappreciated by the profession; for either it is not tried, or the trial is unsuccessful, and few use it. I refer to peptonized milk. By peptonized milk I mean two distinct preparations; one prepared with extract of pancreas and soda, the other with pepsin; the first having a marked alkaline reaction, the other slightly acid.

"I began using the alkaline preparation over two years ago, following the suggestions of Fothergill, and Roberts of Manchester, using for a ferment the 'Liquor Pancreaticus;' but of

late I have steadily employed the 'Extractum Pancreatis' of Fairchild Bros. & Foster, with gratifying results.

"I think that the formula advertised by the last-named firm contains too much soda for the continued use of the young child. The gastric secretions probably become vitiated, and vomiting or diarrhœa sometimes ensues, after short use. For this reason I have lessened the amount of soda and find that satisfactory peptonization may be had from ten grains of soda with five of 'Extractum Pancreatis,' or even five grains of each, to a pint of milk. The amount of soda and the degree of peptonization must vary in different cases. After a longer or shorter period most little stomachs rebel against even so small an amount of soda; then pepsin should be used as the ferment.

"To properly peptonize milk with pepsin requires more skill and watchfulness than when the extract of pancreas is used. About ten grains of good saccharated pepsin, or the equivalent of other preparations, are necessary to peptonize a pint of milk.

"For several years past I have employed milk thus treated with satisfactory results. Great care is necessary not to allow the lactic acid fermentation to proceed too far, which may be prevented by removing the milk to an ice-chest directly after it is sufficiently peptonized.

"I hesitate to speak as strongly as I feel concerning the importance of this matter to the artificially-fed infants of our cities. For the past year I have had recourse to this method with nearly every infant under my care that was not nursing the breast, and with such success that I commend the practice without reserve. The best plan is to continue with the pancreatin until it disturbs, then for a short interval use the pepsin. Dr. J. Lewis Smith, in a recent number of the *Medical Record*, relates his experience with peptonized milk by 'Extractum Pancreatis,' and gives the plan unstinted praise."

Dr. Hartwig did not understand how the peptonization of milk with pepsin took place. The milk would curdle, and how could any one know exactly when it had become peptonized?

Dr. Cronyn said there was no greater error in dietetics than that of feeding an infant upon the milk of one cow. There was far less danger in using the mixed milk of a large number of cows, for then some of the defects of one would be in a great measure counterbalanced by the production of the healthier animals of the herd. The farmers in the neighborhood of large cities feed their cattle upon the refuse of breweries and distilleries. The milk of a cow at the time of cutting is very unwholesome. By boiling cows' milk, adding limewater and sweetening, we make it very nearly like human milk. The speaker knew a number of families in which the children have been raised upon condensed milk. Upon the whole, condensed milk is better than that of a country cow. It should always be borne in mind that it is very important to distinguish, in children, between gastric and enteric affections. If symptoms of gastric disorder preponderate, we should naturally employ pepsin; if the enteric are uppermost, pancreatin is the proper physiological remedy.

Dr. Coakley stated that he had tried cows' milk properly diluted, sometimes using pepsin, and had not had favorable results. He had also made use of many cereal preparations, but had finally concluded that condensed milk was, after all, the best infant food. The Swiss condensed milk (not the Anglo-Swiss) had, in his hands, proved to be superior to all others. It was successful in a very large percentage of his cases. He had raised his own children upon it.

Dr. Hauenstein told of a patient with œsophageal stricture from carcinoma whom he had fed for four weeks, per rectum, with milk peptonized according to Fairchild. The man was unable to swallow a drop of anything. Five injections of a pint each were given him daily. This sufficed to keep up his strength to the last, when pneumonia (*schluch-pneumonie*) carried him off. He had walked out daily. Injections of milk alone were tried at first, but were not retained. When peptonized,

however, they were wholly absorbed by the rectal mucous membrane.

Dr. Strong said he had always used the following method in preparing food for children, and with very good success: Fresh milk from the country was allowed to stand for a short time. The upper third was then removed, added to twice the quantity of boiling water, and then sweetened. He thought this the best plan of all, and, indeed, deemed this preparation even superior to many mothers' milk.

To a question of Dr. Hartwig as to when Dr. Coakley began to feed babes condensed milk, that gentleman responded: "During the first week, or, if necessary, at once."

Dr. Bartlett considered Swiss condensed milk the best artificial infants' food he could obtain. Aside from this, he had also used a mixture of two-thirds milk from a good cow and one-third oatmeal gruel. If the children were constipated, cornmeal could be used instead of oatmeal. He had felt opposed to peptonized milk because it converted the stomach into a place for the cultivation of bacteria.

Dr. Stockton, in closing the discussion upon infantile dietetics, said: "To peptonize milk with pepsin, add ten grains of good saccharated pepsin to a pint of fresh milk; bring this milk to a temperature of 85° F.; watch it carefully, and as soon as the soft curd begins to form, remove to a cool place, whip it up quickly with a fork, strain through a linen cloth, and thereby extract about one-third of the casein. Too high temperature makes a hard curd, and too long peptonization converts too much of the casein.

"As suggested by Dr. Cronyn, by remembering what part of the alimentary tract is affected, and using the pepsin or the pancreatin accordingly, is sometimes found practicable. By extract of pancreas I have tried to peptonize condensed milk, but with poor success. Other trials are to be made.

"No matter if infants appear to thrive when fed with cereal foods, nevertheless they do not. From such foods do we have mal-nutrition and weakened constitutions. Only when they are milk-fed do we find truly vigorous infants, possessed of strong organs and animated spirits, with backs like a sheep's and eyes like an eagle's."

The discussion now turned upon the treatment of the diarrhœas of children, especially of cholera infantum.

Dr. Hartwig said he used a prescription of pulv. ipecac et opii calomel, āā gr. 1-10, with a little pepsin when there was vomiting and purging. He liked Swiss condensed milk very much. It was sterilized by heating to 75° C. in vacuo when manufactured, and he thought it was this which prevented its peptonization, and not the sugar. He believed the peptonization of milk, though a good method, would be impracticable among poor and plain people. They desired some simpler way. It was more important to teach people to feed their children from a cup or spoon and avoid the bottle. In chronic cases of cholera infantum, where there were five or six motions daily, he used salicylic acid.

Dr. Cronyn, in acute cases, prescribed an acid mixture for internal use while the cold swath was most efficient externally. Vegetable astringents proved useful in the chronic form. He thought much depended upon nutrition. Children with less than six or eight teeth should not be given farinaceous food. He objected even to gruel. Barley water might better be used.

Dr. Coakley considered farinaceous food unobjectionable. If there was not sufficient saliva, it would be digested in the small intestine. Therefore, a small amount of farina could not do harm. There was, in his opinion, no remedy equal to the mercurials, such as calomel or mercury with chalk, in incipient cholera infantum.

Dr. Park said real cholera infantum was seldom met with, and our ordinary cases would be better named if they called them entero-colitis.

Dr. Strong had known of no recoveries from cholera infantum without the administration of mercury in some form.

Voluntary Communications—Dr. Park exhibited three very interesting specimens of fracture of the neck of the femur. He said he made no distinction between extra and intra-capsular fracture here.

Dr. Hartwig brought a patient before the association with a peculiar jerking of the penis. Some years ago he had had gonorrhœa, and about four years ago this remarkable motion began. There is nothing the matter with his genito-urinary organs beyond this, and this does not disturb him in any way The motion, which several present jocosely called nystagmus penis and penile chorea, is irregular, and not synchronous with the pulse.

Dr. Cronyn suggested that it was a spasmodic neurosis. If it were his case, he would try a small blister over the sacrum, or an electrode in the urethra and one over the pubis. If this caused the jerking to cease, it would at least prove the nervous origin of the affection.

Dr. Peterson stated that he had constituted himself a committee of one to investigate the length of tape-worms, over which there had been some discussion at the previous meeting. He had accepted the invitation of Dr. Hayd to measure the one at his office. This he found eight feet in length. The doctor said the rest of the worm had been thrown away the night before. Tape-worms are easily extended several feet by pulling upon them. The speaker thought that in those cases where neither, the imagination nor the worm was stretched, the presence of several worms in the same intestine might explain the great lengths expelled in individual cases. It is said that from 10 to 40 worms may co-exist in the same patient. He had tabulated, as follows, the lengths in feet given by the various authorities which were at hand:

	Tænia Solium.	Tænia Mediocanellata.	Bothryocephalus Latus.
W. H. Ransom	7–10	Larger than T. Solium.	16–26, Sometimes 60
Dunglison Dict....	A few feet to 600	.....	180, Enormous.
Cobbold	10–20	Larger than T. Solium.	25
Flint	4–35	.....	Larger than T. Solium.
Aitken	9–35	Large.	6–20
Coats.....	10–12	13–24, Stretched.	16–26
Wagner.....	6–10	10–12	16–26
Birch-Hirschfeld...	6–10	10–12	16–26
Leuckart.....	6–10	.....	.....
Davaine	20–26	.....	.....
Hooper	4–20	4–20	.....
Ziegler.....	6–10	12	16–26
Heller (in Ziemsen)	6–10	19	16–26

It would be seen from this schedule, that the weight of authority and the best modern judgment made the T. solium 6–10 feet, the T. mediocanellata 10–12 feet, and the B. latus (not met with in America) 16–26 feet in length. It was surprising what little conscience was shown by physicians in general with respect to the measurement of tape-worms.

Miscellaneous Business—The Secretary announced having received a note from Dr. Tremaine withdrawing his letter of resignation sent some months before.

Dr. Hartwig, chairman of the committee appointed to inquire into the matter of midwives, as suggested in a paper by Dr. Pryor, reported that the committee had met. They had decided to send a circular to physicians in the city, asking for reports of any cases of malpractice by midwives which may have come under their observation.

A motion was carried that the committee continue its work.

The meeting then adjourned.

FREDERICK PETERSON, *Secretary.*

Transactions of the Buffalo Obstetrical Society.

Meeting August 26, 1884.

The Vice-President, Dr. R. L. Banta, in the Chair.

Dr. W. W. Potter read a paper on "The Obstetrical Management of the Perinæum."

The paper embraced three propositions: First, is the perinæum vested with that importance, anatomically and physiologically, to warrant any special care during parturition? Second, if this is admitted, how shall we best prevent its rupture? Third, failing in this, what shall be done with reference to its immediate restoration?

The essayist took ground with the more modern opinions, in regard to the relations of a sound perinæum to the good health of woman, holding that it played an important part in maintaining the pelvic viscera in their normal position; that its office is, in part, to strengthen that part of the pelvic floor which has no bony support; and, finally, that the integrity of the female perinæum, and, to a great extent, the proper relations of the pelvic organs, depend upon a perfect perineal body.

For our improved anatomical knowledge of the part, acknowledgments were made to the researches and dissections of Henle, Savage, Ranney, Hart and Foster.

"The frequency with which lacerations of the perinæum occur is so differently related by observers, that anything like correct statistics are unobtainable. One class of practitioners, and I should presume by far the larger class, attaching very little importance to the lesion, considers only cases where the perineal body is severed from end to end; while another class, appreciating the value of a sound perinæum, reports the simpler breaches of continuity as perineal rupture. There are others, again, who never inspect the parts after delivery, and assert, with an air of grandiose superiority, that they 'never have lacerations of the perinæum in their practice.'"

"In this connection," says the essayist, "it would seem proper to remark, that in the very nature of things a certain number of

lacerations are unavoidable, and the occurrence of the accident is no proof of unskilfulness on the part of the accoucheur. When it does occur, however, it is becoming, in the present light of science, that it should not escape observation, and that measures to restore it, immediate or remote, should not be neglected."

How shall we best prevent laceration of the perinæum when threatened in labor?

First. Never give ergot until the *completion* of labor. Great stress was laid upon this dictum, and the reasons therefor discussed at some length.

Second. The rectum must be thoroughly emptied prior to the commencement of the second stage.

Third. The patient must be made to assume the left-lateral posture during the passage of the fœtus through the vulvar orifice.

Fourth. As to support of the perinæum. Great diversity of opinion exists among obstetricians as to the propriety of rendering artificial support to the perinæum during the final passage of the child. Much has been said, pro and con, on this subject, and the question if any direct protection ought to be used or not may be regarded as still *sub judice.* Even great diversity of opinion exists among the advocates of "support," as to the best method of rendering it.

After passing in review the various methods recommended, the reader advocated but two, viz.:

First. The reinforcing of the vulvar ring with very moderate pressure of the flat of the hand, placed so that the fold between the thumb and index finger rests against the posterior commissure, while the presenting part is dilating the vulvar orifice.

Second. By direct pressure upon the presenting part of the fœtus, and, finally, when the vertex protrudes, to lay hold of the chin with two fingers of the left hand in the rectum, and thus control the delivery of the head. The head, in this way, can be gradually extended, kept away from the perinæum, pushed

firmly against the pubes, and the pressure equalized against all parts of the vagina, to a considerable extent. The perinæum is carefully watched, different portions of the vulva are pushed backwards, slipped gently over the head, and the chin caused slowly to advance until finally it glides out of the vagina. Chloroform, administered simultaneously with the seizure of the chin, and maintained in its effects until the delivery of the head is accomplished, will enable us to assume entire control of delivery during the enucleating process.

The forceps, and episiotomy, were remarked upon as having very little place in the prevention of laceration of the perinæum, *serre fines* pronounced a delusion and a snare, and the paper closed with a plea for primary perineorrhaphy, and a brief description of the operation, the following being the concluding sentences :

"There are, no doubt, sources of failure inherent to the primary operation itself; for instance, in cases where there has been much delay, or much manipulation within the parturient canal, whereby a semi-pathological condition of the parts is produced ; for in such, if the perinæum becomes torn, the reparative process is very much retarded, and union does not take place if it is sutured. Equally fruitful sources of failure are, however, to be found in the performance of the operation in a hurried or unskilful manner. With the improved methods at our command, and the constantly accumulating experience, the failures are being rapidly reduced to an insignificant minimum."

Discussion—Dr. Frederick, in opening the discussion, remarked that it was important to exhaust every useful method to preserve the perinæum intact. Its usefulness was hardly over-estimated, and he leaned to the side of regarding it of prime importance in the preservation of the normal relations of the pelvic organs. He did not think much good could come of perineal support, as ordinarily understood and as generally taught. The better plan is to retard the head by pressure, when it is distending the vulvar orifice and the perinæum is threatened. He had frequently per-

formed episiotomy in hospital practice and the cases did well. In case of rupture he favored the treatment by immediate suture.

Dr. Stockton approved, in the main, the principles advanced by the essayist, but desired to enter his protest against the too sweeping condemnation of ergot, which seemed to be quite the fashion now-a-days. He is in the habit of giving the drug just before the termination of the second stage, and believes that it is useful in preventing post partum hemorrhage, as well as in promoting the expulsion of the placenta. He is also in the habit of treating perineal ruptures by immediate suture, and obtains good results.

Dr. Van Peyma has not been in the habit of repairing perineal rents primarily in his practice; has not found occasion to do so; thinks it a good plan to give ergot near the close of the second stage. In regard to supporting the perinæum with a view to prevent rupture, thinks very little good can come from any method yet proposed, but favors retarding the head by direct pressure, in some cases. He also finds it well to stretch the perinæum, manually, in advance, so that when the head comes along it will find it pliant and elastic; but, most important of all, he would seek to establish, in the mind of the patient, the great need of avoiding violent expulsive effort while the pressure upon the perinæum is greatest. In this way he thinks much can be done to avoid calamity to the vulvar orifice.

Dr. Keene is not prepared to admit that perineal rents are as frequent as is now generally claimed by the gynecologists, nor that the necessity for their repair, immediate or remote, is as great as would appear by their writings and teachings. Still, in a limited number of cases he would repair the perinæum by immediate suture, as recommended by the essayist. He is a believer in the usefulness of ergot when prudently and timely administered, and thinks the perinæum will generally get along pretty well without much artificial support.

Dr. Lothrop has been in the habit, for the past few years, of treating perineal ruptures by immediate suture, and finds occasion

to approve the practice from practical observation of his cases; for, whereas, formerly they were subjected to the slow gettings up and the hundred-and-one annoyances, not to say dangers, of the parturient period, besides the secondary pelvic disorders which unrepaired rents entailed, now the recoveries from the child-bed state are rapid and free from the dangerous and unpleasant conditions, immediate and remote, which the neglected lesion in question is well known to precipitate. As to ergot, he never gave it now-a-days until the termination of the third stage of labor, and he then administered it with a view to obtaining tonic contraction of the muscular structures of the womb, and the consequent shutting up of its sinuses, believing that, thereby, a fruitful avenue of puerperal septicæmia was closed. His practice in regard to perineal support consists rather in pressing the head under the pubic arch and securing flexion, than in any endeavor to give undue support to the perineal body. This period of labor is the critical one, and calls for the exercise of wise judgment and careful management on the part of the accoucheur.

Dr. Banta did not, until some two years ago, even believe that rents of the perinæum following labor were very common, and regarded the lesion, when it did occur, as comparatively unimportant, requiring, at least, no surgical care at the hands of the accoucheur. His practice in this regard was now, however, completely revolutionized. It was almost exceptional when he did not have occasion to suture the perinæum of a primaparous woman. It is so simple and easy to do the operation that he now wonders why he was so long in bringing himself to adopt it, particularly as its benefits are unquestioned. He uses the triangular needle, slightly curved, armed with silk, and invariably obtains good results.

Dr. Potter, in closing the discussion, formulated the salient points of the subject, as follows:

I. As to prevention:

(*a*). Position during delivery: The left-lateral is the best.

(*b*). Refrain from the use of ergot until the completion of the third stage of labor.

(*c*). Protect the perinæum by—

1st. Direct pressure upon the head.

2d. Seizure of the chin through the rectum and enucleation of the head.

3d. The administration of chloroform.

II. In case of a laceration, repair the rent by immediate suture.

Its benefits are—

(*a*). Lessened danger of puerperal septicæmia from absorption of putrescent lochia.

(*b*). The burning pain and irritation of the vulvar orifice during puerperal convalescence are avoided or prevented, in a large measure.

(*c*). Hemorrhage from the torn surfaces is prevented.

(*d*). The patient thereby escapes the danger of future displacements of the pelvic viscera and their long train of distressing phenomena, local and reflex.

(*e*). And finally, the necessity of submitting to the more formidable secondary operation is averted. This is worthy of consideration on economic grounds, even if weightier reasons did not obtain.

Selections.

Impaired Vesical Function.

The healthy functions of the urinary bladder are, first, its ability to retain a considerable quantity of urine without occasioning any inconvenience to the individual, and, second, its ability to empty itself easily and completely at will. These functions imply elasticity of the coats of the bladder, which is a mechanical attribute, and contractility, which is to be regarded as a "vital" attribute. Various morbid conditions have the effect of impairing these two vesical functions, so that the bladder may be unable to expand and retain a quantity of

urine, or it may be unable to contract and expel the whole of it. The chief modes by which this impairment of vesical-retaining function takes place can be divided into three classes, as follows:

Class 1. Enlargement of growth from the prostate, obstructing, more or less completely, the urethra at its entrance to the bladder, and so presenting an obstacle which the expulsive power of the bladder and associated muscles cannot surmount.

Class 2. Loss of nerve-power to the muscles of the organ, constituting paralysis.

Class 3. "Atony" of the structures of the bladder, invalidating their action, a term of doubtful import, and ordinarily so employed as to comprehend all other forms of vesical incompetence not designated by Classes 1 and 2. The first class, constituting prostatic hypertrophy and outgrowth, is familiar to all surgeons and need not be dwelt on. There is one feature of this condition, however, that is sometimes overlooked. The most complete form of organic occlusion at the neck of the bladder may be present, giving rise to the most distressing symptoms, and yet the finger in the rectum is unable to detect any prostatic enlargement. A small prominence at the neck of the bladder is more dangerous than a large hypertrophy; the former often renders the patient absolutely incompetent to empty the bladder, while the latter, though more or less troublesome, seldom causes so much disturbance. In regard to the operation of section or resection of the obstruction, Sir Henry concludes that where the retention has existed for some time, it is highly improbable that it will do any good, and may be even considered dangerous. When the little outgrowth can be dealt with in the early stage of its existence, a division of the tissues *may* overcome the obstruction and restore, wholly or partially, the function of the bladder. But even then the catheter can seldom be dispensed with.

In the second class of cases the impairment of function manifestly depends upon an injured or diseased nerve-center and

the treatment must be directed to its restoration before improvement can be expected.

In regard to the third class, Sir Henry mentions three conditions that may give rise to impaired vesical function:

1. Chronic inflammation affecting the tissue beneath or outside the mucous membrane of the bladder. As an example of this, repeated attacks of ordinary cystitis can be taken. A single attack may pass off, leaving the bladder but slightly, if at all, impaired in function, but repeated attacks, by spreading to the sub-mucous and muscular tissues, cause an hypertrophy of the walls of the bladder which is more or less permanent.

2. Chronic inflammation of the prostate and neck of the bladder usually following gonorrhœa. Repeated attacks of gonorrhœa or want of care in its treatment, or the injudicious use of instruments, may give rise to an inflammation of the prostate with more or less persistent induration and swelling of the organ, causing an impairment of the vesical function of the bladder. While the nature of this enlargement is unrelated to that which constitutes hypertrophy, its effects may be the same. A small amount of urine is retained and troublesome symptoms developed in consequence.

3. The presence of a calculus is a frequent cause of the failure of the bladder to empty itself, and this may persist for some time after the calculus has been successfully removed. This condition is one that is well understood, and the indication for treatment is plain, so that it need not detain us. In regard to the treatment, in general, we quote Professor Thompson's conclusions, viz.: "It follows, from all the preceding considerations, that our chief reliance for successful treatment in all the forms of impaired vesical function which give rise to retained urine, is the habitual use of the catheter; and I must add that the remedy is not only most valuable, but that it is, for the most part, indispensible, and the sooner it is employed in the great majority of cases, the greater is the chance of ultimate recovery, in addition to the immediate relief which the instrument affords.

It is the failure to perceive this fact, especially in relation with the less obvious forms of incompetence, which has led, as I said at the outset, to my choice of the subject. The failure is due not only to the oversight of the pathological condition which demands mechanical aid, but to the strong and very natural disinclination which so widely exists to the employment of instruments—I had almost added to the prejudice which is entertained against them—and I fear that this, also, must be admitted."—*Sir Henry Thompson, F. R. C. S., in British Medical Journal, July* 5, 1884.

THE LOCAL TREATMENT OF LARYNGEAL TUBERCULOSIS.

Dr. Gouguenheim (*Bul. Gen. de Ther.*, May 30, 1884) lays down some general rules for the local treatment of tuberculosis of the larynx. He divides the treatment into: 1. The use of medicated solutions. 2. That of solid applications, or crayons. 3. That of the galvanic cautery. 4. Surgical operations—partial avulsion, tracheotomy, or extirpation of the larynx. The use of crayons he does not approve of, believing it to be more defective, less convenient, and more difficult to support than the use of fluid applications. He makes an exception of iodoform, but prefers to use even that on a small sponge with a holder. He gives the following general rules for the use of the galvanic cautery: 1. When dysphagia is due to increase in the size of the epiglottis, the weekly application of the cautery at a few points brings about a rapid and lasting benefit. 2. When dysphagia is due to swelling of the folds and of the arytenoid region, cauterization is more painful than in the former case, and is not followed by the same good results. 3. When the vestibule and superior vocal cords are involved, the cautery is well borne, but the effects are not so good as in the first case. 4. When the larynx is the seat of numerous vegetations, cauterization is absolutely indicated, and should always be preferred to avulsion. 5. When the inferior vocal cords are thickened and

covered with vegetations, they may be cauterized with advantage, but only if they are movable and if there is no stenosis. 6. When the vocal cords are approximated, and cannot be separated, and stenosis exists either by spasm of the adductors or paralysis of the dilators, there is danger in carrying the caustics into the interior of the larynx; but this danger is less than that which follows fluid applications. As to the avulsion of vegetations, he believes it to be bad practice. It is painful, and creates wounds which may serve as points of inoculation. He much prefers the galvanic cautery. He enumerates the indications for tracheotomy as follows: 1. With a tuberculous patient, where the lesions in the lungs are not extensive, the general state is satisfactory, and the temperature nearly normal, when frequent attacks of suffocation are caused by the laryngeal stenosis. 2. The existence of extensive pulmonary disease does not contraindicate the operation if the temperature is normal and the digestive functions are undisturbed.

Of the relief obtained by tracheotomy in this affection of the larynx, Dr. Morrell Mackenzie speaks in the following words: "If there is much dyspnœa, tracheotomy should be performed, but the effect of the operation is, as a rule, only to prolong a miserable existence. I cannot recommend the operation as in any sense curative, and quite agree with Dr. Solis Cohen, who remarks that 'it cannot be curative, either directly or indirectly, and is only justifiable to ward off asphyxia, from œdema, tumefaction or impaction of necrosed cartilage.' He goes on to say that 'in opposing tracheotomy in laryngeal phthisis, except when there is urgent dyspnœa, I differ entirely from my accomplished pupil, Dr. Beverly Robinson, who observes that in order to obtain these latter (*i. e.*, favorable results) it seems indicated not to delay the operation, but, rather, to perform it so soon as the nature of the disease is obvious and other means appear of no avail.'"

THE REPAIR OF WOUNDS AND FRACTURES IN AGED PERSONS.

It is generally held that the healing processes are more protracted in the aged than in those of the early and middle periods of life. In the former the nutritive forces are failing, the strength and weight are diminishing, and repair is less and less able to keep pace with wear, and, therefore, it was a natural conclusion that the processes concerned in breach-closing should also show a decrease in energy. This opinion Professor Humphrey considers to be erroneous. He was led to investigate the subject by observing that ulcers in old persons frequently heal quickly, and that granulation and cicatrization proceed in them with great rapidity. Not wishing to rely entirely upon his own observations, he took pains to ascertain the opinion of most of the other surgeons of England, and found that they coincided exactly. Through the kindness of these gentlemen he was able to present a series of thirteen cases of wounds in elderly persons, their ages ranging from 75 to 93 years inclusive, where the healing was very rapid. He also reports a series of fifteen cases of fracture in old people, their ages being from 58 to 92 inclusive, where union was completed in a very short time. As an instance, we will cite the case of a woman, aged 81, who sustained a fracture of the thigh, below the middle, and also dislocation of the shoulder. In six week she could walk round the table with the help of a stick; in five months walked four miles.

In studying more closely this exceptional phenomenon of nutrition he found that not infrequently the very opposite tendencies existed at this time of life, namely, the tendency to slough and the tendency to heal quickly, and so the conclusion arrived at was, that when in elderly people the tendency to slough was absent, we could generally expect a rapid healing. This is not exceptional to old age, but may be observed in other lowered conditions. The wounds in patients exhausted by large losses of blood usually heal quickly, as they also do after operations for cancer, and in many other debilitated conditions, an exception must be made, however, of persons of naturally strumous

temperament, and persons who have certain impaired conditions of the nervous system, in whom wounds and sores are sometimes very troublesome.—*G. M. Humphrey, F. R. S., British Medical Journal, July* 12, 1884.

Arm-Presentation in a Twin Case, Terminating by "Spontaneous Expulsion."

Mr. Ford, in the *British Medical Journal*, reports the delivery of a full-grown child, presenting as follows: The left arm of the child was projecting from the vulva; the head was resting on the pubes; the left side of the thorax was over the outlet and the buttocks occupied the hollow of the sacrum. Pains were good; the child was dead, the first child having been delivered by a midwife three hours before, alive. The cross, birth was delivered without assistance by the accoucheur four and one-quarter hours after the first.

Editorial.

On the Cause and Curability of Locomotor Ataxia.

This subject has been a bone of contention among specialists for some years. First, the cause. It was formerly said that locomotor ataxia was almost never caused by syphilis, but it was due to exposure to wet, severe weather and excessive venery. It is now claimed, and apparently with great foundation, that the cause of locomotor ataxia is certainly specific in about seventy per cent. of all cases. This idea was first advanced by Erb and is confirmed by many noted specialists. Of the few cases seen by the writer, all but one were due to syphilis and this one was traced to exposure to wet, his occupation being that of a sailor. The remaining thirty per cent. of the cases analyzed by Erb were due to exposure and to excessive venery. It is also known that metallic poisoning is a factor in the cause of this disease. But while most of the specialists now agree as to the cause, there still remains a wide difference of opinion as to

the curability. Some would say, with Reynolds, that "the prognosis of the disease is, unhappily, full of gloom. Usually, without doubt, the course is slowly but steadily downward." Moreover, it is not impossible to find cases in which the conditions have remained stationary or have changed for the better. "Cases of this kind, it is true, are not very common, but they are to be met with. I myself can testify to the existence of several of them." Others fully agree with Ross that "locomotor ataxia is a serious disease, although the prognosis is not always so serious as it was once thought to be. A certain small percentage end in recovery, and, in many instances, the disease may be arrested for years. The prognosis is favorably influenced by the absence of any hereditary predisposition to the disease or of a neuropathic constitution, by a slow development and moderate intensity of the symptoms, especially of the sensory disturbances, by the patient being in a comfortable condition in life, and by the favorable effect of treatment."

Again, physicians claim a great percentage of recoveries, and maintain that in the early stages it is easily influenced by treatment. Even after the ataxic symptoms have become well developed, the disease can be arrested, and the patient be able to continue his daily occupation. The journals of nervous and mental diseases have contributed, lately, to the literature of this subject, some very interesting and instructive reading. It will be seen that the most of those who study this disease are fully committed to the theory and belief that it is curable. Dr. Hughes, in the last number of the *Alienist and Neurologist*, confirms the theory that this disease is due to syphilis, to exposure and damp. As to its curability, he says: "Recent clinical observations force us to the conclusion, from which we cannot escape, that not only posterior spinal sclerosis, but multiple cerebral sclerosis is either actually curable, or that they both have such symptomatic counterfeits as to render it impossible to distinguish the false from the genuine during life." He reports cases where all the symptoms of locomotor ataxia were present,

and, under treatment, had disappeared. The conclusion he reaches is that "these evidences are not alone sufficient to indubitably establish the existence of posterior spinal sclerosis, though they plainly indicate locomotor ataxia as we often see it clinically presented, and point to a condition of the spinal cord, which, if it proceed to dissolution, is found, on post mortem examination, to be one of sclerosis of the posterior columns of the cord."

Dr. Philip Zenner, of Cincinnati, has also lately reported, in the *Cincinnati Lancet and Clinic*, cases of recovery from well-marked symptoms of locomotor ataxia; and Erb, in his work on diseases of the spinal cord, reported cases of locomotor ataxia cured. One of these, in whom the usual symptoms, anæsthesia, ataxia, etc., had been manifested and later disappeared, excepting a slight bladder trouble, after an apparent recovery of about eight years, suddenly died of acute poisoning. An examination of the cord made at this time revealed the degenerative changes, in Burdoch's columns, characteristic of this disease. So, in this case, the symptoms had disappeared, while the pathological changes which produced them had remained. Here we must attribute the improvement, as Dr. Zenner, from whom we extract this reference, does, to vicarious function, certain nerve fibres in the cord assuming the function of those which had been destroyed. "Indeed, clinical observation does establish the curability of the symptom grouping which we have been accustomed to regard as locomotor ataxia, all that is lacking being the cadaveric affirmations of diagnostic accuracy, and this we cannot have in recovered cases." In June last, at the meeting of the American Neurological Association in New York, Dr. G. M. Hammond read a paper: "Can Locomotor Ataxia be Cured?" In this paper he calls attention to the cure of several cases of locomotor ataxia, but without any apparent reason comes to the conclusion: "That these are not cases of true locomotor ataxia."

He says, in conclusion:

"That congestion of the posterior half of the spinal cord may give rise to most, if not, all of the symptoms of locomotor ataxia.

"That it is impossible during life to make a differential diagnosis between posterior spinal sclerosis and posterior spinal congestion.

"That there is no evidence to show that sclerosis, once existing in the spinal cord, has ever been removed.

"That those cases of so-called locomotor ataxia which have been cured are simply cases of spinal congestion more profound in the posterior half of the cord."

The possibility of spinal congestion giving rise to all the symptoms of this most serious disease will need much more conclusive proof than the statement, to be believed by any one, but those who can add to scientific research a very vivid imagination. Many specialists and the author of this review are firm in the belief that there may be such a condition as anæmia and hyperæmia of the cord; but the symptoms would be of a much slighter nature. Many specialists, however, claim the existence of these states, to such a degree as to produce a certain group of symptoms, definite enough to be demonstrated by clinical observation, to be mere fancy. Gowers, in his recent work on the spinal cord, says, on page 73: "It will be observed that I have said nothing of anæmia of the cord or hyperæmia of the cord. In current descriptions of the symptoms of these conditions, I cannot help thinking that a vigorous scientific imagination has contributed much more than observation has supplied. The only practical knowledge of the effects of anæmia and hyperæmia of the cord, is, that they seem capable of causing such disturbances of the sensory structures as reveals itself in subjective sensations of tingling, pins and needles, and the like, and, perhaps, also, some impairment of motor conduction." From this and many more like statements, it would seem that the theory of congestion was not proven and needs further confirmation. Second, how can it be possible to have a congestion of

the posterior half of the cord? Third, the statement that sclerosis cannot be removed is certainly true. But cases are on record where the ataxic symptoms have disappeared; either this is due to "certain nerve fibres in the cord assuming the function of those which had been destroyed," or, the portion of cord affected had not entirely gone on to dissolution, and was restored by proper treatment. These explanations seem very much more reasonable than that of congestion.

Dr. Bartholow, of Philadelphia, in discussing this paper, said: "I quite agree with the author of that paper that cases of locomotor ataxia can be cured; but what kind of cases? I was once sharply criticised for reporting a case of locomotor ataxia accompanied by the statement that it could be cured by large doses of iodide of potassium, but it was a case of mercurial ataxia perfectly well developed, which got well. I have no doubt that as the metals are so largely introduced into our common modes of living, there are a great many cases of so-called locomotor ataxia, which are examples of metallic poisoning. I think, also, we should draw a distinction between two classes of cases, undoubtedly syphilitic. Syphilitic gummata of the spinal cord will produce symptoms of locomotor ataxia, and iodide of potassium will remove them. But there is a condition of the system induced by syphilis in its chronic form, favorable to changes in the connective tissue, changes known as sclerosis, in which the results are altogether different, and we should make a distinction, with regard to conclusions drawn with reference to the action of remedies, between those cases due to gummata, and those due to syphilis, which acts, secondarily, as a cause. In that restricted sense I believe locomotor ataxia can be cured. Furthermore, I believe that by the use of remedies, unquestionable cases of locomotor ataxia can be arrested. There is, however, a great difference between arrest and restoration to *status in quo*."

Dr. Mills, of Philadelphia, said: "I have not seen cases of what might be termed the regular form of the disease cured.

When I say regular form, I mean that type which we recognize pathologically as posterior spinal sclerosis. I have seen, however, several cases with ataxic symptoms relieved and cured. I believe those cases with ataxic symptoms, in which there is a distinct syphilitic history, will be relieved by the energetic use of anti-syphilitic remedies." From these facts, we are forced to the conclusions :

First, that the theory of hyperæmia of the cord producing symptoms which cannot be differentiated from true locomotor ataxia, is unproven and improbable.

Second, that the condition of the spinal cord producing ataxic symptoms is frequently relieved and cured.

Third, that many cases of locomotor ataxia, when the disease has progressed to a marked degree, have been arrested for years.

Fourth, that locomotor ataxia, due to syphilis, which forms a vast number of cases, is readily relieved and cured.

These considerations should make us ever careful in the diagnosis and treatment of this disease, once considered hopeless, now hopeful, and when our therapeutic power is equal to our knowledge of the symptoms of this disease, " we shall have added another therapeutic triumph to the many marvelous successes of the past." F. S. C.

The Lesser Degrees of Chronic Pelvic Inflammations in Women.

Under this title there appears in the *New York Medical Journal* a most excellent paper from the pen of Dr. Frank P. Foster. Its practicability merits for it the careful perusal and thought of not only the gynæcologist, but of the general practitioner. He believes that the disorders of the generative apparatus and its functions, in a large proportion of cases, are due to a lesser degree of exudation in the peri-uterine cellular tissues, " in which no history of an acute beginning can be elicited, or

any sign that there has been a tendency to suppuration, and in which there is no bulky exudate." "They are exceedingly common in occurrence; they are apt to be followed by consequences which produce serious impairment of health, and they constitute an important element to be considered, when we have to decide upon measures of treatment." Furtheron in his discourse, he says: "It is my decided conviction that this feature of these affections is underrated by many gynæcological writers. * * * Chapter after chapter is devoted to displacements of the uterus, to flexions of that organ, to dysmenorrhœa, to endometritis, and even to sterility, while the affections now under consideration—in my opinion, the most common beginning of them all—are treated as of minor consequence. * * * * * This one element seems to me ample to account for the great majority of cases of dysmenorrhœa, sterility, ovarian pain, profuse menstruation and leucorrhœa, that make up so large a share of the every-day practice of gynæcology." He then proceeds to show how injurious are many of the therapentic measures resorted to, in these cases, by those whose knowledge of the pathology and diagnosis of pelvic diseases is very limited. He mentions simply the introduction of the uterine sound and the possible restoration to its normal position of a displaced uterus. When it is considered how readily this chronic inflammation can be lighted into an acute inflammation, the reason of the possible injury is apparent. We commend the whole article to the careful perusal of all who have access to the *New York Medical Journal* of July 5, 1884.

Medical Colleges.

Before this number reaches our readers, the Medical Colleges of this city will be in full operation. The Buffalo Medical College opened its session September 25th, with an introductory address by Dr. J. W. Keene on "The Relations of the Teacher and Student of Medicine." We need not say that whatever production comes from so cultured a mind as that of the lecturer on

that occasion, will furnish valuable pabulum for thought and reflection to students, as well as practitioners of medicine.

The Niagara Medical College opened its course October 1st, with an address by Prof. W. S. Tremaine on "Medical Education." The well-known ability of the distinguished professor of surgery was abundantly shown on the occasion, and we voice the sentiment universally expressed by his hearers, when we say that the Niagara Medical College shows its inherent strength when one of its faculty utters sentiments on this important subject, which echo the advanced thought of the profession of this country.

On account of the failure to complete the college building in time for the opening of the session, the lectures will be given at the Young Men's Christian Association Building on Mohawk street. It is expected that the new building will be ready for occupancy by December 1st, when this school will possess ample accommodations and most conveniently arranged apartments for its work.

We direct the attention of our readers to the interesting remarks of Prof. Stockton of the Niagara Medical College, made before the Buffalo Medical and Surgical Association, in reference to artificial alimentation in infants, which we publish in this number of the Journal. The subject is of the greatest importance, and is also attended with the greatest difficulty; and, until this solution of the problem was reached, we have been at a loss to know how to treat successfully the derangements due to defective alimentation so frequently met with in our large cities during the heated term. It will be noticed that the milk diet is emphasized as the essential nutriment for infants. The question has always been how to adapt cow's milk to the child's powers of digestion and assimilation. We fully endorse the principle enunciated by the speaker that mal-nutrition and enfeebled constitutions result from the use of cereals and prepared foods. A healthy balance in the nutrition of the organiza-

tion only results from a diet of milk, and all efforts to substitute other foods inevitably result in failure. The preparations of milk, as directed by Dr. Stockton, are based on sound physiological principles, and practically are found beneficial in their effects. Their introduction marks an important advance in infant dietetics, and furnishes the profession with an aliment for successful use in the gastro-intestinal diseases, which are so prevalent, and difficult of treatment, during the heated term. We have found, in our professional experience, the peptonized, and pancreatized milk to be adapted very generally to digestive derangements of adults as well as of children. The specific directions for their preparation are important and should be strictly observed. We venture, also, to direct special attention to the remarks of Dr. Cronyn that the part of the alimentary tract affected should be carefully diagnosed. This will be a guide to the selection of the preparation of milk to be used, whether peptonized or pancreatized, the former being indicated in gastric indigestion and the latter in duodenal and intestinal derangements. It is also an interesting study to observe how many complications are the direct result of gastro-intestinal derangements, and how much they are under the influence of proper food. These diseases also suggest the extensive reflex nervous influences prevailing in the growing organization of children. How to maintain a healthy equilibrium of the nervous and vascular forces, so readily disturbed in the young and tender child, is a question which turns more upon the selection of proper food than upon medication. These questions in pediatrics open a wide field for study and investigation. For derangements depending on malnutrition, as well as for disturbances of the equilibrium of the vital forces of the body, the principles laid down by Dr. Stockton seem to offer a satisfactory solution. We hope the profession will give these subjects the attention their importance demands. We believe the large mortality resulting from gastro-intestinal diseases, due to prolonged heat and improper food, will be very much lessened thereby.

PARKE, DAVIS & Co. have furnished us a convenient and tastefully arrangee case, enclosing Oliver's urinary test papers, with instructions for their use. They are designed for the clinical examination of urine at the bed-side. The case contains litmus paper, which serves as a test for acidity or alkalinity of the secretion; as tests for albumen, the case includes four of the recently introduced reagents: 1, Picric acid; 2, Potassio-mercuric iodide; 3, Potassium-ferro-cyanide; 4, Sodium tungstate, all of which are to be used in connection with citric acid. As tests for sugar, the series of test papers includes, first, a modification of the usual copper test, and, second, picric acid in combination with carbonate of sodium. For use by the physician, especially in the country, where chemicals are not easy of access, this compact arrangement meets a want which has been long felt. We have used them with success and satisfaction. The case contains, also, a graduated pipette and specific gravity beads, with full directions for their use. We direct attention to this case with a view to commend them to many in the profession who have neither the time nor the taste to convert their office into a chemical laboratory for analytical investigations, and who need just such a compact test case to take with them in their daily practice.

DR. FERGUSON, of Toronto, Canada, reports (*New York Medical Journal*) a case of post partum synovitis. The patient, a primipara, suffered from septicæmia for several days, and in four weeks after delivery was able to be up. Two weeks after pains began to attack the various joints, attended with tenderness, slightly swollen, faintly reddened and painful on motion. No abscesses formed during the progress of the case, neither was there much of a rise of temperature, or pulse above the normal. The tenderness and swelling of each joint subsided in about four days to a week. To quote: "Barwell, in his work

on the diseases of the joints, mentions that he has met with, altogether, four cases of post partum synovitis; and, from his description, they pursued a course somewhat like any case. Some infection is taken up from the utero-vaginal tract, which acts injuriously on the joints, giving rise to metastatic synovitis." Salicine and salicylic acid were used without benefit. This would not point toward rheumatism as a cause. She improved steadily upon Barwell's plan of treatment: fifteen to twenty grains of sulpho-carbolate of sodium with two grains of quinine in half an ounce of camphor water three times a day.

Dr. Theobold, of Baltimore, reports the removal, by a physician, from the nose of a lady, of a suspicious looking mass which had apparently sloughed off from its former attachments the supposed neoplasm being regarded as probably of a malignant character. It was examined with the microscope, and at one of the meetings of a Baltimore society, its histological characteristics, together with the clinical facts, were duly presented. An animated discussion followed, and more than one hypothesis was advanced to account for the unusual features of the case. During the heat of this debate, an inquisitive individual inspected the supposed tumor with more care than others had done, and announced that it was a harmless specimen of the "bi-valve" order, familiarly known as the *oyster*. It was half digested and had probably became lodged in the nose during a previous spell of vomiting. This is a forcible illustration of discussions, "long, labored and loud," too often held over imaginary or misconstrued "facts."

Dr. W. W. Seely, of Cincinnati, has found a new use for jequirity, the remedy which is becoming so popular in the treatment of trachoma of the conjunctiva. In a paper read before the American Otological Society, at its recent meeting, he states that he has, for the past year or two, treated certain long-standing cases of purulent inflammation of the middle ear by

exciting an additional substantive inflammation with jequirity, using a small quantity of the preparation made for the eye. He thought such inoculation capable of good results under certain conditions, viz., when there was extensive destruction of the membrana tympani with a great amount of thickening of the mucous membrane of the tympanic cavity, rendering other plans futile, and where the Eustachian tube was patulous, so as to regulate the inflammation.

Lawson Tait pays the following tribute to American medical schools: "In my early days the medical education of a British youth was not considered complete unless he had made a tour of the schools of France and Germany, and, like others, I felt of myself as was said of Proteus:

> 'Twould be a great impeachment to his age
> In having known no travel in his youth.'

But I wish now that the time and money spent had been directed to the western instead of the eastern continent, and I now venture to predict that ere long it will be to the medical schools of America rather than to those of Europe that our students will travel, as did the apprentices of old before they settled down to the serious exercise of their craft."

Antipyrin is a new anti-pyretic and is recommended as a substitute for quinine. It is a white crystalline powder, with a slight aromatic odor and somewhat bitter taste. It is soluble in water, and the dose as an anti-pyretic is fifteen to thirty grains. Drs. Penzoldt and Sartorius, who have made numerous trials of the drug in diseases of children, regard it as a very effectual remedy in the pyretic diseases of childhood. It reduces the temperature several degrees, but not the frequency of the pulse to a corresponding degree, and the only disturbance it causes is, occasionally, vomiting. They give it in three doses, at an interval of an hour, each dose consisting of as many decigrams (1½ grs.) as the child has lived years.

Lawson Tait, the eminent surgeon and ovariotomist of Birmingham, England, is now visiting in the United States, and is most warmly received by the profession wherever he goes. His success and boldness in abdominal surgery have given him the attention of the whole medical world, and his independent and fearless criticism has been severely felt, not less in high and honored, than in more humble professional circles. His address before the Canadian Medical Association, at its meeting in Montreal, August 25th, is an emphatic and pronounced epitome of his views on abdominal surgery, and of his opinions of methods and men connected with its history. Every surgeon should read this address.

The American Opthalmological and the American Otological Societies held most successful meetings at the Catskills, in July. The various sections of the United States were well represented, and the papers and discussions were highly interesting. The excellent work done by each of these organizations, and the zeal with which members pursue it, are equal to that of any medical or surgical society with which we are acquainted. The profession is greatly enriched by such labors, and such careful investigations.

Dr. Geo. H. Kidd, in his address in obstetric medicine before the British Medical Association at Belfast, took puerperal fever for the subject of discussion. He takes the ground opposed to Schroeder, as announced in the nine propositions, that puerperal fever is nothing but poisoning with septic matter from the genital organs. Dr. Kidd believes that a large number of cases occurring in a community during a special time may be called an epidemic, and that epidemic puerperal fever is a specific disease.

Prof. W. H. Heath, of the Niagara Medical College, sailed for Europe Sept. 27th, to be absent about two months, for the benefit of his health. His position in the college will be tem-

porarily filled, while the duties of hospital marine service of this city, which devolved upon him, will be performed by Dr. Bennett, transferred to this city for that purpose. We wish our esteemed colleague *bon voyage*.

The effects of operation for lacerated cervix, upon dilatation of the os, at subsequent labors, has been a fruitful source of speculation in the past. The observations of such operators as Skene, Hanks, Lee, Pallen, Barr, Gittings, Montgomery and Goodell prove that a large majority of the cases operated upon do not have a re-laceration at subsequent deliveries.

Jerome A. Anderson, M. D., of San Francisco, in the *American Journal of Obstetrics*, advances a new theory of fœtal nutrition. He believes the child to be nourished, not so much from the utero-placental circulation as from absorption of albumen from the amniotic fluid, the placenta acting simply as a respiratory organ.

We notice a constantly increasing number of favorable reports upon the success of Dr. Alexander's operation for shortening the wound ligaments in posterior displacements and prolapsus of the uterus. It looks to be a reasonable procedure, and it is to be hoped that its results will be permanent.

The *Glasgow Medical Journal* contains a report of the removal, by Dr. Patterson, of an exceedingly large stone from the bladder of a man. It measured, in its long circumference, ten and five-eighths inches, and in its short circumference eight and one-eighth inches. Its weight was fifteen ounces.

Dr. Giddings, of Maine, reports (*Medical Record*) an ovarian tumor developed within eighteen months in a woman ninety years old. He fitly queries: "Who has seen so old a person develop an ovarian tumor?"

In St. Mary's Hospital, Brooklyn, N. Y., there are eleven different departments. Roosevelt Hospital has but a single surgeon for the entire surgical work. Both hospitals claim to be successful.

Bellevue Hospital, of New York, like the Sisters of Charity Hospital, of Buffalo, has found it advisable to establish an emergency hospital in the down-town districts of the city.

Reviews.

The National Dispensatory. Containing the Natural History, Chemistry, Pharmacy, Actions and Uses of Medicines, including those recognized in the Pharmacopœias of the United States, Great Britain and Germany, with numerous references to the French Codex. By Alfred Stille, M. D., LL. D., Professor Emeritus of the Theory and Practice of Medicine and of Clinical Medicine in the University of Pennsylvania, and John M. Maisch, Phar. D., Professor of Materia Medica and Botany in the Philadelphia College of Pharmacy, Secretary to the American Pharmaceutical Association. Third edition, thoroughly revised and greatly enlarged, with 311 illustrations. Price, in cloth, $7.25; leather, raised bands, $8; very handsome half Russia, raised bands and open back, $9. Philadelphia: Henry C. Lea's Son & Co.

When the National Dispensatory first appeared, in 1879, it was hailed as supplying a want that had long been felt in both the medical and pharmaceutical professions. Its accuracy, its fullness, its conciseness, the happy manner in which, while omitting all that was obsolete or merely curious, it gave all the information that the practitioner or druggist could desire, not only with regard to the selection, preparation and compounding of drugs, but their physiological effects, their therapeutical use and their clinical value, gave it at once an unappoached position as a standard work and an indispensable book of reference. The exhaustion, in less than six months, of an unusually large edition was the most emphatic testimony of its practical value. The carefully revised second edition fully maintained its reputation,

and so thoroughly was it brought up to the day that when, in 1882, the new United States Pharmacopœia appeared, it contained not more than half a dozen articles which had not been carefully treated by the authors of the Dispensatory.

Since then the authors have labored incessantly at the work with the view of making the third edition an even more complete representative of the science of 1884 than its first edition was of that of 1879. For this, ample material has been afforded not only by the new United States Pharmacopœia, but by those of Germany and France, which have recently appeared and have been incorporated in it, besides a large number of new non-officinal remedies. It is thus rendered the representative of the most advanced state of American, English, French and German pharmacology and therapeutics. The vast amount of new and important material thus introduced may be gathered from the fact that the additions to this edition amount, in themselves, to the matter of an ordinary full-sized octavo volume, rendering the work larger by twenty-five per cent. than the last edition. The Therapeutic Index, so suggestive and convenient to the practitioner, contains 1,600 more references than in the last edition—the general index over 3,700 more, rendering the entire number in the volume 22,390, while the list of illustrations has been increased by 80, and a number of wood-cuts have been substituted for others that were not deemed satisfactory.

Yet these facts inadequately represent the amount of labor bestowed on the revision, for it has not simply consisted in making additions. Many of the old articles have been condensed, others have been virtually re-written.

The work is wonderful in its completeness, and will maintain the position universally accorded to it as the standard authority in all matters pertaining to its subject, as registering the furthest advance of the science of the day, and as embodying, in a shape for convenient reference, the recorded results of experience in the laboratory, in the dispensing room, and at the bed-side.

Fat and Blood. An Essay on the Treatment of Certain Forms of Neurasthenia and Hysteria. By S. WEIR MITCHELL, M. D., Physician to the Orthopædic Hospital and Infirmary for Diseases of the Nervous System, Etc. Third edition, revised, with additions. Philadelphia: J. B. Lippincott & Co. London: 16 Southampton Street Strand. 1884.

This valuable little book advocates employment of certain methods of renewing the vitality of feeble people by a combination of entire rest and of excessive feeding, made possible by passive exercise obtained through the steady use of massage and electricity. The success of the treatment advocated by the distinguished author has been demonstrated beyond question, since the first edition of this work was published. As the author states, it now runs the risk of being employed in cases which do not need it, and by persons who are not competent, and of thus being, in a measure, brought into disrepute. The remarkable cures which the book relates would excite distrust, were it not for the high character of Weir Mitchell. The same excellent results, too, have been reported by Playfair Goodell and many others. We commend the work most heartily to our readers.

Sexual Neurasthenia: Its Hygienic Causes, Symptoms and Treatment, with a Chapter on Diet for the Nervous. By GEORGE M. BEARD, M. D., formerly Lecturer on Nervous Diseases, University City of New York, etc. Edited by A. D. ROCKWELL, A. M., M. D. New York: E. B. Treat, 757 Broadway. 1884. Price, $2.00.

This work was in manuscript at the untimely taking off of its brilliant author. His confrere has ably edited the work, and it is one which may be read with advantage by all practitioners. The honesty and fearlessness of its author, as well as the purity of his character, fitted him for the consideration of the delicate but important topics herein discussed, and the subject is presented in such a clear and lively way as to compel attention. While we cannot always agree with his conclusions, still the work is eminently suggestive, sparkling with originality, and its perusal will repay the physician.

Ziemssen's Motor Points of the Human Body. A Guide to Localized Electrization. By HERBERT TIBBITTS, M. D. New York: J. H. Vail & Co., Medical Publishers, Booksellers and Importers, 21 Astor Place and 142 Eighth Street. Buffalo: J. H. Matteson. 1884.

The profession have, for a long time, needed a guide to local electrization, and the present work furnishes the desired information in a compact and practical form, adapted to the immediate wants of the practitioner. It comprises a brief introduction, in which Ziemssen's electrodes are delineated and explained, and five plates, with ample explanation as to the use of electricity in various parts of the body. We regard the work as a very valuable one, and recommend it to those who seek to attain success in the use of electricity in disease.

The Laws of Health. Physiology, Hygiene, Stimulants and Narcotics. For Educational Institutions and General Readers. Copiously illustrated. By JOSEPH C. HUTCHINSON, M. D., LL. D., Author of a Treatise on Physiology and Hygiene; late President of the Medical Society of the State of New York. Clark & Maynard, 734 Broadway, New York.

This little book of about 200 pages presents, in clear and concise language, the knowledge of to-day concerning the laws of health and the effects of narcotics and stimulants, as far as can be expected or desired in a work so elementary. It is specially designed to meet the requirements of grammar schools and academies. It is one of the best school manuals, and may well receive the commendation of the physician.

Some of the Diseases of the Rectum and their Homœopathic and Surgical Treatment. By MORTIMER AYRES, M. D. Chicago: Duncan Bros. 1884.

A little book of 75 pages was written, as the preface says, because the author had become possessed of some facts that enabled him to manage them with satisfaction, or, in his own words, he had quite a repute for "curing piles." There is a good deal of practical information in the book.

THE

BUFFALO

Medical and Surgical Journal.

VOL. XXIV. NOVEMBER, 1884. No. 4.

Original Communications.

MEDICAL EDUCATION.

AN ADDRESS DELIVERED BEFORE THE STUDENTS OF NIAGARA MEDICAL COLLEGE, AT THE OPENING OF THE SESSION OF 1884–5.

BY WILLIAM S. TREMAINE, M. D.,
Professor of the Principles and Practice of Surgery.

"Life is short and the art long, the occasion fleeting, experience fallacious and judgment difficult."

These words were uttered over two thousand years ago by the father of medicine, the contemporary of Socrates and Plato, the wise, the learned physician of Cos, the immortal Hippocrates, and they are as true to-day as when, it may be, perchance, on some autumn afternoon in the academic groves of that island in the Grecian Archipelago, they were addressed to his pupils, together with others of his wonderful aphorisms, which have come down to us for our instruction and guidance.

In the march of civilization there seem to be moments when, after a long halt, the herald sounds his trumpet, and forthwith a leader appears, an intellectual champion, a genius, and this not in one, but in every department of human knowledge. He heads the column, and the march is resumed. Such a leader in the golden age of Grecian history was Hippocrates, the friend

and contemporary of Plato and Socrates. Founded in the Socratic philosophy, inspired by the genius of Hippocrates, medicine continued to advance by the double pathway of observation and reason.

From Greece the art was carried to Rome, and the next great teacher who arrests the attention of the student of the history of medicine is Celsus, who was followed by Galen, both of whom resided in the Imperial City. After this epoch came a period of intellectual darkness. Another halt, until Bacon, with his inductive philosophy, revived the Hippocratic reasoning. But so great was the impulse given our art by the father of medicine that some progress continued to be made.

A knowledge of the art of surgery was obtained by the Arabs, who had conquered Alexandria, then the chief seat of learning. There were, at that time, three sects, the Empirics, the Rationalists and the Methodists. Of these the Rationalists were by far the most enlightened, and to them belonged the great Arabian physicians, Rhazes and Albucasis, together with the distinguished Greek surgeon, Paulus, of Equieta. In his hands, indeed, ancient surgery reached its climacteric; in his works many operations and diseases are described with a mental grasp and thoroughness scarcely exceeded at the present day.

Without wearying you further with an attempt to trace the history of medicine in detail, I remark that the prominent thought that strikes one in studying its history is the diverse schools and methods that arose from *à priori* reasoning, a great teacher here and there formulating a theory of life and disease and attempting to found a philosophical system thereon; such, for instance, as the semi-metaphysical system of Galen, the microcosm of Paraceleus, the iatro-physical, the iatro-chemical school, the "excitability doctrine" of Brown, familiarly known as the "Brunnonian system," the wild vagaries of Hahnemann, whose teachings were so ridiculous and absurd as to excite much opposition on the part of the medical

profession, so that he was driven to appeal to the public and flatter its self-love by making it an arbiter on questions of science and technical matters, obviously beyond its knowledge. He was thus enabled to pose as a martyr to professional prejudice. These conflicting schools were clearly the outcome of the attempt to construct a universal system of medicine, based upon abstract speculation.

In the early part of the nineteenth century what we may regard as the modern school was formed, characterized by the use of the methods of research which obtain in physical science and the avoidance of theories, the fundamental idea being to abandon *à priori* reasoning, and to study closely the structure and functions of living normal tissues and organs, and the deviation from the normal, producing those changes in structure and functions known as disease. The founder of this school was undoubtedly John Hunter, who, by his voluminous researches in the domain of anatomy and pathology, stimulated, greatly, the modern scientific method of research. It must be admitted, I think, that greater advance in general pathology has been made in the last half century than in all preceding time. To this largely contributed the discovery of Schwann of cells and the cellular pathology based thereon by Virchow. Thus, for instance, instead of formulating a theory of inflammation, the actual behavior of the tissues in this condition was studied by the aid of the microscope. As you progress in your studies, you will not have expounded to you this or that theory, but you will be shown the actual phenomena that take place in the tissues of the living body. To pursue this method of investigation in the domain of biology and pathology, you will plainly see that some acquaintance, at least, with the physical sciences is necessary. We, therefore, demand of him, who, in the present day, aspires to be an educated physician, not only a mind trained to think accurately by that process intended as a means of mental development, which is usually termed a "liberal education," but a technical knowledge of physics and chemistry is

necessary, before you can properly begin the study of medicine. The object for which it is presumed you have matriculated at this university is the study of medicine. Have you ever stopped to consider what this means? A great thinker of modern times has said: "It were well to pause, sometimes, and translate our words into thought." Probably, if I were to put the question to most of you, individually, you would reply: "Study medicine, why, of course I want to know how to cure disease;" and while I admit the importance for yourselves and the public of the desirability of the cure of disease, I say, alas! that this *alone* should be considered the study of medicine; and this leads me to say that we must discriminate between the pursuit of medical science, and the practice of the healing art. The first embraces a knowledge of all the physical sciences that may possibly assist us in investigating physiological or pathological processes, the functions of the different organs and tissues of the body, the methods of growth and repair, the phenomena of reproduction and development, the natural history of disease, which, in itself alone, is encyclopædic in character. All these may and ought to be known, and yet, in the full possession of this knowledge, and from it, not a faint idea is suggested of how to cure diseases. That belongs, in the present state of our learning, chiefly to what is termed the *art* of medicine. You will thus see that I divide this study of medicine into the *science* and the *art*, the former embracing what I have indicated to you, the latter that rational empiricism derived from the study of the action of remedial agents upon man and the lower animals, in which great progress was made long before the days of modern scientific research; and while it is true that the efficacy of many remedies was well known from empirical methods some thousands of years long past, no real progress can be made without an accurate knowledge of science. As we become familiar with the laws governing the action of living organisms now being developed by this modern inductive method, the practice of the healing art becomes more accurate;

and thus, while I lay great stress upon *science* as a necessity to true advance, I must warn you against neglect of the *art.* I fear we can never hope to reduce the *art* of medicine to a mathematical formula, in which disease and remedy will represent one side of the equation and health the other. We deal with an infinite variety of unknown quantities and indefinite variables, impracticable if not impossible to reduce to any fixed expression that can have a practical value. We investigate the *inscrutable*, and fight the *inevitable.*

The conditions of disease, or, more properly speaking, perverted normal action, are highly complex. We have to contend with age, sex, temperament and previous history, elements for which allowance can, to some extent, be made, but we have to deal with idiosyncracies, with a thousand and one social surroundings which may ever baffle our calculations and stultify our foregone conclusions. You may ask, what is the use, then, of science? By science we know and understand disease. It is diagnostic. By art we treat it. It is therapeutic. Let me impress upon you that medicine is a faculty to be acquired, not a lesson to be learned; to be acquired by long and patient observation of complex phenomena, not yet reduced to the hard and inelastic formulæ of exact science. You will see that the tendency of past times was to search for principles. As these were and are unattainable by hypotheses, loose and plausible theories were adopted in their place, hence the quackery and "isms" of the profession itself, which have now become the property of the public, and, sad to say, of a certain proportion of medical practitioners who set up claims to be considered physicians. It a curious fact that the fallacies of the medical profession of a past generation become the belief of the public in a succeeding one. You will find, for example, that the humoral pathology is the current belief of the *profanum vulgus* of our day. This is one reason of their lack of discrimination between the modern scientific physician and the charlatan, with his "paths" and "isms;" nor is it peculiar to our day and genera-

tion, for as far back as 1229, when the Emperor Frederick II. required that physicians should study philosophy three years, then medicine and surgery five years, and then practice for some time under an older physician, before being let loose on the public, there existed a class of medical practitioners whose type we are familiar with to-day. They practiced solely for money, were ignorant of the study of medicine, and wanting in scientific knowledge. They are yet occasionally to be found in the drawing-rooms of the new rich, and the super-refined, the difference being that in that day they were not styled doctors, that honorable title being reserved for those who had complied with the conditions laid down by the universities or seats of learning, the term "university" meaning then, as it should now, and does in other countries, an institution where learned men teach the higher branches of the arts and sciences, and should not be assumed by any joint-stock concern intended for the rapid manufacture of medical tradesmen at so much a head. Think you the distinguished novelist, Lever, had such a product in his mind's eye when he wrote, referring to the elevation of medical men to the peerage: "I own that I am anxious to see some share of the high honors of the State bestowed upon a class which, whether simply regarded as numbering among them some of the ablest thinkers and writers of the age, or conferring more gratuitous services on the world than any other rank and condition together, are less recognized than any other. Among all the trained and polished intellects you assemble in the Upper House you have not got that special form of mind that distinguishes the doctor. You have not got a man whose daily life and labor is passed between the deepest problems of science and the practical workings of the great truths he has been considering. In knowledge of his fellow-men he is without a rival. His study of temperament is a study of character, and this not in one class or condition, but in every walk and rank, from the palace to the hovel. He is the one man with whom no fallacy

can succeed that assumes to say what men in this or that station might do or think, for he knows them all."

Gentlemen, for years I have been an advocate for higher medical education, for more thorough training for our work. However desirable it may have been in earlier days that men with only a limited knowledge of the healing art should be provided for the sparsely settled districts, that day has long since passed. There are no longer "backwoods" to be found. The conveniences produced by modern science have penetrated to every hamlet. Shall the doctor alone be ignorant?

You live in a privileged time. Medicine is now more than ever tending towards a positive science. Over a quarter of a century has elapsed since I occupied your position as a pupil, but a short time in the history of science, and yet I may fairly say that the amount to be learned has, at least, doubled in that time.

How, then, I say, is it possible that a student can, in two courses of four months, acquire sufficient knowledge to intelligently understand or treat disease or injury. He cannot do it, and as a matter of fact, it is never done. No one could learn the merely mechanical trade of a shoemaker in that time, far less obtain even a rudimentary knowledge of that science which virtually embraces *all* other sciences.

When I contrast the advantages you possess with those I and my fellow-students had in the days of our pupilage, I must say I envy you your high privileges. While I was yet an undergraduate, Virchow published his cellular pathology, the microscope was in its infancy, the ophthalmoscope, laryngoscope and clinical thermometer were not used. I remember hearing ovariotomy (that triumph of modern surgery, which, it is estimated, was added 40,000 years to human life), stigmatized as a barbarous and unjustifiable operation. Within my time has developed the splendid achievements of antiseptic surgery, whereby almost any operation is rendered safe, and surgical mortality reduced 25 or 30 per cent. Certainly, these are results

to be proud of. To what are they due? Certainly not to the *charlatan* or the *pathist.* They have been brought about by the patient, self-denying efforts of men with well-trained minds, imbued with the scientific spirit of search for *truth.* Will you profit by their labors without fitting yourselves by proper training to add your tribute, albeit, but a single stone, for the Temple of Science, in whose Holy of Holies is enshrined the mystery of life! While your privileges are great, your responsibilities are increased in proportion.

"The laboratory is the forecourt of the Temple of Philosophy; and whoso has not offered sacrifices, and undergone purification there, has little chance of admission into the sanctuary." So wrote one of the masters in science, Thos. Huxley. See to it that *your* garments are white.

The medical man must ever be a *student* for life. The first lesson, then, to learn, is *to study*, *how to study* and *what* to study. Early acquire the habit of thoroughness and method. Realize that the end and aim of your work is to acquire knowledge and intelligently apply it, and not simply to answer questions and pass examination. Learn to examine yourselves, that you gain knowledge understandingly. "Apply thine heart unto instruction, and thine ears to the words of knowledge," and remember, above all, that "He that getteth wisdom loveth his own soul, and he that keepeth understanding shall find good." Do not attempt too much in the beginning, bearing in mind that one subject thoroughly mastered will be of much greater ultimate advantage than a dozen superficially skimmed over. Question yourselves, or each other, as to the real progress in your daily work. To those of you who are beginning study, the three branches of anatomy, physiology and chemistry will sufficiently occupy your time. There is an erroneous impression that anatomy is only of use to the surgeon. It is of equal, if not greater, importance to the physician. You must then *know* your anatomy, and be able to answer any question, as Huxley said, as you would that of the arrangements of your

own apartments. Avoid learning by rote, and endeavor, in studying the relations of any part, to understand, also, the purpose, it is to subserve in the animal economy. The same advice applies to physiology and chemistry. But I must not trespass on the domain of my colleagues. The incumbents of these several chairs will indicate to you, at the proper time and place, the manner in which you should pursue these special studies. Having a thorough knowledge of these, so to speak, *foundation subjects*, you will then be prepared to better appreciate the clinical lectures or bedside study of diseases; and each case, if systematically studied, will become a valuable and lasting lesson; and while I think it desirable that students should, early in their career, attend, to some extent, the clinics, I deprecate any attempt at systematic study of general pathology, practice of medicine and surgery, until well grounded in the *foregoing branches*. Above all, do not pursue your studies with a view to becoming specialists in conformity to the pernicious fashion of the day, whereby an organ prone to disease and suffering is singled out as if it were independent of the rest of the body and subjected to all kinds of torture and experiment—too often only an advertising trick. Methinks a future historian, possibly a contemporary of Macaulay's New Zealander, may indite an eloquent chapter on the relation between the decline and fall of nations and the evolution of the *gynecologist*.

In conclusion, I would add a few words in regard to the establishing of the medical department of Niagara University, which, to some of you, at least, will be your Alma Mater, and hence, during your future career, an object of special interest. In Europe the requirements for the degree of Doctor of Medicine are fixed by law, and, generally speaking, at a sufficiently high standard, accompanied by sufficient and enforced penalty against its unwarrantable assumption by unauthorized parties. It is conferred solely by chartered universities under government inspection and control and constituted, without a single exception, of what is known as regular medicine, ignoring,

entirely, so-called "schools," or what are popularly understood as different systems of practice. A diploma given by one of these bodies means just what it says—that the possessor is well instructed in the science and art of medicine. It is the "Hall mark," indicating the quality of the article. It is to be regretted that the same is not true of that title in our country. Hosts of colleges swarm all over the land, issuing diplomas whose value bears the same relation to the genuine article that the spurious coin of the counterfeiter bears to that of the realm or republic respectively. Every "pathy" and medical heresy has its college or university (save the mark), often deluding the untaught public into the belief that their wares are genuine. Fancy a university designated by the prefix of a "path," the catholicity of science conditioned and bounded by an "exclusive dogma"! Perish the idea! Science can have no schools in this sense. It is possible that there are those who mistake the paths of science for "*paths*" of pseudo-science. Do not misunderstand me. I quarrel with no man because of his opinion or belief on unsettled matters, or his theories, provided he is well versed in those sciences which, by the common consent of the educated world, go to make up the learned physician, and is an earnest seeker after scientific truth for truth's own sake, but I do protest against the assumption of *trade-marks* in science. I trust that each of you will strive for that completeness of knowledge which is embraced in the simple title of a learned physician.

The profession in general is entirely awake to the deplorable looseness of our medical education. The public, too, are partially alive to the situation. In this country, where it seems impossible, or, at all events, impracticable to accomplish reform by legislation, the remedy must come from the profession itself. The time is ripe when it should lay its strong hand on the colleges and say: "We will not admit your graduates to our fellowship unless you demonstrate to us in some positive manner that they are worthy of recognition by being thoroughly trained in our science and art, which can only be done by

taking sufficient time to pursue the numerous and varied studies that now constitute a regular medical education."

If the profession is in earnest in its desire for reform, it can best demonstrate it by supporting and encouraging teaching bodies which endeavor to meet these requirements. The Niagara University is one in fact as well as in name. Its trustees, belonging to an organization whose belief in thorough training for work is well known, have determined to make such an effort, and the day will come when its graduates will be able to point proudly to their diplomas as having a *real* and not fictitious value. May the true spirit of scientific inquiry so pervade your minds, and direct your studies, that wherever you go, or whatever tests you may be subjected to, you will always be living examples of the fulfillment of this prediction, and bear honorable testimony to the faithful teaching of your young but vigorous Alma Mater; for, as Lord Bacon says: "I hold every man a debtor to his profession, from which, as men, of course, do seek to receive countenance and profit, so ought they, of duty, to endeavor, themselves, by way of amends, to be a help and ornament thereto."

Personal Experience with the Cholera Epidemic of 1852–53.*

By E. T. Dorland, M. D.

My only apology for presenting to this learned body a few thoughts on Asiatic cholera, is, that I was privileged with an opportunity of knowing something of the disease, from experience, where it prevailed in a very virulent form, viz., at the Erie County Almshouse during the serious epidemic of 1852–53. At that time I was resident physician of the institution and Dr. Pratt the attending physician. Professor Austin Flint and Dr. Winnie also visited the institution many times, in consultation, during the epidemic.

*Read before the Erie County, N. Y., Medical Society.

I assume that the profession are generally too well informed on the history of Asiatic cholera to make it proper for me to dilate upon it. We are all, I suppose, aware that the disease is endemic in certain parts of British India, where, from time to time, it assumes a virulent type, and is then apt to spread by favoring circumstances along the great lines of human intercourse, and so to extend over the world. The essential characteristics of all epidemics are the same, though differing from each other in the degree of virulence, necessitating, therefore, modifications of treatment according to the activity of the specific cause. Asiatic cholera was unknown in Europe prior to 1829 and 1830, although it had existed in India for many centuries.

The principal visitations of cholera in America were in the years 1829 and 1830, in 1848, in 1852, 1853 and 1854, and in 1873; this latter epidemic you were all, doubtless, familiar with, either by actual observation or by reading its history. Apropos of this last visitation I will state that a very full and careful history of facts concerning it may be found in the work of Dr. John M. Woodworth, Supervising Surgeon, United States Merchant Marine Hospital Service, entitled, "Cholera Epidemic of 1873 in the United States." Much valuable information is therein contained on the subject of sanitary science and disinfection. The symptoms of cholera you are all practically or theoretically acquainted with, but to those who have only a theoretical knowledge of the disease, I will say, that if you are ever called to treat a case of real Asiatic cholera you will never experience any difficulty thereafter in diagnosticating it. Such violent vomiting and purging, such enormous quantities of watery fluid ejected in so short a time, such severe and agonizing spasms, such rapid sinking, such lowering of the temperature, such early collapse and death, finds no parallel in any other disease ever yet known or recognized on the face of the earth. With no desire to magnify the importance of my observations, I thought, however, as many of the cases there were seen by Flint, Pratt

and Winnie, and as several autopsies were made, and I, by request, made a record of them, a few points that impressed us as prominent and striking might be of some interest at this time. I find by the record then made, which I still have, that Professor Flint made two autopsies, and Dr. Winnie three, agreeing substantially in regard to the external and internal appearance of the bodies examined, so I will recite but two of them, one of Professor Flint's and one of Dr. Winnie's, and to avoid the possibility of errors in copying, will, with your permission, read from my old diary the original notes taken thirty-two years ago, just as they were written up at the time. The notes read as follows:

"June 5, 1852. Last night a young, robust German woman was taken with violent vomiting and purging; fluid ejected was of the rice water character; was pulseless; hands, feet and nose blue and shriveled; covered with cold sweat; intellect obtuse; great thirst; uneasiness at the epigastrium; respiration hurried; we applied mustard extensively, and made vigorous application of external heat by means of unslaked lime, etc., but she sank rapidly and died in about fourteen hours from the attack. This afternoon a young, healthy Irish woman was taken in the same manner, and in spite of prompt treatment by mustard and external heat, and the internal use of brandy, laudanum, camphor and capsicum, she is rapidly sinking.

"June 6, 1852. This morning, about 7 o'clock, the patient last referred to in my yesterday's diary died. Dr. Pride and myself thought both cases were real genuine Asiatic cholera, although no cases of the disease have yet been reported in this part of the country. We sent for Dr. Winnie to come and make a post mortem examination. He examined the body of the woman who died last, and found the following condition obtained: Capillaries of the stomach and intestines much congested, giving them a rosy tint; urinary bladder empty and gall bladder filled; but the most striking feature was the condition of the mucous membrane. This, of both stomach and bowels, was entirely

decomposed and existed in a cream-like form, lining but not adhering to the muscular coat, and the bowels were filled with the same fluid evacuated before death. Dr. Winnie was of the opinion that the patient died of real Asiatic cholera."

In the same diary, under date of June 20, 1852, after describing the symptoms and treatment of several new cases of cholera, I find the following statement:

"John Devoy died about 3 o'clock this morning; sick seven hours; Dr. Flint was here about 10 o'clock and we made a post mortem on his body; the cadaver was wonderfully shriveled and skin mottled; his legs were almost black; rigor mortis had set in, and one leg was partially and very rigidly flexed. On opening the body the mucous membrane of the stomach and upper intestines were found greatly congested and swollen; many small and many large patches were seen in the stomach and intestines, owing, Dr. Flint says, to the epithelial coat having sloughed off at those points; the right side of the heart and the pulmonary artery were found full of very heavy, dark blood, but the left side contained but very little; the lungs appeared bloodless and collapsed. Dr. Flint said the cause of this was the blood being so thick, after losing nearly all its serum, it could no longer pass through the smaller pulmonary arteries; hence this great engorgement of the right side of the heart and pulmonary artery and the empty condition of the vessels of the lungs."

The cases referred to above were considered of special interest at the time as being the first cases of recognized cholera in Western New York in the epidemic of 1852, 1853 and 1854.

Pardon me now for inviting your attention to the cause of cholera. I have no expectation of enlightening you on the subject, but have some points to make in regard to it as related to the epidemic that came under my observation. As to the immediate cause and development of Asiatic cholera, I think the ground is fully covered by the six short propositions of Dr.

Woodworth in the work referred to. I will venture to quote them:

"1st. That Asiatic cholera is an infectious disease, resulting from an organic poison gaining entrance into the alimentary canal, acting primarily upon and destroying the intestinal epithelium.

"2d. That the active agents in the distribution of the cholera poison are the defecations of persons suffering from the disease in any of its stages. That in these defecations there exists an organic matter which is capable of reproducing the disease in the human organism to which it has gained access.

"3d. That cholera defecata coming in contact with, and drying upon any subject, such as articles of clothing, bedding and furniture, will retain, indefinitely, their power of infection. That in this manner a sure transmissibility of the cholera infection is effected, and that a distinct outbreak of the disease may occur by such means at great distances from the seat of the original infection.

"4th. That the specific poison, which produces the disease known as cholera, originates alone in India, and that, by virtue of its transmissibility through the persons of infected individuals or in the meshes of infected fabrics, the disease is carried to all quarters of the world.

"5th. That the respiratory and digestive organs are the avenues through which individual infection is accomplished. That through the atmosphere of infected localities cholera is frequently communicated to individuals. That water may become contaminated with the specific poison of cholera from the atmosphere, from surface washings, from neglected sewers, cesspools or privies, and that the use of water so infected will induce an outbreak of the disease; and,

"6th. That the virulence of a cholera demonstration, the contagion having been introduced into a community, is influenced by the hygienic condition of the population, and not by any geological formation upon which they may reside."

From what I have observed and read, I fully subscribe to the truthfulness of these several propositions. But as experience proves that the specific contagion may gain entrance to our land through our seaports in spite of the most vigilant attention to quarantine, it behooves us, I think, as physicians of an inland town, to devote our special attention to the predisposing or contributing causes, so that in case it should, unfortunately, break out in our midst, we may be found in the best possible condition to meet the much dreaded foe, and thus be enabled to greatly lessen the destruction it would otherwise accomplish. The two great and principal predisposing causes to cholera I believe to be filth and fear, and I hardly know which is the more potent. By filth I must be allowed to mean everything unwholesome, unclean, unhealthy and unsanitary. But as the question of preventive treatment, or the adoption of the most approved principles of sanitary science as safeguards against the introduction of this dread disease among us, will be the special subject, I suppose, of your deliberations this evening, it will not become me to enter largely into its discussion, but I desire simply to call your attention to a few facts as gathered from our observations in the epidemic referred to. We learned, by bitter experience, that cleanliness and disinfection meant something, and that to accomplish what it is capable of, it must, of necessity, be very thorough. The first year it was with us, viz., 1852, we thought we were doing all that was required in a sanitary way by having the floors of the sick wards washed often, by the free use of chloride of lime, and requiring the inmates to carry further away from the institution the slops, consisting of all the accumulated filth and garbage of the place, where it was dumped on the ground. That was about our sanitary status through the summer and autumn of the year 1852.

The only wonder is that in such a place of concentrated filth, such a pestilential breeding atmosphere, any of us survived to tell the tale. It was terribly fatal; nearly all attacked were swept away; but it must be borne in mind that the class of persons that

fill our almshouses are usually physical wrecks, among which we should expect a far greater mortality. The following year, 1853, when it again broke out in Buffalo as well as at our institution, it found the almshouse and the city in about the same sanitary condition as in the preceding year. The people did not anticipate this recurrence, and had, therefore, done but little in a precautionary way. The disease at once assumed a far more virulent form than characterized it the year before. The people were thoroughly alarmed and clamored for protection. The medical profession went to work with a will and did what they could in the way of improving the general hygienic condition of the city. As a result of a medical conference, held at our institution, at which Prof. Flint was a conspicuous figure, very radical sanitary reforms were instituted. The necessity of general personal cleanliness was urged upon us, the importance of isolation of those affected, and the burning of all clothing soiled in the least with cholera defecata, and of all clothing worn by cholera patients. Debris of all kinds was ordered collected in heaps and destroyed by fire; all the outbuildings, including stables, chicken house, privies, etc., were ordered to be thoroughly cleansed and disinfected; all the cholera discharges were ordered carried a long way from the buildings and thrown into a deep trench, dug on purpose to receive them, and there mixed with a quantity of loose earth and chloride of lime; these and other precautionary rules were rigidly observed. The principal disinfectants used by us were chloride of lime, charcoal, fresh earth and carbolic acid. The effect of this radical sanitary revolution among us was surprising, and, surely, very gratifying. There was an immediate abatement of the malady, both in the numbers attacked and in the virulence of the disease. In fact, it soon became quite manageable. The mortality soon dropped from at least 75 per cent. down to about 25 per cent., all unquestionably due to greater cleanliness and disinfection, and the confidence and hope that it helped to inspire. I verily believe that what vaccination is to small-pox, hygienic regulations are to

cholera, and that the people of our city may rest assured that a rigid observance of sanitary laws presents to this virulent disease a wall which is almost insurmountable.

If any further evidence were needed of the potency of filth as a predisposing cause of cholera, we have it in the history of the present epidemic as it has been raging recently in France. In towns where sanitary requirements are unknown or unheeded, and where the people are steeped in filth, cholera runs riot, while in a great and densely populated city like Paris, where intelligent hygienic regulations are enforced, the disease is comparatively unknown. You may all have noticed Harold Frederick's account, cabled to the *New York Times*, of his experience in the cholera infected towns of Marseilles, Toulon and Arles. A summary of his observations is given in a Buffalo daily, as follows: "From Frederick's dispatches we learn that the cholera is largely, if not wholly, due to the undisturbed presence and unnoticed accumulation of filth, the uncleanly habits of the people and their ignorance of sanitary laws. Panic has also played its part and swelled, very considerably, the mortality." As to the treatment of cholera, I will offer in this paper no suggestions, although we held very positive opinions on some points which we thought our experience justified, but the principles of which harmonize, I think, with the general principles of treatment laid down by most authors and teachers, so I will not trespass upon your time in presenting them.

A few observations now on the influence of fear as a predisposing cause of cholera, and I am done. I think I am safe in saying that there is no disease upon which fear exerts so potential an influence in the inducing of an attack as in that of cholera. Its effects upon the brain and nervous system somehow so lessen the vital force or resisting power that the system falls an easy prey to the operation of the specific cause if brought, by any means, in contact with it. We all believed that a large per cent. of the cases, in 1852, among the inmates of the

almshouse, was directly due to the condition of fright and fear that prevailed among them, and we also believed that the feelings of hope and confidence inspired among them by our earnest and thorough sanitary regulations, in 1853, exerted a wonderful influence in checking the further ravages of the disease.

Several, through fright, ran away from the institution, and two of them, we knew, were taken with it before they got far away and died by the roadside. Our attending physicians were continually urging the officers of the institution not to think of danger, but to keep cheerful and courageous, and, with one exception, we maintained good cheer and hopefulness throughout, and with that one exception none of the officers or attendants suffered any serious attack of the disease. The exception mentioned was an assistant keeper; his case furnished very convincing evidence of the great power of fear in inducing an attack of the disease. He was brave and cheerful during the siege of 1852, and when it first broke out in 1853, he was nothing daunted. After about two weeks, however, it happened, one day that several were taken about simultaneously, and two died within a few hours. He then became greatly alarmed, and lost his courage, and gave way to a conviction that we should all die. He lost his appetite, could not sleep, became very despondent, and in four or five days was attacked very suddenly and very violently, and died within fourteen hours. I have no doubt that fear alone caused his attack, being in a place and in an atmosphere where the specific cause was at work. In conclusion, I will state that I regard the obligation of the medical profession to the people to consist of two things: First, recommending and insisting that the city be put in the best possible sanitary condition and kept so, as the only safeguard against its introduction amongst us, and, second, assuring the people that this matter properly attended to, there is, then, no occasion for fear or alarm; that if each individual will see to it that his own domicile is kept clean and wholesome, thus contributing his share to the

desired sanitary condition of the city, realizing that a board of health, unaided by individual effort, cannot accomplish everything, then may all rest in peace, with no anxieties in regard to any serious visitation of Asiatic cholera.

Society Reports.

Transactions of the Buffalo Obstetrical Society.

Stated Meeting, September 23, 1884.

The President, Dr. W. W. Potter, in the Chair.

Dr. C. R. Jewett read a paper on "Puerperal Eclampsia."

He gave the history of the malady chronologically and medically, and its pathology as at present understood. The doctrine of cerebral anæmia, in its etiological relations to puerperal eclampsia, was elaborated in a forcible and plausible manner. The relations of the various forms of Bright's diseases to puerperal eclampsia were treated of, and the bearing of the former upon renal insufficiency, a prime cause of eclampsia, quite fully dilated upon.

The differentiation of uremia and eclampsia received a full measure of consideration at the hands of the essayist, and the unsatisfactory nature of the results in this direction thus far attained were pointed out.

The post mortem appearance of the kidneys was described, and the usually pale condition of these organs referred to as indicative of renal insufficiency. The essay was replete with evidence of pathological research and statistical accuracy, dealing almost wholly with the etiology and pathology of the malady.

Discussion—Dr. Banta, in commenting on the paper, remarked that he stood in greater fear of post partum hemorrhage, and puerperal eclampsia, than any other complications of pregnancy

or parturition. He believes it to be of the first importance to address the treatment to the prevention of eclampsia, when it can be done, by the administration of diuretics and active cathartics. He further believed it good practice to give full doses of morphia, with a view to suspend the morbid processes, after the convulsions set in, and thought this would generally control eclamptic fits, which appear first *after* delivery.

Dr. Van Peyma thought it advisable, no matter what view we may take of the etiology or pathology of the disease, to induce labor at once when convulsions appear, and thus rid the system of the chief embarrassment to the reception of other therapeutic measures.

Dr. Hartwig had seen two forms of convulsions, one with and another without the presence of albumen in the urine. He believed that the urine should always be examined where there was suspicion of approaching eclampsia, but did not regard the test-tube as an infallible indicator, either of the certain coming on of the malady, or of the degree of its severity. He does not give credence to the theory of cerebral anæmia as causing the convulsions, but believes there is, on the other hand, hyperæmia of the brain when they appear. He would, among other things, administer sub-cutaneous injections of pilocarpin, in the treatment of the disease, and related cases of its beneficial employment in his hands.

Dr. Howell said his personal experience with eclampsia had been *nil*, but he had seen Schroeder, in Berlin, successfully treat the disease with chloroform by inhalation, and chloral per rectum.

Dr. Stockton thought the early delivery of the woman was often demanded, not only for her own safety, but for that of the child as well; and believed that this important fact should not be lost sight of, in making up our judgment as to the therapeutic management of cases when the fœtus is viable.

Dr. Lothrop related cases which had fallen under his observation during twenty-eight years' practice, one of which had been

fatal. He succinctly passed in review the various remedies which seemed to offer the best hope of successful employment, named the special conditions in which the several plans were indicated, and called attention to the usefulness of venesection in certain cases of plethora with high arterial tension. He also directed attention to the use of morphia, hypodermically administered, and accepted the experience of others as to its efficacy in this disease. The importance of urinalysis during the last months of pregnancy was urged upon the members as a safeguard to the patient and a source of safety to the attending accoucheur.

Dr. Frederick called attention to a report he had recently observed, upon the employment of Norwood's tincture of veratrum viride in the disease, and remarked that the chief point in connection with its use was that it should be carried to the point of producing emesis, in order to get the greatest benefit from the drug.

Dr. W. D. Greene was in favor, generally speaking, of the early induction of labor in these cases, and pointed out the fact that Nature herself usually made the attempt to rid the uterus of its contents, clearly indicating thereby the propriety of the practice. He furthermore remarked upon the ease and rapidity with which labor can, in most cases, be artificially induced.

The President remarked upon the interesting character of the subject chosen by the essayist, as indicated by the discussion. In regard to the doctrine of cerebral anæmia causing eclamptic fits, how is it, then, he asked, that remedies like the bromides, chloral, etc., which have such a strong tendency to diminish the cerebral blood-pressure, act with such potency many times in these cases? Formerly he had been of the opinion that the gravid uterus acted mechanically upon the renal emulgent veins in such a manner as to produce these convulsions; but, of late, he had been more inclined to regard the mechanical obstruction to the excretion of the urine, as a more tenable ground to occupy in regard to the etiology of eclampsia. This obstruction

may be, in part, by pressure upon the ureters and in part by catarrhal or other obstruction of the uriniferous tubules. The ureters thus become dilated, distorted, or stretched out, or, possibly, blocked up by catarrhal exudate, so that the passage of urine is impeded; nor do they regain their function fully for some time after delivery. Whatever view may be taken of the pathology of this malady, he continued, it would appear to be good practice to seek to empty the uterus of its offending contents whenever it can be done without too much officiousness. He described two extreme cases where he had recently employed the artificial induction of labor with success. He also remarked upon the importance of preventive measures when the patients are seen in season; of the usefulness of morphia in large doses, hypodermically, as recommended by Dr. Clark, of Oswego; and warned against the indiscriminate employment of blood-letting. Finally, he counseled against the treatment of this malady by any fixed or pre-formulated plan, but, rather, to approach each case free to adopt such measures as seemed best suited, after a careful survey of all its surroundings, history and symptoms; for it would appear that now one method or set of remedies would seem best adapted, and again another plan, quite different in character, would offer the greatest probabilities of success.

Dr. Jewett, in closing the discussion, said that he had purposely avoided introducing anything on the subject of treatment in the paper, believing that the discussion would elaborate that branch of the subject quite fully enough. He had not been disappointed in his expectations. The etiology and pathology of the disease would probably be less understood, in view of the recent researches, and he had, therefore, confined himself exclusively to their consideration. In regard to treatment, he did not regard the induction of labor of value, unless it be done before the occurrence of convulsions; any palliative is quite as good. Morphia, chloroform, chloral, etc., only suspended, for

the time being, the morbid processes, did not remove them. Thinks pilocarpin used in diseases of the kidneys logically wrong, consequently inadmissible in eclampsia, on account of the involvement of the kidneys.

Foreign Correspondence.

BERLIN, October 7, 1884.

Editors Buffalo Medical and Surgical Journal:

Having followed, with considerable interest, the many investigations and consequent theories as to the cause of cholera, it seems to me that the conclusions of Dr. Koch are open to very serious objections. It is only reasonable to suppose that the bacilli, which he claims to be the essential cause of the disease in man, when injected into animals, should induce similar if not identical symptoms; but his efforts in this direction have thus far failed to produce the least indications of blood-poisoning. This has been urged by many as a proof that animals are insusceptible to the malady. In like manner the incredulous claim that not the bacillus, but, rather, some product evolved by it, is the true cause of the disease. This certainly seems probable enough to demand further investigation, and until some effect can be produced upon the higher animals by the injection of poisonous matter into their system, I do not think the real cause of the disease has been discovered.

The actual poison may exist at some particular step in the growth and development of the bacillus. Dr. Koch has not, as yet, traced its entire life-history, and, therefore, has not watched the many changes which it undoubtedly undergoes during the spore-bearing period. If we grant the same life-history to the bacillus previous to sporification which characterizes other such

organisms, and, indeed, the forms which the same organism assumes are so different that they have often been assigned to distinct species, then it is not improbable that the cholera germ may exist in one of the more developed stages of the bacillus.

The recent discoveries of Drs. S. Maurin and Lange, who have been working at Marseilles, have convinced them that the actual agent in the propagation of cholera is a mucor. This mucor, they say, is the mature form of which the bacillus is an earlier and lower phase. Their report seems to indicate that it makes its appearance only on the fourth or fifth day, and, when visible, has the form of a mycelium whose tapering ends are surmounted by cup-shaped sporangia. The slightest agitation causes these sporangia to burst, thus discharging vast numbers of spores. Contact with some putrid organic matter germinates the spores, and they then develop into a mucor of another form, an anærobe, which they believe to be the immediate cause of the disease. The sporification of the anærobe gives birth to the bacilli of Dr. Koch. They claim to have proved, beyond a doubt, that the bacilli themselves are inocuous, but when deposited on a putrid medium and exposed to the air, they develop the first-mentioned mucor, and the cycle is renewed.

A rabbit, after being injected with these mucors, died in twenty-four hours with lesions entirely like those of cholera. The alleged difference between the mucor and the bacillus is the power of the former to resist disinfectants. Ten per cent. of nitric or hydrochloric acid has comparatively little effect upon it, while in a solution of carbolic acid of like proportions it vegetates freely. It withstands any temperature up to 150 degrees Centigrade, but above this breaks and disappears.

Strange as these statements may seem, there is really nothing in them save the power of resisting reagents, which is not in perfect harmony with what we know of the life-history of similar organisms.

Very sincerely, L.

Selections.

The Surgical and Orthopædic Treatment of Infantile Paralysis.

At the late meeting of the British Medical Association Bernard Roth read a paper upon this subject. In the course of his paper he says that the two guiding principles in the treatment of infantile paralysis, after the acute stage is passed, are:—

1. To improve the power of those affected muscles which have still some voluntary power left.

2. To prevent the onset of any deformity, or if this has already occurred, to reduce it to a minimum.

To carry out the indications of these principles, the first thing to be done is to correct the lowering of temperature, nearly always present, in the limb or limbs. If one leg or arm is affected you must not rest satisfied until it is as warm as the healthy one. Upon rising in the morning the patient should be sponged all over with tepid water, followed by brisk rubbing and drying. The limb must then be clothed with thick woolen goods, or, better still, with goods lined with some kind of fur. Warm baths every evening, temperature from 98 to 100° Far., are most useful. These must be followed by rapid sponging of the entire body with cold water, thus correcting the tendency to undue sensitiveness to changes in temperature. Next, *massage* or rubbing is indicated. This must be practiced regularly and more frequently than is generally recommended. Tenacious adipose tissue is often found taking the place of the wasted muscle, and through this the pressure of the rubber's hands must be transmitted before the muscle can be brought under its influence. Massage can be performed in different ways and these can be roughly classed as kneading, circular friction with the thumb, feeling, and firm stroking down. These methods can be combined with any others that may occur to the operator,

the principal point being to stimulate the lowered nutrition of the muscles by artificial exercise. Besides these various motions the muscles can be exercised by putting them through their ordinary movements. As an illustration of the author's method we will quote what he says in reference to the muscles moving the shoulder joint: "The patient lying on the back, circumduction from before backwards is one of the exercises most easily taught, if there be any voluntary power, the elbow and wrist being kept extended, either voluntarily, or, if that be impossible, by means of a wooden splint. To bring the scapula muscles into action, the patient lying supine with arms down by the side of the trunk, or adjusted at right angles to the body, or extended upwards by the side of the head, is told to resist the arms being brought forward by the surgeon from either of the above positions, and then voluntarily returned to the initial position against the surgeon's gradually yielding resistance, the elbows being kept well extended. The rhomboidei and subscapularis muscles are chiefly brought into action in the second movement, with the arms at right angles to the trunk."

If the above indications are rigidly carried out, and the case has been seen early, the onset of any deformity can generally be prevented. If the case did not present itself until the deformity has occurred, it is often difficult to entirely remove it. To the suggestions above made must be added general constitutional measures. Milk should form a large element of the food. If there is any tendency to chronic constipation tepid water enemata are advised, rather than purgatives. These should be given on alternate days. The *prognosis* is favorable to some improvement within a month, if there be even so small an amount of voluntary power left, and within three months there should be decided and marked improvement. By this time the parents and friends will be properly trained, and the treatment should be continued by them as long as it is necessary. —*British Medical Journal, Sept. 6, 1884.*

Gangliar Disease of Joints.

Four cases of this interesting disease are reported by Mr. Norton, of St. Mary's Hospital, England. After relating the cases and defining it as a particular form of destructive disease of joints, totally different from scrofulous disease and from rheumatic disease in its pathology, though resembling either in external appearance, and often in its symptoms, the author then presents its chief characteristics as follows:

1. It is a disease which seems to occur almost invariably in elderly persons, or at any rate from thirty-five years upwards, though it does occur from time to time in children.

2. It is always a truly destructive disease, and for a certainty terminates in ulceration of the bones, preferably the small bones in the cases of the wrist and tarsus; the bones being rarefied and softened and often in part absorbed, according to the length of time during which the disease has existed before the commencement of the caries.

3. It is a disease which I am inclined to believe never allows improvement, though it may remain dormant for an indefinite period.

4. The synovial membrane is villous or granular, but never develops a mass of granulation tissue, such as usually occurs in the chronic destructive arthritis of so-called strumous children, and which has been called spongy synovial membrane.

5. It is a disease, of necessity, associated with the formation of ganglions, either connected with the joint, or at a distance from the joint, and then not communicating.

6. It is a chronic disease, extending often over ten to fifteen years, or perhaps more.

7. It is not painful to the touch, is not accompanied by much pain, though there is often aching, and the patient then refuses to use the limb; and, after a time the ligaments give way, and the hand (if wrist joint) hangs and cannot be lifted. When ulceration takes place with suppuration, then, of course, pain comes on, and the temperature rises.

8. When ulceration commences it progresses very rapidly, all the bones being affected, and some completely disappearing.

9. It appears to arise spontaneously, and not to result from injury.

The presence of ganglions will diagnose this disease from common ulceration of the cartilages or from rheumatic disease. In chronic synovitis the swelling and protrusion of the joint give a sense of fluctuation to the touch; in this disease the swelling is solid and not fluid. In differentiating from rheumatic disease, enlarged bursæ should not be mistaken for ganglionic formations.

It is a progressive disease and does not yield readily to treatment. The ganglions should never be opened, but they may be incised subcutaneously or the fluid aspirated. The fluid from the joint may also be aspirated, the limb placed upon a splint and a lotion of one part of tincture of iodine, four parts of glycerine, and sixteen parts of water, kept constantly applied. If the hand hangs or the joint glides there is no other course but amputation.—*British Medical Journal, Aug. 30, 1884.*

Dislocation of the Sternal End of the Clavicle, Upwards and Backwards.

J. Harry Poland, in the *Lancet* of July 19th, reports a case of this comparatively rare luxation. The patient, a young man, aged 20, was admitted into the Sandhurst Hospital, Victoria, with the history of a fall while wrestling, he being underneath. He complained of pain in the right shoulder, and inability to use the right arm, slight difficulty in breathing, and great difficulty and pain in swallowing. On examination, the right shoulder was slightly lower than the left, and projected more forwards; the arm was extended and kept at an angle of 40° to the body, this being the least painful position. The head was inclined and turned slightly to the left side. The line of the clavicle could be felt throughout. There was a well-marked depression at the right sterno-clavicular articulation, and the sternal end of the clavicle could be felt beyond this, and at about three-quarters of

an inch higher level than the corresponding articulation, the trachea apparently being pushed to the left side. The patient was seated in a chair, and reduction effected by placing the knee in the hollow between the two scapulæ, taking firm hold of the upper part of the arm and shoulder, and bringing them backwards and a little upwards. The parts were retained in position by means of a large pad placed over the right scapula, and the right arm bandaged so as to keep it well backwards, the elbow a little upwards and the fore-arm folded across the chest. There was some difficulty in keeping the arms in position, and the bandage had to be re-applied three or four times. The head of the clavicle did not completely resume its former position, and at the end of four weeks, when the patient was discharged, a slight depression could be felt over the articulation. There was, however, not the slightest trace of any upward displacement. The patient has since resumed work, and experiences no inconvenience from the injury.

Placenta Praevia.

Dr. E. P. Christian, of Wyandotte, Wis., reports (*Medical Record*) eight cases of placenta praevia, with statistics from several sources. He considers placenta praevia a frequent cause of abortions in the early months of pregnancy. *Vice versa*, he considers frequent abortions a fruitful cause of placenta praevia, or of the subinvoluted state of the uterus, which predisposes to placenta praevia.

Editorial.

Chiseling the Mastoid Process.

Dr. A. Hartman, of Berlin, details (*Arch. of Otol.*) the histories of fourteen cases of abscess of the mastoid process which were treated by him at his polyclinic, and which required open-

ing by operation. Of the fourteen cases, the mastoid disease followed acute suppuration of the middle ear in four, and chronic suppuration of the middle ear or its complications in ten. Of the ten cases which resulted from chronic suppuration, sequestra had formed in four, caries in four, polypi in the middle ear and mastoid in one, and cholesteatoma in an enlarged mastoid antrum in one. Death resulted in two cases, but in one facial paralysis and symptoms of meningitis had developed before the operation, and in the other pyæmia and thrombus were present and the operation was proposed as a last resource.

Concluding a full report of each of the fourteen cases, Dr. Hartman presents a short general review of his practical experience, utilizing his former observations in operating upon the mastoid, which is of great interest. As to the choice of the point of operation, he says: "The incision of the skin and the opening of the bone should be practiced at the line of attachment of the auricle, or, at least, immediately behind it." The mastoid should be opened directly beneath this, when pus may be reached at a trifling depth. In cases where fistulas have formed, it is likewise most judicious to so incise the skin that the bone beneath the line of attachment of the auricle or immediately beneath it may come into the region to be chiseled.

The reader is warned against the danger of wounding the transverse sinus or penetrating the middle fossa of the cranium. According to the results of examinations made by the author upon the cadaver, which are essentially the same as those of Bezold and others, "a sharp forward curve of the transverse sinus toward the posterior wall of the auditory canal is very frequent," the distance between these two points in 100 temporal bones, amounting, in 41 cases, to one centimetre or less; in one case it being only five millimetres; in five cases, six millimetres, and in six cases, seven millimetres. The greatest measurement found was nineteen millimetres, while the average in the whole one hundred was eleven and five-tenths milli-

metres. The danger of wounding the transverse sinus is best seen on horizontal section of the temporal bone.

In view of the danger of opening the middle cranial fossa, he adheres to the rule previously laid down by him, that the operation-canal should not extend higher than the level of the upper wall of the auditory canal, as his anatomical investigations have shown that the floor of the middle fossa of the cranium is not infrequently separated from the upper wall of the auditory canal by only a thin, long lamella, and lies but a little above it. In his operations upon the cadaver, after the manner of Buck, who sets the drill a little above the line of the external auditory canal and penetrates inward and a little upward and forward, he penetrated the middle cranial fossa with the drill in three cases out of one hundred.

"Those," he says, "who are familiar with the anatomical relations of the parts will, therefore, avoid the use of drills or trephines, such as are employed by many physicians. When, in using such an instrument, the sinus is chanced upon, an injury to it is inevitable; whereas, in the operation with the chisel, as the ground is kept clear for inspection, we can recognize the danger in time and avoid it."

In operating, both the incision through the skin and the bony canal chiseled out, should be made large, so that a free inspection of the wound-cavity may be possible during the after-treatment, so that pieces of bone which may become detached later, may be easily removed, and so that any remaining or luxuriant granulations may be readily destroyed with caustics or removed with a sharp spoon. The operation-canal should be kept open by rubber tubes immediately after the operation, to be replaced later by thick, and later still by thin lead ones, converting the lead tube into a sort of funnel-shape, by rounding one end with a knife and splitting the other end, and bending the two halves apart. Old retained secretions or cholesteatomatous masses in the mastoid should also be completely removed, which is often impossible, except with the author's inflexible tympanum tube.

To prevent inflammatory reaction after the operation, he covers the walls of the cavity and of the canal in the bone with iodoform, powdered. In the cases with previous acute symptoms, there followed an immediate recedence of them and a surprisingly rapid cure. He considers that possibly the favorable effects of the remedy depends upon the circumstance that it forms with the underlying tissues a soft, firmly attached crust. By this crust-formation, on account of the scanty secretions, the first dressing can be left unchanged for two or three days.

Considering, on the one hand, that the artificial opening of the mastoid in acute as well as chronic diseases leads to a prompt and perfect cure, and that the operation must be regarded as entirely free from danger; and, on the other hand, the often very tedious, incomplete recoveries, accompanied, perhaps, with severe functional disturbances and the danger also of extension of the disease to contiguous and more vital structures by the conservative methods of treatment, a decision must be given in favor of the former operative plan. Again, sequestra may exist, which cannot be determined, but which can only be removed by an operative procedure.

The Buffalo Medical Library Association.

The Buffalo Library Association have issued the following circular to its members and the profession, to which we direct the attention of our readers. The value of a medical library, always open and accessible for study and reference, is acknowleged by every educated physician, and the enterprise of the directors in changing the rules so that journals can be circulated among its members deserves special encouragement. The library rooms are open daily from 2 to 9 P. M. All the principal journals of America and England, and several of the leading journals of Germany and France, are found on the library table. Journals devoted to special departments are also taken by the asso-

ciation. It is arranged for members who are unable to visit the library rooms to notify the librarian the special journal, with number and date, they desire, with postage enclosed, and if the journal is in, it will be sent by mail. The dues are five dollars per year.

These provisions are exceedingly liberal and will accommodate the convenience and wishes of all. They signify a very liberal and progressive policy in the present management of the association, which, we trust, will bring forth generous patronage from the profession.

At a meeting of the directors, held August 6th, a committee was appointed to consider if it was desirable to change the rules governing the library, so as to allow the journals taken to be circulated among the members. They were also empowered to act in the matter according to their judgement.

It is decided by the committee to make a fair trial of this method from October 1st to January 1st. If it meets the wishes and wants of the members it will be continued.

It is earnestly requested that none of the members will enter into any arrangement among themselves to circulate to one another any periodical, and also that no member will take advantage of any opportunity that may present to regularly get control of journals when they first arrive. Such a breach of good faith will defeat the proposed change.

M. D. Mann,
C. C. Frederick,
W. D. Granger,
Committee.

Library, 396 Pearl street.
August 16, 1884.

RULES GOVERNING THE CIRCULATION OF PERIODICALS.

Rule 1. A list of members who are entitled to take out periodicals will be kept posted in the library room. No one, unless his name is on the list, will be allowed this privilege.

Rule 2. Any member whose name is not on the list must apply to the librarian, who shall be the judge, and decide if it is to be added.

RULE 3. Any member who has paid the yearly dues, or signed an agreement to pay them on either April 1st, July 1st, or October 1st, shall have his name put on the list.

RULE 4. Each number will be plainly marked with the date at which it can be taken out. As a rule, a weekly will remain on the library table two weeks, and a monthly or quarterly one month.

RULE 5. A member will be entitled to but one periodical at any one time, which must be returned; and if any fines are owing, they must be paid before he shall be entitled to another publication.

RULE 6. Weekly journals may be kept three days, and a monthly or quarterly one week. They may be returned by mail, but must be placed in the mail the day before they are due, the postage fully paid, and the name of the sender placed on the wrapper.

RULE 7. A fine of ten cents a day will be due for every day a periodical is retained beyond the time allowed. A box will be provided in the library to receive the fine, with the name of the person who pays it.

RULE 8. Periodicals kept more than one week will be sent for, and the cost of sending charged to the member.

RULE 9. All fines not paid within a week will be collected by the librarian, and the cost of collecting charged.

RULE 10. All periodicals shall be taken out in person, and not by an agent. He shall enter in a book, to be kept for that purpose, the date, his name, and the number and name of the periodical; on its return, the date, and the amount of fines, if there are any.

RULE 11. If a periodical is lost, it shall be replaced by the member who drew it.

RULE 12. Great care must be used not to soil the publication, as it is kept by binding. If a number is soiled by undue carelessness, the librarian may require a new one to be furnished.

RULE 13. Each member taking a periodical is placed upon his honor to fully observe these rules in their spirit and letter. The Board reserves the right to erase the name of any person who shall willfully and grossly violate these rules.

Medical Science in China.

In view of the impending war in China there is a demand for foreign, especially American medical talent. Like most other arts and sciences in that strange land, medicine and surgery suffered an arrest of development centuries ago, and have since made no progress. Only the simplest surgical operations are undertaken, and it is quite probable that in the event of a war as many will die from the lack of proper surgical skill as will fall by the bullets of the French. A few months since the writer visited the Smithsonian Institute in Washington, in company with a person who has spent several years in China. We were much interested in examining the collection of Chinese medicines, and listening to an account of their methods of practice, an occupation which was, to say the least, entertaining if not instructive.

The medical notions of the Chinese have many points of resemblance with those of Europe in the middle ages, being a mixture of truths derived from experience with many absurd speculations and superstitions. Like our modern refined disciples of Hahnemann, the Chinese physician believes in the specific action of drugs, and employs remedies which rival, in nastiness, the homœopathic tinctures of bed-bugs, pediculus capitis and psorinum syphiliticum. The Pen-tsan-kong-mu, which corresponds, in a measure, to our National Dispensatory, was published in the sixteenth century, and is still the standard authority. It contains a list of about 1,900 crude drugs. These drugs are seldom given singly, but are combined in complicated formulæ which surpass, in length, those of the celebrated Dr. Brown-Sequard. The Chinese Dispensatory contains over 12,000 of these formulæ, so that there is, at least, an ample field for selection.

Only the rudest chemical knowledge is apparent. Inorganic substances, when used, are in their native mineral state, and the general form for administering all drugs is in powder or decoction. In the selection of remedies, there are many illus-

trations of the mediæval doctrine of signatures, that nature has indicated by certain peculiarities of form, color, or otherwise, the proper use of a drug. Ginseng root is most highly prized, as it presents a rude resemblance to the human form. Marvelous invigorating properties are attributed to it. It is given to the sick as a restorative, to the well as a preventive; in fact, it is the Chinese quinine. As further illustrations of this law of signatures, we may mention the use of red coral to arrest hemorrhage, hedgehog skin for cutaneous diseases, and tigers' blood as a remedy for timidity and debility. The consumption of drugs is enormous; many medicines are habitually taken by those in perfect health in the belief that they prolong life and prevent disease.

Some of their remedies are really efficacious. Aconite is used to reduce fever, but only after some method of preparation has been employed to remove its poisonous properties. Ginger is used as a stomachic tonic and for headaches. Musk and camphor are favorite remedies; these are given combined, in the form of a bolus about half an inch in diameter, and are excellent nervous stimulants for those who have gullets sufficiently large to swallow them. Japonica root, resembling, in its action, squill, is used as a diuretic and expectorant. Fowls' gizzards are given for dyspepsia, it is said, with excellent results, while red rose leaves are regarded as a specific for asthma.

The tonics used by the Chinese will interest us only on account of their absurdity. Among them may be mentioned the gall-stones found in the gall-bladders of cattle; a variety of glues made out of asses' hide, cowhide and deer horns; tigers' blood and bones, dried toads, and dried human placenta. Among other curious remedies may be mentioned, caterpillars, for bronchitis; snake skin, dried and powdered, for cutaneous diseases, especially leprosy; cuttle-fish, for cancer; oyster shell, for deafness, and maggots for the delirium of fever.

We are not surprised that with this pharmacopœia the Chinese physician is not a great success. Most foreign medical men attain wealth and distinction, and are now welcomed in many of the larger cities of the Empire.

Mr. Barwell on the Tubercular Degeneration of the Products of Strumous Synovitis.

After defining struma as "a condition usually inherited, which renders many of the tissues very prone to respond to slight sources of irritation by prolonged inflammations tending to suppuration and caseation," the author enters into the subject of the influence that this diathesis possesses over the course of certain forms of arthritis, particularly in reference to the degenerations of the new tissue, the product of the inflammation in strumous synovitis. "The new tissue has little or no tendency to cicatrization or fibrilliaton; it remains, or, at least, tends to remain for an indefinite time the same unformed or embryonic material, and then, without further organization, is apt to undergo either fatty or purulent degeneration. There is yet another degenerative process which must be noticed—the tuberculous." Remarking that for very many years the possibility or probability that the extreme obstinacy of strumous synovitis might be due to tuberculosis of the synovial membrane had been constantly borne in mind, the author refers to the investigations by Dr. Schüller on a number of animals which he had rendered diseased by the injection of tuberculous matter, and in which he had, at the same time, injured a knee-joint. In considering the effect that the results of these experiments should have on the theory of the tubercular origin of strumous synovitis, "that of a very slow malady commencing in children either a little weakened or depressed, or apparently in fairly good health, and who have received only a slight injury to the

joint, or none at all," and the cases of the animals experimented on (generally rabbits prone to tubercular disease) "artificially affected with acute tubercular intoxication and at the same time with very severe traumatism of a joint," and that the latter were in a state by no means identical with that of a strumous child who has hereditary tendency to or is actually ailing from chronic tuberculosis, and who may have received slight or no articular injury, he examined the results of injections and contusions in twenty-four animals. Of these, five were injected with phthisical expectoration; these all showed changes considered to be tubercular; six were injected with minute pieces of tubercular lung; six with portions of tuberculous lymphatic gland; four were injected with lupus tissue; three with tuberculous synovial membrane. "Of the twenty-four injured and injected animals, we find that only those injected by sputum showed any clear marks of tubercle in the joint structures, save one dog injected with phthisical lung tissue." That the sputa injections should have had so much more effect on the injured joints than the injections of more tuberculous matter, he (Barwell) considered significant, and possibly due to the non-putrescence of that material.

"The experiments appear to show that, even while internal organs are deeply infected with acute and subacute artificial tuberculosis, the synovial membranes, even though severely injured, will resist the infection to such a degree that, as a rule, only 'doubtful' or 'initial signs' of tuberculous action can be detected by either naked eye or microscopic research. Moreover, it is a very instructive outcome of these experiments that in no single instance was a joint that had not been artificially injured affected with inflammation. * * * Does tubercle, then, ever become deposited in a previously healthy synovial membrane * and give rise to a typical inflammation? At present we have no evidence that this ever occurs, and Dr. Schüller's book goes very far to prove its non-occurrence, since

* Cancellous bone tissue stands in same conditions.

even inflamed synovial membranes were, with difficulty, infected, and since in the highly tuberculariz ed animals which were the subjects of his experiments there was not found a single spot of tubercle in any one uninjured.

Muriate of Cocaine.

For some time laryngologists have used this substance to produce a local insensibility of the vocal cords. Dr. Carl Kollar, a young physician of Vienna, knowing this, was led to experiment with it upon the conjunctiva, beginning upon animals and afterwards testing its effects upon himself and other men. The results of his experiments were presented to the Ophthalmological Congress of Heidelburg in a short paper read before that body September 15th. The *Ophthalmic Review* (London), gives the following summary: "One or two drops of a two per cent. solution instilled into the eye produced a slight sensation of burning; in two minutes the cornea and conjunctiva become partially anæsthetic, and completely so in from ten to fifteen minutes, and this lasts for ten minutes. The drug causes a slight mydriasis, which lasts a couple of hours, and is accompanied by some paresis of accommodation, but reaction to light and eserine is not obliterated." He stated that during the anæsthesia the anterior surface of the globe can be cut, torn, scratched or rubbed without sensation. This discovery was made by Dr. Kollar only two weeks before the time of reading his paper at the meeting of the congress.

The wonderful and astonishing effects claimed for this drug can only be equalled by those of opium and general anæsthetics. It may not only be utilized in diseases and operations upon the eye, but also in the ear and upon mucous surfaces generally for similar purposes. Dr. Hubbell, of this city, who is one of the first to test its properties, will give the results of his experiments to the readers of the Journal at an early date.

Five Cases of Extra-Uterine Pregnancy, Operated Upon at the Time of Rupture.

Several weeks since, Mr. Lawson Tait reported, in the *British Medical Journal* a series of five cases of extra-uterine pregnancy, operated upon at the time of rupture, from the tenth to the thirteenth week. Four were successful. In each he removed the fallopian tube, the pregnancy having been tubal. In his own words: "These cases all confirm the view of the pathology of extra-uterine pregnancy which I advanced many years ago, that in origin it is always tubal, and that its varieties depend merely upon the direction in which rupture occurs. These results also confirm the policy of early interfering in such cases, for four out of the five have been easily and completely cured of one of the most formidable conditions of pregnancy. The first and only fatal case might have had a better ending if Mr. Spachman had seen her sooner, for he recognized the case at once and sent for me."

Puerperal Eclampsia Treated by Veratrum Viride.

Dr. H. W. Brown, of Hillsboro, Ohio, reports six cases of puerperal eclampsia, in the *Obstetric Gazette*, treated entirely by Norwood's tinct. of veratrum viride. He gives it in doses of from forty to ninety drops every few minutes, till vomiting, relaxation and a fall of the pulse, to or below normal, occurs.

Theoretically, it is indicated in those cases in which venesection was formerly advised by the older obstetricians. Dr. Brown closes his article by saying that these cases treated thus show that the fears entertained by the profession as to its deadly poisonous effects, when administered in large doses, is wholly groundless.

Dr. John B. Roberts, of Philadelphia, in the *Polyclinic* of Sept. 15, 1884, expresses himself in favor of more frequent trephining in cranial fractures. While this line of treatment is more heroic than is generally taught, still it is thought it will

commend itself to those who will carefully consider the subject. Each case must, of course, be studied by itself, and the patient's chances of death, of life with subsequent epilepsy or insanity, or of return to perfect health, carefully weighed. As a general guide, however, for the student and practitioner, Dr. Roberts presents the following table, which, we think, will be found, in the main, correct:

SYLLABUS OF THE TREATMENT OF FRACTURES OF THE CRANIUM.

SIMPLE FISSURED FRACTURES.

1. No evident depression, no brain symptoms. No operation.
2. No evident depression, with brain symptoms. Incise scalp and trephine.
3. With evident depression, no brain symptoms. Incise scalp and possibly trephine.
4. With evident depression, with brain symptoms. Incise scalp and trephine.

SIMPLE COMMINUTED FRACTURES.

5. No evident depression, no brain symptoms. Incise scalp and probably trephine.
6. No evident depression, with brain symptoms. Incise scalp and trephine.
7. With evident depression, no brain symptoms. Incise scalp and trephine.
8. With evident depression, with brain symptoms. Incise scalp and trephine.

COMPOUND FISSURED FRACTURES.

9. No evident depression, no brain symptoms. No operation, but treat wound.
10. No evident depression, with brain symptoms. Trephine.
11. With evident depression, no brain symptoms. Possibly trephine.
12. With evident depression, with brain symptoms. Trephine.

COMPOUND COMMINUTED FRACTURES.

13. No evident depression, no brain symptoms. Probably trephine.

14. No evident depression, with brain symptoms. Trephine.

15. With evident depression, no brain symptoms. Trephine.

16. With evident depression, with brain symptoms. Trephine.

PUNCTURED AND GUNSHOT FRACTURES.

17. In all cases and under all circumstances, trephine.

In classes 3 and 11, I should be inclined to trephine if the depression was marked, or the fissures sufficiently multiple to approach the character of a comminuted fracture.

In classes 5 and 13, I should trephine, unless the comminution was found to be inconsiderable.

The operation, when decided upon, should be performed at once, or certainly not delayed more than a few hours.

All cases, whether trephined or not, should be treated as cases of incipient inflammation of the brain.

Sir Joseph Lister writes to the *British Med. Journal* that one drachm by weight of a solution of one part of corrosive sublimate in one and a half parts of glycerine contains two-fifths its weight, or twenty-four grains of the sublimate. This, multiplied by 1,000 (the proportion of water required), gives 24,000 grains, which is very nearly three pints. It is, however, much more convenient to use fluid measure than weight, and a fluid drachm of the glycerine solution referred to requires four pints of water to produce the 1 to 1,000 solution.

A private letter from Prof. W. H. Heath, written from London, states that he expects to sail for home Nov. 4th, with health so much improved that he will resume his duties in the Hospital Marine Service and in the Niagara Medical College. This information will gratify the numerous friends of our esteemed colleague, both here and elsewhere.

Reviews.

The Ear: Its Anatomy, Physiology and Diseases. A practical treatise for the use of medical students and practitioners. By CHARLES H. BURNETT, A. M., M. D., Professor of Otology in the Philadelphia Polyclinic and College for Graduates in Medicine. With one hundred and seven illustrations. Second edition, revised and rewritten. Philadelphia: Henry C. Lea's Son & Co. 1884.

The second edition of this excellent work on otology embodies the advances made in this important department up to the present time. The author brings to the work which he issues to the profession a wide experience and a ripe culture, both literary and professional. The result of these labors is certainly a credit to American medical literature. The publishers have liberally supplemented the efforts of the author with accurate illustrations and clear typography, on a superior quality of paper, so that the volume is among the best we have had presented for examination and review. The contents show the care with which the author has revised the work. Many chapters of the first edition have been entirely rewritten, among which may be enumerated the abnormalities of the auricle, otomycosis, the treatment of chronic otorrhœa, the classification and treatment of aural polypi, and the diagnosis, etiology and treatment of aural vertigo. Obsolete matter has also been omitted, and the valuable work offered in a volume of 585 pages. When one considers the frequency of aural diseases, and the tendency to deafness often resulting therefrom, the value of a comprehensive work devoted exclusively to their consideration will be appreciated by the profession outside of the specialists. We commend this work to the profession.

Year Books of Medical Progress: A Year Book of Surgery for 1883. Edited by CHARLES H. KNIGHT, M. D. A Year Book of Therapeutics for 1883. Edited by ROYAL W. AMIDON, M. D. G. P. Putnam's Sons, 27 and 29 West Twenty-third Street, New York; 25 Henrietta Street, Covent Garden, London. 1884.

The high standing of the publishers of these works gives assurance of their worth and value and of their professional

excellence. The object is to condense within a moderate space the most important contributions to surgery found in the current literature of the year, and also the advances in therapeutics in the same period. The progress in surgery has been most marked, and the volume devoted to this subject gives a most valuable resumé, without endeavoring to approach completeness in so vast a field. The advances of this department in thyroidectomy, in supra-pubic lithotomy, in the digital exploration of the bladder, syphilology, etc., are well portrayed in the work devoted to surgery. The progress in therapeutics is not a flattering one, according to our author. He says: "There has been little of genuine value added to our knowledge by workers in the field of experimental therapeutics. The enterprise of wholesale druggists and manufacturers exceeds the labors of the therapeutist in the number and variety of drugs and medicinal preparations thrown upon the market." For the profession, as well as the public, these works are valuable. They present a condensed statement of the more important advances made in the respective departments of which they treat. We think the publishers have conferred upon the profession important aids in their labors, and we know of no works in which are condensed so much information as in these.

Henke's Atlas of Surgical Anatomy. A series of plates illustrating the application of anatomy to medicine and surgery. Translated and edited by W. A. RATHACKER, M. D., Pathologist to Cincinnati Hospital, Lecturer on Pathological Anatomy, Miami Medical College. Cincinnati: A. E. Wilde & Co. 1884.

This large and handsome volume contains eighty-one plates. Those who have the good fortune to possess the admirable "Atlas of Anatomy" published by this same house will not need to be told that the engravings are excellent and the typography and press-work all that could be desired. This work is, to many, even more valuable than the atlas referred to, in that

it shows us, at a glance, the anatomy of the human body as we view it in relation to surgical operations, medical diagnosis, post mortem examinations, etc. It is a work that will prove of the greatest value to the student, the surgeon and the physician. To the student, not to take the place of dissection, but to fix the application of its lessons in his mind. It shows him the structures grouped together just as he exposes them. To the surgeon, who may have become "rusty" concerning some points in anatomy, the parts are pictured in the order in which he divides them with his knife. To the physician, it furnishes a ready means of keeping fresh in his mind the lessons of his student days. The price at which it is offered is remarkably low ($10). The work ought to, and will, undoubtedly, meet with a large sale.

The Lock-Jaw of Infants (Trismus Nascentium); or, Nine-day Fits, Crying-spasms, etc. Its history, cause, prevention and cure. By J. F. HARLIGAN, M. D., Washington, D. C., Member of the American Medical Association, etc. Bermingham & Co., 28 Union Square, New York; 14 Cockspur Street, Pall-Mall, London. 1884. Price, 75c.

The author gives a very complete history of this very strange disease of infancy, with all the conflicting theories as to its causation. He then gives his own opinion and says that the disease is the result of pressure exerted at the base of the brain by inward displacement of the occiput, differing in degree from the slightest to the greatest. There is yet another class of cases which he describes, plainly caused by an opposite state of things, namely, prolonged lateral decubitus, with a position of the occiput exterior to the parietal bones. The author illustrates his work with the citation of cases, with table showing the influence of age, color, seasons, etc., the correction of the displacement of the occiput by changing its position so as to relieve the pressure from the overriding of the occiput, the replacing of the displaced bones being the treatment advised, based upon the cause, which the

author has endeavored to elucidate. The work is a valuable contribution to the literature of trismus. We have read it with pleasure and profit, and commend it to those interested in diseases of children.

The Elements of Pathology. By EDWARD RINDFLEISCH, M. D., Professor of Pathological Anatomy in the University of Wursburg. Translated from the first German edition by WILLIAM H. MERCUR, M. D., University of Pennsylvania. Revised by JAMES TYSON, M. D., Professor of General Pathology and Morbid Anatomy in the University of Pennsylvania. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut Street. 1884. Price, $2.00.

This work does not aim to be a text-book. Its purpose is simply to establish the natural groundwork which exists in this as well as in every natural science, and to place it in as clear a light as possible. Prof. Tyson's connection with the work is a guarantee that the American edition will fill a niche in the wants of the student and of others who may desire to become familiar with general pathological processes, viewed from the most modern standpoint. The importance of the study of pathology in the medical curriculum is now fully recognized, and we think this work facilitates its study.

A Treatise on Physiology and Hygiene for Educational Institutions and General Readers. By JOSEPH C. HUTCHINSON, M. D., LL. D. Fully illustrated. New York: Clark & Maynard, Publishers, 734 Broadway. 1884.

A work on physiology and hygiene, prepared by a competent writer, for the use of schools, has long been desired, and we believe the present work fills this want. It is sufficiently comprehensive in its scope, and simple in its details to meet the purpose for which it was written. The language used is familiar, technical terms being avoided, as far as possible. It is well illustrated. It has a chapter on the use of the microscope in the study of physiology, with an appendix devoted to the resuscita-

tion of the drowned, care of sick rooms, etc. We think the author and publishers have performed a duty to the public in furnishing this work, which we cordially endorse and commend.

Index-Catalogue of the Library of the Surgeon-General's Office, United States Army. Authors and subjects. Vol. V. Washington: Government Printing Office. 1884.

The fifth volume of the catalogue carries on the index from FL to HE. That more than 1,000 pages are filled with titles under these alphabetical headings is an indication of the magnitude of the work which is being so successfully and perseveringly accomplished under Dr. Billings. This volume includes 15,555 author-titles, 8,069 subject-titles of separate books and pamphlets, and 34,127 titles of articles in periodicals. We earnestly hope that nothing may arise to hinder the active prosecution of this great work. When completed, it will form the most complete index to medical literature in the world.

The Medical Graduate and his Needs. By GEORGE C. WELLNER, M. D. Detroit, Mich.: George S. Davis. 1884.

This little volume contains deductions of a careful observer from the practical experience of the young physician. It is intended to unravel certain difficulties in professional life and to smooth the pathway of obstructions. It contains many valuable hints, which we especially commend to the young practitioner. The work has a purpose, an object, which we are sure will be fully appreciated by those who are interested in this kind of medical literature.

Visions of Fancy, Poetical Work. By N. M. BASKITT, M. D. St. Louis, Mo.: Commercial Printing Co., 405 North Third Street. 1884.

If there is any excuse for the existence of this work, we are unable to find it, after a cursory examination of its contents. There is little poetry in the ordinary routine of a physician's life, and we doubt if this work will relieve the professional reader of any of the cares and anxieties which beset his pathway.

THE
BUFFALO
Medical and Surgical Journal.

VOL. XXIV. DECEMBER, 1884. No. 5.

Original Communications.

THE CÆSARIAN SECTION.*

BY STEPHEN Y. HOWELL, M. A., M. D.

Richard Volkmann, one of Germany's most brilliant surgeons, in his address on "Modern Surgery,"† delivered in London on the 8th of August, 1881, before the International Medical Congress, pronounced a most eloquent eulogium upon the author of modern antisepsis. "Never," said he, "has a surgical discovery been made which conferred upon suffering humanity even a tithe of the blessings which have followed in the wake of this one * * *; and England may well be proud that 'tis one of her sons whose name is so inseparably linked to this, the greatest stride which surgery has ever taken."

And, certainly, in the few years which have since elapsed, there has transpired nothing which detracts in the slightest degree from the truth of his remarks; on the contrary, the beneficent influence of Joseph Lister's work is extending in ever widening circles, invading every department of medicine where the aid of the knife is invoked, and whispering words of comfort and hope to thousands of despairing mortals in every civilized land.

* Read before the Buffalo Obstetrical Society. † Samml. Klin. Vorträge, No. 221.

Nor has our own science been backward in availing herself of the benefits of Listerism. Operative obstetrics has steadily advanced, *pari passu*, with other branches of surgery; and operations, whose very names were well-nigh synonymous with death only two decades since, are now performed with comparative immunity from risk, and rank as feasible means of escape for both mother and child, when nature or disease has obstructed the parturient passages of the gravid woman to such an extent that spontaneous delivery is out of the question, and the forceps or version are of no avail. In view, then, of its enhanced usefulness and probable popularity in the near future, I deem no apology necessary before directing your attention, for a few moments, to the Cæsarian operation and some of its modifications.

Lost, as it were, in the night of time, the origin of this operation has not, as yet, been precisely ascertained. In the mythological ages 'twas said that a fœtus, the son of Jupiter, was extracted from the belly of Semele by Mercury; and the Romans made the same statement concerning Æsculapius, the god of medicine, who was rescued by his father, Apollo, after the mother had already been placed on the funeral pile, which was destined to consume her. Virgil, also, says that Lycus came into the world in the same manner; and, according to Pliny, Scipio Africanus and Manlius were thus spared to the Roman State.

Indeed, the Greeks and Romans seem to have attached great stress to the performance of the operation upon women who died in advanced stages of pregnancy, or during labor.

Thus Numa Pompilius decreed, in the *lex regia*,* that the fœtus should always be removed by abdominal section before the burial of the mother; and the Italian laws, too, made this necessary; while, as late as the middle of the eighteenth century, the King of Sicily sentenced to death any physician who was guilty of the sin of omission in this respect. M. Mansfield, in

* Digest., lib. IX., tit. VIII., l. 2, et lib. I., tit. V., etc.

a work from which an excerpt appeared in the *Bulletin des Sciences Médicales*, attempts to prove that the Cæsarian operation was practiced even by the Jews; and it is stated in the Talmud and the Mischajoth, that a child born by the section of the belly has not the right of primogeniture.

As to the etymology of the term, Cæsarian section, Guy de Chauliac, who, apparently, was the first to describe the operation, believed it to be derived from Julius Cæsar, founding his opinion upon the familiar passage of Pliny: *Auspicatus, enecta parente, gignuntur, sicut Scipio Africanus prior natus, primusque Cæsus, cæso matris utero, dictus; qua de causa, Cæsones appellati*, etc., to which we've already referred; while others declare that the children thus saved were called Cæsar, and that the name was later adopted as a family patronymic.

Thus history, both ancient and modern, affords abundant encouragement for the performance of post mortem gastrohysterotomy, admonishing us at the same time, however, to operate with care, when it is not absolutely certain that death has supervened. Thus Van Swieten and Baudelocque mention three cases of apparent death, in which recovery from a lethargic state ensued just before the operation was commenced, and Peu relates an instance which is still better calculated to excite caution.

He had begun his incision, when the woman gave a shudder, accompanied with grinding of the teeth and a movement of the lips; but, whether these phenomena sufficed to secure a postponement of the proceedings, history saith not. Sudden death, then, in late pregnancy or during labor, would call for the prompt release of the fœtus, either *per vias naturales*, were this expedient, or by the abdominal section.

But, in resorting to the latter alternative, we should not be guided by the quaint advice of Guy de Chauliac, who says: "Let the woman be opened with a razor along the left side, inasmuch as that part is freer, on account of the liver," but, rather,

proceed as when operating on the living patient, prepared, as far as may be, for the worst.

Duer's tables of 55 cases of post mortem Cæsarian section show that forty living children were extracted: 21 in from 1 to 5 minutes after death of mother; 0 between 5 and 10 minutes; 13 in from 10 to 15 minutes; 2 in from 15 to 23 minutes; 2 after one hour, and 2 after two hours,—results which not only warrant, but which demand legal interference in our own day.

For, could opposition and consequent delay be avoided in such trying junctures by an appeal to the law, not only would the operation be more frequently performed when indicated, but a still greater percentage of children would be spared to lead lives of probable usefulness.

Rousset was the first surgeon who had the temerity to propose the performance of gastro-hysterotomy upon the living woman; and he mentioned seven instances in which it had been resorted to successfully.

Bauhin, too, cited several cases, including that of J. Nufer, a spayer of cattle, who, in 1500, operated successfully upon his own wife, after she had been given over by several midwives. But none of these cases bear a rigid investigation; indeed, the majority of the so-called Cæsarian sections of that time seem to have been operations for the relief of extra-uterine pregnancy.

The first really authentic laparo-hysterotomy was probably performed by Trautmann, of Wittenberg, in the year 1610, upon a case of hernia of the gravid uterus, which is vouched for by Tandler, Sennert and Doering. Considerable time elapsed, however, ere the labors of distinguished men like Levret, and Stein, the elder, served to establish the indications for the new and heroic operation.

But their efforts finally prevailed; and, in spite of the opposition of such men as Paré, Guillemeau and Sacombe; in spite of the wonderful popularity of its great rival, Symphyseotomy,—proposed by the student Sigault, and the occasion of those

violent polemics between the Symphysians and Cæsarians from 1777, to the commencement of the present century,—the Cæsarian operation not only flourished, but was scandalously abused as late as 1827. In this year, however, Baudelocque, the younger, scored a point for the obstetricians by inventing the cephalotribe, an instrument which, in its improved form, has been the most active agent in limiting the employment of the Cæsarian section; though its use means the certain death o the child, and the exposure of the mother to a risk, fully equal to that offered by its more dreaded rival, whenever the conjugate diameter measures less than two and three-fifths inches.

But, without stopping now to discuss the various alternatives which present themselves, and simply premising that the Cæsarian section is absolutely indicated when the child is at term and the internal sacro-pubic diameter measures less than two inches, we pass on to a description of the conditions which should obtain and the various steps of the manual operation.

The most fitting time for operating is during the first stage of labor, before the rupture of the membranes, when the os uteri is somewhat dilated and the pains vigorous. If we begin sooner, the uterine contractions, subsequent to the operation and to which so much importance attaches, are defective; while, on the other hand, the previous rupture of the sac enhances the difficulty of the procedure, and renders the prognosis for the child less favorable. For the mother, the exhaustive effects of delay, coupled, possibly, with decomposition of the secretions, render the outlook more gloomy.

In doing a gastro-hysterotomy one proceeds, on the whole, as in simple gastrotomy, taking the most stringent precautions to combine great personal cleanliness with as complete a disinfection of room, utensils, etc., as possible; though the use of the spray during the operation may be omitted. As antiseptic agents are employed carbolic acid, corrosive sublimate and thymol.

The bowels and bladder having been thoroughly evacuated, the patient is anæsthetized, while the parts are being shaved and

washed with the sublimate solution (1-1000). Any intestinal folds between the uterus and anterior abdominal wall are stroked to one side, and the organ is firmly held in the median line by an assistant, who places a hand on each side, and renders the abdominal parietes tense over the uterine convexity.

An incision some six inches in length is now made in the linea alba—Mauriceau's method—and carefully carried through the parietal peritoneum in the usual manner; when the uterus appears as a large, red, tense globe from which the omentum, if present, is displaced upwards. So far the operation has slowly and gradually progressed.

But, as soon as the operator begins to sever the fibres of the uterine globe, which distends the parietal aperture, he must proceed swiftly as well as coolly; for, as a rule, the hemorrhage from the walls of that organ is severe,—at times even appalling. Now presence of mind is at a premium! Only one thing can stay the rush of blood, and that is the evacuation of the uterine contents. The fiercer the hemorrhage, then, the quicker must be the cutting, and it is best to rapidly deepen the upper end of the incision till the ovum is exposed, when the fingers are inserted as guides, and the opening is completed with a blunt-pointed bistoury. Should the placenta be implanted in the line of incision, it is peeled from its insertion on one side, rather than severed. Winckel recommends that the fingers of an assistant be hooked into the extremities of the uterine wound, in order that its edges may the more effectually be apposed to the abdominal incision, thus preventing the escape of fluids into the abdominal cavity and the protrusion of viscera.

Now let the operator rupture the membranes, seize the child by the presenting part; or, preferably, by the head, to prevent delay by the rapidly contracting uterus, and quickly extricate it. The placenta is generally loosened by the contraction of the uterus, and is easily removed; though, should it still adhere, it may be carefully separated with the fingers, while the diminishing organ is followed by the hands of the assistant to prevent the prolapse of omentum or intestine.

Child and placenta being removed, the uterus usually contracts promptly, and thus the hemorrhage from the placental site, and the line of incision, now reduced in length from about six to two inches, is well-nigh completely stilled. But the incised uterine surfaces do not come into perfect apposition; the wound gapes, especially the peripheral layers of muscular fibres; and, in order to remedy this and prevent the subsequent escape of fluids into the peritoneal cavity, deep and superficial sutures of silk, catgut (Veit*) or metal are passed, after first cleansing the uterine cavity with a strong solution of carbolic acid, 5 per cent. at least, and inserting a drainage tube, which extends through the cervical canal into the vagina. Another moment calls for the insertion of uterine sutures, and that is the variable state of the organ—now larger and thinner, now smaller and thicker—for which reason it is also well that the sutures should be secured by three or four single knots to prevent their becoming untied. As will readily be seen, however, this alternate contraction and relaxation of the uterine walls tends to loosen the sutures, and, probably, suffers the escape of the lochia, pus and blood through the incision into the peritoneal cavity, where they serve to light up what may prove a fatal peritonitis. And yet, recent successes have demonstrated the fact, that the chances of recovery after Cæsarian section are enhanced by thus closing the uterine wound. In the hope of overcoming this difficulty, however, Drs. Grandesso-Sylvestri and Valentinoldi have employed elastic sutures of rubber, covered with silk, and these seemed to have fulfilled the indications very well. Spencer Wells suggests a continuous suture, which may afterward be withdrawn.†

E. Martin,‡ of Berlin, and Prof. Olshausen,§ of Halle, have favored stitching the uterus to the lower end of the abdominal

* Berl. B. z. Geb. u. Gyn., III., S. 45; Birnbaum: Arch. f. Gyn., VII., S. 352; A. Martin: Berl. Klin. Woch., 1876, No. 28.
† Rodenstein: Amer. Jour. of Obstet, Vol. III., page 577.
‡ M. f. G., Bd. 23, S. 333.
§ Tagebl. d. Leipz. Naturf. Vers, 1872, S. 179.

wound; and Robert Barnes* proposes a very ingenious, though somewhat involved, method for doing this, so that the sutures may be entirely removed later.

These complicated procedures are unnecessary, however, as the results of ovariotomies show that silk sutures may be suffered to remain *in situ* as *ligatures perdues*.

After careful and thorough cleansing of the abdominal cavity, the parietal incision is closed with silk or metallic sutures, and a dressing of powdered iodoform with antiseptic gauze or cotton is applied. The after-treatment is the same as in ovariotomy.

The mortality of the Cæsarian operation has been variously estimated from 54 to 67 per cent.

Dr. Robert P. Harris, of Philadelphia, finds that the Cæsarian section was performed 60 times in the United States up to 1872 resulting in the saving of thirty-two women and twenty-seven children. In seventeen cases labor had been in progress for periods varying from a few hours up to twenty-four. The repetition of the operation is attended with diminished risk. Thus, of twenty-eight cases, collected by Dr. F. Churchill, in which the operation had been repeated, four died; three after the second operation, and one after the third.

In one instance, the operation was performed five times; in another, six times; and, in a third, seven times with entire safety to the offspring. What, then, was the cause of this high rate of mortality?

Of 147 fatal cases, analyzed by Dr. Chas. West, 33 perished of shock, 13 of hemorrhage, and 56 of peritonitis or metro-peritonitis; 69 cases, then, or nearly 50 per cent., died from loss of blood and the inflammation following the escape of septic fluids into the abdominal cavity, or their absorption by the uterine venous and lymphatic systems. Gross, in speaking of the hemorrhage subsequent to the operation, says that it "may be primitive or secondary, more generally the latter, and does not admit of relief."

* Lond. Obst. Trans., XII., p. 364, and Obst. Oper., 1871, p. 328.

'Twas to diminish this frightful mortality, so largely due to the failure of the uterine sutures to perform their mission in effecting union by first intention, as well as to secure for gastro-hysterotomy the brilliant results attending Listerian ovariotomies, that Prof. E. Porro*, of Pavia, suggested, in 1876, the entire ablation of uterus and its appendages after the extraction of the child, an operation which has been followed by about 50 per cent. of recoveries.

P. Müller†, of Berne, afterwards proposed to better even these results by operating outside of the abdominal wall, that the escape of fluids in the abdominal cavity might the more thoroughly be avoided, and this so-called Müller-Porro operation is the one which is now generally employed. To illustrate this latest method, and to instance the success which attends its performance by skillful hands, under the most stringent antiseptic precautions, I take the liberty of quoting from my notes of three cases, which were operated upon by Prof. Carl Braun von Fernwald in Vienna, the patients being at term:

Case 1. April 25, 1883. Pat. æt. ca. 28; pelvis symmetrical, but of infantile proportions.

The abdomen was carefully shaved, washed with the sublimate solution (1-1000), and covered with a rubber sheet having a central slit corresponding to the proposed incision; the edges of the opening were protected by gauze wrung out in hot carbolized water. Median incision, extending from above the umbilicus to the pubes; uterus delivered through the opening, and held in a vertical position; sponges were packed about its cervical, intra-abdominal portion, to prevent intestinal protrusion, and to receive any fluids which might escape during the operation. The pedicle was next encircled, low down, by two turns of rubber tubing, some 5 mm. in diameter, and, just above, by the chain of a large-sized écraseur; uterus rapidly incised; child removed and handed to an assistant, who tied the cord

* Porro: Della amputazione utero-ovarica, etc. Milano, 1876.

† Müller: Corresp. Bl. f. Schweizer Aerzte, 1878.

(child crying); while others tightened the elastic ligature and écraseur, both being retained in place by a long needle passed through the pedicle on their distal side. Uterus, with its appendages, was next removed with scissors about 4 cm. above the chain; bleeding was controlled; chain clamped, and handle of écraseur removed. Siver-wire sutures, each of which was armed with an oval lead plate, secured by two perforated shot clamped together upon the end of the wire, were carried through both lips of the abdominal wound, about 3 cm. from the edges, and at intervals of 5 cm. Sponges were now removed, peritoneal cavity cleansed, and the wires drawn taut and secured with similar lead plates and double shot. A continuous suture of silk was now passed, securing the wound both above and below the exit of pedicle, and this was fortified by a second and more superficial one.

The skin being protected with moist, carbolized cloths, a large Billroth clamp was applied above the needle, and the stump was seared off with Paquelin's thermo-cautery. The dressing was of thick strips of iodoform gauze, wrung out in carbolized water, over which loose, dry gauze, and antiseptic cotton was placed, the whole being topped off with the Lister sheet dressing,* to which lateral and perineal bands, long enough to reach around the trunk, had been attached. Thus the ecraseur chain and elastic ligature were left *in situ*, only to be removed at the first change of dressings, *i. e.*, after eight days.

Case 2. April 26, 1883. Pat. æt. 32, with a rachitic pelvis. Spray was used for several hours prior to the operation, but not pending the same. Abdominal section, etc., same as in yesterday's case. The rubber ligature about the pedicle was drawn snug, though remaining untied, an assistant holding the ends; the ecraseur chain being also passed around the pedicle, though not tightened. Now the uterus was quickly opened, the cord

* The Lister sheet dressing was made of gauze and Mackintosh, as suggested by its author, the whole being stitched together in the form of a pad.

compressed between two spring clamps, and the child removed. Ecraseur and ligature next tightened. In other respects the case was treated as in yesterday's operation.

This second case resulted unfortunately for the child, as, appended to the notes of an ovariotomy done two days later, I find this note: In the second case of sectio-Cæsarea the child survived only a short time, though crying when removed from the uterus, and it was found that death had resulted from the inhalation of amniotic fluid, the circulation having been retarded to too great a degree by the elastic ligature. Had such a state of affairs been suspected, said Braun, it is altogether probable that prompt efforts directed toward the clearing of the air-passages would have had a successful issue.

Case 3. May 1, 1883. Pat. æt. ca. 32, and suffering from marked pelvic distortion, the result of osteo-malacia.

The technique of the operation resembled that of the two previous cases, except that the child was held aloft with its face downwards immediately after delivery and before section of the cord, that the escape of any fluid present in the respiratory tract might be facilitated. The whole operation consumed forty minutes, of which four sufficed to open the abdomen, apply the ligatures and deliver the child.

In these three cases the mothers recovered promptly and without any serious drawbacks; while, of the children, one perished, as we have seen. Thus, out of a possible six, five lives were saved, and I see no reason why eighty per cent. of both mothers and children should not survive utero-ovarian amputation, or the Müller-Porro operation, when skill and the most stringent antiseptics are united to this end.

Two other alternatives, only, offer themselves when the degree of deformity calls for extreme measures, viz.: Embryotomy, or the "repeated cephalotripsy without traction," which is so ably supported by Pajot, in his brochure of 1863; and Laparo-elytrotomy, as revived by Thomas, independently of the previous

labors of Ritgen and Baudelocque, and described in a paper read before the Medical Association of Yonkers, in 1870, with the title, "Gastro-elytrotomy, a Substitute for the Cæsarian Section." Of these, the first has never been successful in saving the life of the mother, even in the hands of its projector, when the conjugate axis was under two inches; and, of the second, I can only state my belief, in which I am supported by Schroeder, that it can never displace the Cæsarian operation; not because of its intrinsic difficulties, but from its limited adaptibility. With Garrigues, however, I believe that to our celebrated countryman "belongs the glory of having been the first to perform gastro-elytrotomy so as to extract a living child from a living mother in his first operation, and of having brought both mother and child to complete recovery in his second operation." *

"But," some will say in reply to my advocacy of the Müller-Porro operation, "its results are obtained only by the sacrifice of the child-bearing function, a mutilation which cannot be justified under any circumstances." And to all such I would answer, that while the removal of the internal generative organs from a woman, able to conceive but incapable of delivery *per vias naturales* by reason of permanent pelvic deformity, is not an ideal operation; it is still justifiable, nay, incumbent upon us in the present state of our knowledge, as it holds out the most hope for the mother, and almost guarantees the life of the child; while, from a moral point of view, it is vastly preferable to repeated embryotomy. The most desirable consummation, however, is such an improvement in the prognosis of the Cæsarian section that it may offer equally favorable chances, and thus permit the woes of the wretched beings who are exposed to such frightful alternatives to be mitigated in some degree by all the joys which are the reward of maternity.

* Garrigues on Gastro-elytrotomy. New York, 1878.

Clinical Reports.

Two Cases of Cerebral Syphilis.

By H. S. Kilbourne, M. D., U. S. A., Fort Shaw, Montana Territory.

Case 1. Apoplectic seizure with succeeding (left) hemiplegia; paralysis of cranial nerves (abducens, facial and hypoglossal); crossed paralysis of the facial nerve; successive relapses; partial recovery. W. D., aged 33 years, single, came under observation October 12, 1882. He was found in bed, which he was unable to leave, he stated, because he felt dizzy on attempting to rise, and had lost the use of his left arm and leg; he was ordered to the hospital, and, on examination, was found hemiplegic on the left side of the body; paralysis not complete, but nearly so; marked left-lateral deviation of the tongue; paralysis of right side of the face, nystagmus of left eye; failure of left external retina; sensation slightly blunted in the affected motor areas, but not absent; pupils apparently normal; he has not, as far as can be learned, been unconcious; patient states that he has had, for some time, a dull, heavy pain in the right lower occipital region, worse at night. On the ant. ext. aspect of left thigh, lower one-third, is an indolent ulcer, with ragged edges, irregularly oval in shape, size 2x3½ inches. On ant. aspect of both legs a number of cicatrices of a brown color; sleep disturbed; bowels constipated; appetite poor; no fever. The patient gives a history of a single hard chancre on the glans penis, contracted in December, 1879, followed by induration of the lymphatic glands in both groins, for which he had treatment lasting about two weeks, when the sore healed. Eight months subsequently (August, 1880), he had treatment for sore throat, condylomata, and for some undetermined eye trouble (iritis?). The ulcers on the legs appeared about a year after the initial lesion and have been recurrent since that time. Patient to have pot. iodidi, gram one-third, thrice daily, increased gram one, daily, until grams two, thrice daily,

are taken and so continued, also unguent hydrarg. one part, vaseline nine parts, mixed, to be spread on sheet lint and applied to ulcer once daily; faradization of left side of body and right side of face, once daily, for ten minutes; a cathartic dose and nourishing diet. Under this treatment, the patient steadily improved, the ulcer rapidly healed, paralysis diminished, but did not wholly disappear, there remaining a slight paresis in all affected regions, after thirty-seven days, continuous treatment. Acne appeared on the face during the third week, when the dose of the iodide was temporarily reduced to the original quantity and pil. hydrarg., centigrams ten, ordered every night, continued until the patient was discharged from the ward, on the thirty-eighth day from admission. He was directed to continue the use of the iodide until further notice and to report himself once a week for examination. On discharge his condition was as follows: Some slowness of action of left arm and leg and of right side of face, apparent only on close inspection; general health good. After leaving the hospital he was somewhat irregular in his habits, taking alcoholics freely at intervals. On December 9th his paralysis suddenly returned, but not to the same degree as at first, and he was re-admitted to hospital for treatment. Condition as follows: Walks without support but drags left leg; left arm "numb" and not well under his control; paresis of right facial nerve; lateral deviation of tongue; diplopia, and slight strabismus convergens; fails to move the left eye outward with facility; slight pain in occiput. Treatment resumed as before, under which there was again rapid amelioration of symptoms, but recovery was less complete than at first. On January 9th he was again discharged from hospital, ordered to continue the use of the iodide, gram one, *ter in die*, and cautioned in regard to the dangers of irregularity and excesses of any sort. On February 8th was again admitted to hospital with symptoms as on second admission, but less marked, and treatment being resumed, his condition improved as before; discharged March 1st with orders as previously; re-admitted March 31st with

symptoms substantially as on last admission; treatment resumed and continued until May 28th, on which date he was discharged from the military service, his condition being then as follows: Motion: Walks rather clumsily, dragging left foot slightly; muscles of right side of face under control, but not easily; grasp of left hand weaker than right; tongue deviates slightly. Sensation: There appears to be no marked difference in sensibility to points of dividers when applied to the extremities and face on either side of the body. Special sensation: Vision for both eyes $=\frac{20}{xx}$; pupils respond well to light and are symmetrical; no nystagmus; no diplopia. Hearing: Hears watch at one metre on both sides, the same watch being heard by a sharp ear at three metres. Taste slightly dulled. Cerebration: It does not appear that the patient has any marked mental disturbance. He states that his mind is clear, but, on being closely pressed, admits that his memory, as to both events and dates, is not so good as formerly; finds it more difficult to remember "tactics" than before his illness, admits that his temper is less easily excited. General condition: He is well nourished; no adenitis; no skin lesion; no pain in head or elsewhere; bowels regular; sleeps well and is cheerful.

Case 2. Persistent insomnia and cephalalgia, restlessness, hebetude, simulated rheumatism; not cured. W. C., aged 29 years, single. Admitted to hospital March 25, 1883. Patient, on admission, complained greatly of rheumatic pains in the extremities, especially the legs, worse at night, and of inability to sleep. Careful examination, April 5th, showed a depressed cicatrix in sulcus, behind glans penis, on supra and right-lateral aspect, and numerous nodes on internal surface of both tibiæ. None were found on cranium or elsewhere. A single enlarged lymphatic gland (post cervical) in the neck. There was some puffing about the ankles, along both flexor and extensor tendinous sheaths, where pain is also severe. Pains constant, and especially severe at night. Headaches frequent but less constant than pains. There was some slowness of thought and speech. No

cutaneous lesions were observed. No sore throat. Gums a little tumid and tender (perhaps from taking potash iod., gram one, daily, since admission).

Patient states that he contracted the disease in Dec., 1874; that it was cauterized soon after, and that it was healed within a week or ten days after the latter operation; that he had an eruption of "prickly heat" (roseola?) in 1881, and that his rheumatic pains began to be troublesome in that year, and have given him more or less trouble ever since; that he has had frequent headaches, but that the pain is not localized or very severe or constant. Patient is fairly nourished; appetite fair; mind gloomy; loses much sleep, which loss he attributes to the pain in his limbs. Ordered to have potassium iodide, gram one-third, in tinct. cinch. comp., 4 c. c. *ter in die*, with chloral hydrate, grams two, in suitable vehicle, at bed-time. Progress of case: Chloral fails to procure sleep and dose increased without effect. To have tinct. opii deodoræ, 2 c. c. at bed-time, and lead and opium lotions on sheet lint, covered with oiled silk, applied over shins at night. From this he had, on the first night, three hours' sleep. He paces the floor of the ward at night, disturbing other patients. To have unguent hydrarg., dil., rubbed into each axilla and groin, once daily, alternately. Patient fails to obtain sleep from four-gram doses of tinct. opii; is extremely restless at evening and at night; exhibits much mental depression, amounting to melancholia; appetite failing; wastes in flesh; to have pot. iod. increased gradually to grams four, daily, with three centigrams morphia sulph. and one-half milligram atropia sulph., hypodermically, at bed-time.

May 20th. Patient has not improved, but obtained about four hours' sleep from injection. Mercury and iodine discontinued on account of failure of the digestion and sponginess of the gums. No salivation. To have syrupi ferri iod., ext. gentian, fluidi, āā 2 c. c., thrice daily.

May 28th. Patient not improved in respect to the pains, but general condition is better. Sleeps at night only, when injec-

tions are given, but appears to get a little sleep during the daytime. There appears to be much more restlessness and insomnia than should be due to the osteocopic pains. Throughout the succeeding months of June, July and August, the condition of this patient remained about the same as on admission. Tonic and specific treatment, including inunctions of dilute mercurial ointment over the tibiæ, and hourly baths, was continued, with occasional intermissions of the specifics until the day of his discharge from the military service, August 31, 1883, with symptoms somewhat ameliorated, but not decidedly improved.

Remarks—If we say that we recognize three forms of (syphilitic) cerebral disease, one in which the symptoms result from arterial occlusion, one from irritation of gummata, and one from periosteal thickening, we may fairly assume that sudden attacks of paralysis denote one, that the second has all the symptoms common to cases of tumor, and that severe pain and headache go with the last. * * * * No doubt, in some cases all three are combined, and in many, two of them.* As neither of my cases came on to the autopsy table we may place them, provisionally, in the convenient niches so sharply cut out above. A gummy deposit in the cerebral arteries, with, possibly, a syphilitic neoplasm (gumma) at the base of the brain, is the probable pathological basis of Case 1.

The extensive periosteal lesions in Case 2 would place it in the third class of Mr. Hutchinson. In regard to the symptoms, it is noted that ptosis was absent and slight strabismus convergens, due to failure of the sixth nerve, was present. The first is regarded as a common and the last as a rare symptom by many writers. The distribution of the paralysis was so peculiar, namely, that of the sixth and ninth nerves on the hemiplegic (left) side and of the seventh nerve on the right side, that doubts arise as to the accuracy of the observation; the following points are, however, distinctly recalled beyond question, namely: Left hemiplegia, left-lateral deviation of tongue, right facial paresis,

* Hutchinson, quoted by Otis, Genito-Urinary Diseases, vol. 1, p. 202. N. Y., 1883.

not involving orbicularis palpebrarum, but implicating right buccinator, nystagmus of left eye, diplopia with slight strabismus convergens. Memory fails here to support the notes of the case, that is to say, whether right or left eye turned in. Crossed paralysis of the facial nerve is not uncommon, and, according to Nothnagel*, is very characteristic of affections of the *pons* (hemiplegia alternans). Lidell reports a case† of right hemiplegia with paresis of fifth, seventh and ninth cranial nerves of the same side, and of the third nerve on the opposite (left) side. This was a case of cerebral hemorrhage, where a clot was ound in the left crus cerebri. While I have not found, in the authorities available for reference, a case more analogous than this, I am, nevertheless, inclined to trust the record of the case, for we have so great an authority as Brown-Sequard stating‡ that the disorderly grouping of nervous phenomena should lead us to interrogate syphilis as a cause. In both cases the external surface of the cranium was carefully examined for cicatrices, nodes or other manifestations of the disease, and with negative results. Loss of electric irritability of the affected nerves, and atrophy of muscles supplied by them, was not observed, but may have been present in some slight degree. If we did not know something of the natural history of these cases, that there is frequent fluctuation in the severity of symptoms and that improvement is occasionally spontaneous, the rapid recovery of case 1 might be credited to the treatment; that it was in part so due is a fair conclusion based on the rapid healing of a large, ill-conditioned ulcer.

The results of treatment in Case 2 were disappointing, and it may be fairly questioned whether the specifics were not too vigorously pushed. The mental depression was probably increased by them, and some cachexia induced. Salivation was carefully avoided with the intent of keeping the patient steadily

---

* Ziemssen Encyl. vol. xii, p. 141.

† A Treatise on Apoplexy, Lidell, N. Y., 1873, p. 147.

‡ Genito-Urinary Diseases, Van Buren and Keyes, p. 650, N. Y., 1874.

under the mixed treatment, and it does not appear that he was benefited by it. The hygienic conditions of both cases were not unfavorable ; there was plenty of fresh air, sunlight, exercise, bathing, and a regulated diet during the time of treatment in hospital.

Society Reports.

Buffalo Medical and Surgical Association.

Regular Meeting Oct. 7, 1884.

President, F. W. Bartlett, in the Chair.

The minutes of the last meeting were read and approved.

Drs. Niemand and Bode applied for membership.

Drs. Grosvenor and Appel were invited to participate in the proceedings.

Dr. Roswell Park exhibited some interesting specimens of tubecular disease of bone, and spoke at some length upon the frequency of such disorders. He was inclined to believe, with the latest German and French writers upon the subject, that most cases of caries, hip-joint disease, etc., had their common origin in the infectious contagium of tubercle. There was a peculiar aversion among American and English surgeons to the acceptance of this theory.

In the discussion which followed, Dr. Ring led. He referred to Dr. Henry Smith's lectures in Philadelphia upon tuberculous disease of bone.

Dr. Van Peyma asked why Dr. Park thought these specimens which he exhibited of a tubercular nature.

Dr. Wetmore disagreed with the speaker in some points he made. He believed the majority of cases of hip-joint disease originated from traumatic and not tubercular causes. A concussion produced an ecchymosis in the basement membrane of the joint. This, irritated by walking and other motion, finally

resulted in ulceration. If there was anything tubercular in the disease in the larger number of cases, it would return, but experience had not borne this out.

Dr. Hartwig was inclined to accept Dr. Park's views. Although as a rule we can ascertain that a fall has been the commencement of the hip-joint disorder, tubercle is not thus excluded. He mentioned a case in illustration, where he had operated upon a knee three times, the last an amputation because the disease returned each time, and even after amputation; he is fearful of his not continuing in good health. Upon the whole, he thought the opinions of Drs. Park and Wetmore might be reconciled.

Dr. Park, in answer to Dr. Van Peyma, stated that he had found bacilli in his specimens, and also the histological structure of tubercle. He spoke of the value of ignipuncture in the treatment of these cases.

Dr. Phelps had recently operated upon two cases of white swelling of the knee. One was a little girl, the other a man of twenty-seven. There was a history of tubercle in both, but only one began with a decided traumatic cause. He had no doubt there was tubercular disease of the lower part of the femur in both.

Dr. Peterson made a report of the pathological results of two hundred and fifteen post mortem examinations. He said that he made this report more particularly to show what a student of pathology and pathological anatomy and histology might obtain in Buffalo in the way of material; that the opportunities were, in fact, better than those in New York or other large cities, where the material was divided among many. Of these 215 cases, 204 died from disease or violent death, 11 from suicide. These autopsies were upon cases at the Buffalo General Hospital, Erie County Almshouse, State Insane Asylum, and private and coroners' cases.

The ages were from birth to 89 years, and are tabulated as follows:

Under 1 year, 7 cases; between 1 and 10 years, 5 cases; 10 and 20 years, 11 cases; 20 and 30 years, 43 cases; 30 and 40 years, 39 cases; 40 and 50 years, 50 cases; 50 and 60 years, 26 cases; 60 and 70 years, 16 cases; 70 and 80 years, 14 cases; 80 and 90 years, 4 cases.

The causes of death, where known, were written in the death certificates as follows:

Tuberculosis, 27 cases; cardiac disease, 26 cases; violent deaths (exclusive of drowning), 21 cases; pneumonia, 18 cases; drowning, 15 cases; malignant tumors, 14 cases; septic diseases, 11 cases; renal diseases, 9 cases; diseases of alimentary canal, 8 cases; cerebral hemorrhage, 7 cases; senile involution, 7 cases; peritonitis, 6 cases; cirrhosis of liver, 6 cases; acute infectious fevers, 6 cases; pachymeningitis, 5 cases; alcoholism, 4 cases; convulsions, 4 cases; gangrene of lungs, 4 cases; aneurism, 3 cases; abdominal hemorrhage, 2 cases; acute yellow atrophy of liver, 1 case; air in the veins, 1 case; purpura hemorrhagica, 1 case; kyphosis, one case.

But as in each carefully conducted autopsy from two to twenty pathological conditions are always found, the speaker had tabulated, in the following manner, the morbid states he had seen and examined:

TUBERCULOSIS.

There were 32 cases in which there was tuberculosis of lungs; 14 of kidneys; 13 of ileum; 7 of liver; 7 of spleen; 7 of meninges; 5 of peritoneum; 3 of cœcum; 3 of larynx; 2 of pleuræ; 1 of brain; 1 of prostate gland; 1 of pelvis of kidney; 1 of medulla.

TUMORS.

In 3 cases there was primary carcinoma of stomach; 1 of liver; 1 of œsophagus; 1 of gall-bladder; 1 of rectum; 1 of pancreas. In 3 cases there was secondary carcinoma of liver; 3 of mesenteric glands; 2 of lungs; 1 of glands of neck; 1 of heart; 1 of peritoneum; 1 of bronchial glands; 1 of ovary; 1 of alveolar sarcoma of pleuræ and peritoneum; 2 of round-celled sarcoma of neck; 1 of medullary sarcoma of pituitary body; 1 of medullary sarcoma of cerebellum; 1 of medullary sarcoma of brain; 1 of medullary sarcoma of meninges; 5 of myofibroma of uterus; 2 of fibroma of liver; 1 of fibroma of kidney; 1 of fibroma of mitral valve; 1 of lymphoma of neck; 1 of adenoma of stomach; 2 of epithelioma of nose; 1 of papilloma of bladder; 1 of atheroma of skin over sternum; 1 of atheroma of skin upon penis; 1 of tumor cavernosus of liver; 1 of psammoma of dura mater; 7 of ovarian cysts.

MALFORMATIONS.

In three cases there was congenital hour-glass contraction of stomach; 1 case of corset displacement of stomach; 5 of corset atrophy of liver; 3 of persisting fœtal lobulation of kidneys; 1 of floating kidney; 1 of cryptorshismus or hermaphrotismus; 1 of double kidney on one side; 1 of diverticulum of the ileum; 2 of diverticula of the bladder.

PARASITES.

In two cases were found echinococci in the liver, and in numerous cases tæniæ, ascarides and trichocephalus diapar.

FATTY DEGENERATION AND INFILTRATION.

As in most acute diseases, septic or inflammatory, and in many chronic diseases, like tuberculosis, there is great interference with cellular nutrition, these fatty changes are very common. Hence, in these 215 post mortem examinations, one need not be surprised to find that there were 72 cases of fatty metamorphosis of the heart, 72 of the liver, 46 of the kidneys, 3 of recti abdominis.

DISEASES OF SEROUS MEMBRANES.

BRAIN—In 20 cases there was chronic hydrocephalus internus; 5 of chronic meningitis; 5 of meningeal hemorrhages; 4 of chronic pachymeningitis; 2 of acute hydrocephalus internus; 1 of suppurative pachymeningitis.

PLEURÆ—In 19 cases there were no adhesions of pleuræ; in 196 cases there were old adhesions of pleuræ; in 31 cases there was acute pleuritis; 17 cases of hydrothorax; 9 of "spots of Tardieu" on pleuræ; 6 of empyema; 3 of hæmothorax; 3 of pneumothorax; in 2 there were lime plates in pleuræ.

PERICARDIUM—In 37 cases there was pericardial dropsy. The speaker had found that in all cases where there is acute or chronic disease of the lungs, there is a great increase of serum in the pericardium. In 31 cases there were "soldier spots" on pericardium; 10 cases of old adhesions of pericardium; 10 of "spots of Tardieu" on pericardium; 5 of acute pericarditis; 1 of œdema of pericardium.

PERITONEUM—In 23 cases there was acute peritonitis; 13 cases of peritoneal dropsy; 10 of chronic peritonitis; 6 of chronic pelvic peritonitis; 3 of "spots of Tardieu"; 1 of hemorrhage into cavity; 1 of encysted dropsy.

The diseases of the various organs, separately examined, were as follows:

BRAIN.

In 5 cases there was atrophy of brain; 4 of softening of brain; 3 of congestion of brain; 3 of cysts in choroid plexus; 3 of clots in cerebrum; 3 of clots

in pons varolii; 3 of clots in optic thalamus; 2 of embolism of middle cerebral artery; 1 of multiple clots in cerebrum; 1 of abscess of brain; 1 of cyst of pineal gland; 1 of œdema of brain.

LUNGS.

In 34 cases there was emphysema; 24 cases of croupous pneumonia; 18 of bronchitis; 13 of catarrhal pneumonia; 8 of œdema; 6 of old healed tubercles; 5 of gangrene; 4 of infarctions; 3 of abscess; 3 of chronic pneumonia; 2 of schluchpneumonie.

HEART.

In 69 cases there were atheromatous arteries, in which change, as a rule, does not manifest itself until after the fortieth year. But in three of these cases the ages were 22, 27, 27 years, respectively.

In 17 cases there was aortic stenosis; 17 cases of thickened mitral; 16 of agonia clots; 14 of vegetations on mitral; 12 of hypertrophy of heart; 11 of atrophy of heart; 11 of thickened aortic; 8 of mitral stenosis; 7 of mitral insufficiency; 7 of aortic insufficiency; 4 of brown atrophy; 4 of dilatation; 3 of tricuspid insufficiency; 3 of vegetations on aortic; 2 of rupture of heart; 1 of penetration of aortic; 1 of thickened tricuspid; 1 of thickened pulmonary; 1 of thrombus cardis (both sides); 1 of cor adiposum.

SPLEEN.

In 33 cases there was acute swelling; 14 cases of chronic swelling; 8 of infarction; 8 of calcified capsule; 7 of atrophy; 2 of amyloid degeneration; 2 of cyanotic induration.

LIVER.

In 23 cases there was cirrhosis; 15 cases of atrophy; 8 of gall-stones; 4 of hypertrophy; 3 of red atrophy; 3 of cyanotic induration; 3 of syphilitic hepatitis; 3 of acute hepatitis; 2 of acute yellow atrophy; 2 of amyloid degeneration; 1 of chronic hepatitis; 1 of rupture of liver; 1 of catarrh of gall-bladder.

GENITO-URINARY ORGANS.

In 30 cases there was chronic interstitial nephritis; 11 cases of chronic atrophy; 9 of acute cystitis; 8 of pyelonephritis; 7 of acute parenchymatous nephritis; 7 of infarction of kidneys; 6 of pyelitis; 5 of cyanotic induration; 4 of colloid cysts of large size in kidney; 4 of enlarged prostate; 3 of chronic cystitis; 2 of hydronephrosis; 2 of amyloid degeneration; 2 of perinephritis; 2 of ureteritis; 2 of stricture of male urethra; 2 of dilated ureters by pregnancy; 1 of gumma of kidney; 1 of pyonephrosis; 1 of calculi in urine-tubules; 1 of

hydrocele. In 1 case there was a calculus impacted in each ureter near the pelvis of the kidney, at the same time, causing acute suppression of urine and death.

ALIMENTARY CANAL.

In 32 cases there was chronic gastric catarrh; 9 cases of acute gastric catarrh; 8 of enlarged mesenteric glands; 5 of catarrh of colon; 4 of catarrh of ileum; 4 of typhoid ulcers in colon; 4 of typhoid ulcers in ileum; 3 of contractions of colon; 3 of chronic enteritis; 2 of chronic perforating ulcers of stomach; 2 of perforation of ileum; 2 of perforation of colon; 2 of ulcers in rectum; 2 of catarrh of rectum; 2 of ulcers in duodenum; 2 of duodenitis; 1 of abnormally thin-walled stomach; 1 of chronic perforating ulcer of duodenum; 1 of amyloid degeneration of intestines; 1 of typhoid ulcers in cœcum; 1 of perforation of cœcum; 1 of typhlitis; 1 of swelling of Peyer's plaques; 1 of stricture of rectum; 1 of calculi in appendix vermiformis; 1 of new-formed passage between hepatic flexure of colon and cœcum, thus cutting off several inches of the ascending colon. This was due to ulceration and peritonitis. In 8 cases there were hernias, scrotal, inguinal, femoral, internal and umbilical.

FEMALE GENITAL ORGANS.

In 7 cases the uterus was displaced and adhered; 5 cases of acute metritis; 4 of adhered ovary; 3 of hæmatoma of ovary; 3 of hydrosalpinx; 2 of vaginitis; 2 of endometritis; 1 of vagino-recto-perineal fistula. He had noticed that the prostitutes he had examined had morbid conditions of their wombs or ovaries.

BONE.

In 11 cases there was necrosis, and this was of the nasal, spinal, and bones of leg, arm and skull.

There were two psoas abscesses.

There were three cases of acute general cellulitis or phlegmonous erysipelas.

He had, in these 215 cases, looked attentively at the lungs with reference to the amount of carbonaceous matter in them. Country people and sailors seemed to have little, but city people, by breathing dusty and smoky atmospheres, accumulated, as they progressed in years, large quantities of carbonaceous matter in their lungs. In children the lungs were of a pinkish or pale color. As they grew older, the lungs became more and more discolored. In the course of his remarks he mentioned

the fact that by the peculiar method of embalming employed by undertakers in four cases, it had been impossible to recognize pathological changes. One of these was particularly flagrant, as the case was one in charge of the coroner, where there was good reason to suspect poisoning.

Several physicians expressed themselves adverse to these practices of undertakers, among them Drs. Phelps and Cronyn.

Prevailing Diseases—Dr. Hartwig reported dysentery and typhoid fever; Dr. Cronyn, whooping-cough and dysentery; Dr. Bartlett, scarlet fever, typhoid fever and dysentery.

Some discussion was then carried on in relation to the publication of the minutes before or after they had been read and approved at the following meeting. Dr. Hartwig and others were in favor of having them published authoritatively, only after approval by the association. The majority of those present concurred in this opinion. Action upon this question was, however deferred until the next session.

The meeting then adjourned.

FREDERICK PETERSON, *Secretary.*

TRANSACTIONS OF THE BUFFALO OBSTETRICAL SOCIETY.

Stated Meeting, October 28, 1884.

The President, Dr. W. W. Potter, in the Chair.

Dr. Stephen Y. Howell read a paper on "The Cæsarian Section." *

Dr. Lothrop, in opening the discussion, called attention to the great interest and importance that centers in this subject, as it was an operation in which two lives, though in the greatest jeopardy, could possibly be saved. Embryotomy was a horrible alternative. It was a question whether, in the present state of science, a physician could be justified in deliberately sacrificing

* See Original Communications, page 193.

the life of a child. The Cæsarian section, or some of its modifications, offers such strong probabilities of saving two lives that he considered it both unscientific and inhuman to perform in its stead any operation which inevitably sacrifices one. Thus, from a moral, as well as a scientific point of view, this operation commends itself to the obstetrician, and, he thought, must come more into vogue.

The Roman Catholic Church, and, also, the Anglican Church, as is well known, are opposed to the sacrifice of life without previous baptism; therefore, physicians of either faith could not conscientiously perform embryotomy; while the Cæsarian, or Dr. Thomas' operation, could be done without offense to any religious belief.

Dr. Lothrop thought well of Dr. Thomas' operation, laparo-elytrotomy, and, when feasible, believed it should stand first in the list. When, however, there was great deformity, it would be necessary, on account of the increased difficulty of extracting the child, to make, instead, the Cæsarian section or the Müller-Porro operation. He was inclined to give this latter the preference over the Cæsarian operation when laparo-elytrotomy could not be made, because of the lessened danger of hemorrhage.

Dr. Banta reported a case where the life of the child was presumably lost through neglect to make the post mortem Cæsarian section with the first instrument that came to hand. So much time was wasted in going for suitable instruments that the operation was useless. In future he would, in a similar case, lay open the abdomen with even the rudest of cutting instruments, and extract the child without delay. Coolness and dispatch must be united in him who would bring success from conditions where it seems so well-nigh impossible to triumph.

In regard to the Cæsarian section it behooves all physicians engaged in obstetric practice to bear its details well in mind—to hold its various modifications in regular order—so that when called into use there shall be no delay or hesitation. Procrastination is fatal to success. He considered embryotomy a most

unjustifiable procedure from his standpoint. He was almost ready to say, in view of the advance that has been made, that it was unscientific as well, except only in extreme cases. He should not do it himself. He had performed it once, and, though the mother recovered, he has not, to this day, been forgiven by the family. He thought well of Thomas' operation, and considered it destined to lead all the others in the future, excepting in the class of extreme cases mentioned by Dr. Lothrop. In those cases, the essayist had presented the argument in favor of the Müller-Porro operation so strongly, that he was inclined to believe that it was the proper one to make.

Dr. Stockton wished to compliment the author upon the practical and attractive manner in which he had presented the subject. In order to relieve a woman in labor and save both her own life and that of her child, the natural passages being too small to allow the child to pass through, it is necessary to have a proper guide; in other words, to be well versed in the details of these various operations. The results presented by Dr Howell certainly merit serious consideration. There is no other test so accurate by which to judge an operation as its results. When by surgical interference you not only save the life of your patient, but also the life about to be brought into the world, both being certain to be lost if left to nature's efforts alone, you have achieved the greatest triumph in the field of obstetrics. Not the least of the factors entering into the success of the operation, described by the author of the paper, was the use of antiseptics, and, with their thorough and judicious employment, he predicted a great future for the Müller-Porro operation. He reminded the society that the late Prof. James P. White advised the performance of Cæsarian section whenever the natural passages were too small to give passage to the living child, and instructed his pupils most thoroughly in the various details of the operation.

Dr. Keene had, early in his professional career, pronounced for the Cæsarian section as against craniotomy. He had written

a thesis on this subject, when a student, in which he took this ground, though this was before the days of antiseptic surgery, when the operation was not as practicable as now. Human life was sacred, and the physician should be very cautious in advising any operation that certainly destroyed it. In regard to the question of choice between the Müller-Porro operation and Cæsarian section, he would leave that to be decided by the exigencies of each case when presented. If prepared to do either operation, the particular circumstances surrounding each case furnish the only safe guide to a proper decision between the several methods.

A sound judgment could hardly go astray in making either form of the operation under discussion; but craniotomy, by all means, should be avoided.

Dr. Keene also gave due credit to the proper use of antiseptics, as contributing to the success of these operations in a very large measure. Before their employment the operations were only accidentally made, so to speak; but now, when we have command of the case, we can decide upon our plan of action beforehand, and arrange its details with a far greater certainty of success.

Dr. Ingraham, though he had never seen the operation performed, considered the Müller-Porro method most feasible, theoretically and practically. He would, by all means, advise it, in preference to any operation which inevitably destroyed the child. Therefore he would recommend the members to thoroughly familiarize themselves with the various steps of these several forms of operative delivery, in order that there might be prompt action when the emergency comes.

Dr. Hartwig was of the opinion that the old Cæsarian section had a future as well as the Müller-Porro operation. If it were possible to determine the precise locality of the placenta, the Cæsarian operation could be made absolutely bloodless, and thus the principal immediate danger, viz., hemorrhage, avoided. He proposed the following plan: After opening the abdomen

down to the uterus, he would ascertain the position of the placenta, if possible, and if it was not found beneath the incision in the abdomen, strong stitches could be passed on each side of the abdominal incision through the uterine wall, so as to include nearly or quite its entire thickness in the sutures. These should then be drawn tight, which would securely fasten the uterine and abdominal walls to each other, while the incision through the uterus was being made, thus preventing hemorrhage. The membranes should then be ruptured, the child removed, and the cord tied, the placenta being left *in situ.* The wound in the uterus should next be closed by sutures, the stitches holding the uterus to the abdominal wall removed, and the womb allowed to contract and expel the placenta in the natural way.

Dr. H. had performed a post mortem Cæsarian section, but on account of the lapse of time after the death of the mother the child was found dead. It was interesting to note that the hemorrhage in this case was quite severe, notwithstanding the great length of time since the mother's death.

The President remarked that the unfavorable statistics of Cæsarian section were, undoubtedly, due to the fact that the earlier operations were chiefly those of emergency and not of selection. Given, a rachitic woman, or one with a justo-minor pelvis, with an outlet diameter too narrow to permit the passage of a living child, and he could see no reason, in these days of antiseptic surgery, why the statistics of the Cæsarian section may not be made to compare favorably with those of abdominal surgery in general. The profession is indebted to the labors of Dr. Robert P. Harris, of Philadelphia, for much recent light upon the Cæsarian operation. His papers had served to awaken interest in this somewhat neglected field.

He confessed to a preference for the Cæsarian section, though, since listening to Dr. Howell's excellent paper, he thought better of the Müller-Porro operation than ever before. In making Cæsarian section he would remove the placenta, and not leave

it *in situ*, as proposed by Dr. Hartwig, even if he followed his plan in other respects. He considered Dr. Thomas' operation a most excellent expedient, when admissible, but regarded it of more limited application then either of the others. The Cæsarian section was the classical operation, having come down to us from a very remote period, though it was only now beginning to assume its proper place in obstetric surgery. He also reported a case in which he had recently made post mortem Cæsarian section, but without success, as he did not arrive until the mother had been too long dead.

Dr. Howell, in closing the discussion, wished to supplement his paper with a few remarks on pelvimetry. A very simple way of obtaining measurements of the pelvis, and one which he thought better than with any of the metallic pelvimeters, was by the fingers. Two fingers of one hand could be introduced into the pelvis as far as possible, and the extent of the introduction marked by the fingers of the other hand; then, withdrawing the fingers and subtracting three-fifths of an inch from the measure, will give the conjugate diameter very accurately.

He did not consider Dr. Thomas' operation of practical use. Even when undertaken, it has often to be abandoned, on account of the great difficulty of extracting the child, and the Cæsarian section substituted at greatly increased risk. Embryotomy was not justifiable, as the Cæsarian section, or some of its modifications, can be performed in every case without increased danger to the mother, and almost certain safety to the child.

Selections.

Notes on Trachelorrhaphy.

Dr. Thad. A. Reamy, of Cincinnati, Chairman of the Obstetric Section of the American Medical Association, chose for the subject of his address before the general session, at the Wash-

ington meeting in May last, "Notes of Two Hundred and Thirty-one Cases of Operation for Laceration of the Cervix Uteri."

His first operation was made February 28, 1874. Not a single death has occurred in his 231 different patients operated upon. In six cases the operation was followed by perimetritis, parametritis, or peritonitis. These complications delayed, but did not prevent, ultimate recovery. In one case these inflammatory complications were attributed to the undue degree to which the uterus was dragged down, in order to give unobstructed access.

Of these 231 cases, in 170 the laceration was bilateral, in 38 unilateral. Of these latter, 23 were on the left side and 15 on the right. Sixteen cases were stellate, in two of which there were four distinct rents. In five cases there was laceration of the posterior lip only, in two of the anterior lip only. In 80 cases the laceration was extensive, in 15 of these 80 extending to the cervico-vaginal junction on both sides. In 22 of the bilateral cases the laceration extended to the cervico-vaginal junction on one side only. In three cases the rent extended to the internal os. In one of these the vaginal wall was extensively torn; the peritoneal cavity had probably been opened, followed by protracted cellulitis, and 12 sutures were required on one side to close the cervical and vaginal rent.

In 167 cases there was perineal laceration to an extent that left deformity, either at the vaginal orifice or more externally. In 15 cases the anal sphincter was damaged. In seven cases the recto-vaginal septum was opened up. In 26 cases the cervix and perineum were operated on at the same sitting. In five cases the uterus was curetted with the blunt wire at the same sitting, this being the primary of the three procedures. In 50 cases the perineum was operated upon after recovery from the cervical operation.

Dr. Reamy does not hesitate to curette the uterus in a case demanding it, at the time of operating upon the cervix, or the perineum, experience having convinced him that neither of these operations adds materially to the danger of curetting; but, on the other hand, he inclines to the opinion that in certain cases where the conjoined conditions demanding the two operations exist, the depletion of the cervix in trachelorrhaphy presents an element of safety against the inflammatory processes which may follow curetting. Secondary hemorrhage did not follow trachelorrhaphy in any of his cases. In every case where hemorrhage was troublesome during the operation, it was readily controlled by the stream of hot water which it is his custom to have flow upon the field of operation during its progress, with but three exceptions; in which it being necessary to denude deeply, twigs of the circular branch of the uterine artery being cut, compression with hemostatic forceps was invoked.

Dr. R. believes in the importance of allowing free bleeding from the denuded surfaces, firstly (*a*) because it softens the tissues so as to allow more perfect coaptation of the lips to be united; and (*b*) because of this softening, which is immediate, the tissues are more easily penetrated by the needles carrying the sutures. Secondly, and more important, this depletion not only greatly promotes the return of the tissue to its normal condition, but is an immense factor in again starting the processes of involution which had been arrested by the laceration and its consequences. Thorough denudation, cutting out all cicatricial tissue, and allowing free depletion, embrace the essential points in the operation so far as its influence upon involution is concerned.

Dr. R. believes that the early rupture of the membranes, attempts at forcible dilatation of the cervix by the fingers of the accoucheur or midwife, and the improper use of ergot, are more productive of lacerations of the cervix than the forceps. In Cincinnati 70 per centum of all labors are attended by midwives, who are generally ignorant and unskilful, and he thinks the

sins above lie closely at their doors. These errors are, however, sometimes perpetrated by well-educated physicians, though many cases of laceration are, of course, unavoidable, even under the most skilful care. He counsels caution, therefore, against the indiscriminate charge of unskilfulness on the part of the accoucheur, lest some be unjustly censured.

Dr. Reamy takes position alongside most American gynecologists, in the view that the fretting of the exposed tissue consequent upon an ununited laceration of the cervix, is a prolific source of danger in developing cancer, and cites eminent authority, at home and abroad, in support thereof.

In regard to the necessity of the operation, he declares that it is an error to limit trachelorrhaphy to cases where ectropion has occurred, or where a cicatricial plug imprisons or presses upon branches of sentient nerves, causing painful reflex symptoms. He asserts that any laceration which has healed without its surfaces being in contact must have healed without complete union, although its extent may have been much lessened by granulation. In all such cases there is more or less cicatricial tissue in the field of repair, which, in such locality, even should it not produce reflex symptoms, should be thoroughly removed and the parts closed so as to obtain union by the first intention, in which cicatricial tissue is never found. If the rent be small, then the operation is small, especially if it be done before chronic inflammation of the cervix has occurred, as a result.

As bearing upon the question of its influence upon sterility, Dr. R. says he knows of 15 of his cases where conception has occurred with delivery at term, six of which he attended himself. In no case did re-lacerations occur, and the labors were normal.

In but two cases did union fail. This was due in one case to the use of the catgut ligature, and in the others to the sutures not being sufficiently tightened. In each case subsequent operation was successful.

He summarizes his method of operating as follows:

1. I use nothing to draw the uterus down with but the single volsella, with which I seize but one lip, the one to be denuded first, at a time.

2. I draw the uterus down as little as possible. This caution should be the more scrupulously observed, if any cellulitis remains about the base of the broad ligaments or elsewhere.

3. I outline the denudation with a sharp knife, and then cut the tissue included in the line with a sharp scissors. This prevents the rolling of the tissue at the borders.

4. Allow bleeding freely or not, as the condition of the tissue of the cervix, and the involution or subinvolution of the uterus, may require.

5. Use a nearly half-circle needle with very sharp point, armed with Chinese silk. This shaped needle can be drawn through the second lip and withdrawn very much more easily than a straight needle, or one curved only near the point.

Silk is preferred to wire, because it can be tied more quickly, and the tension more easily adjusted. Then there are no ends to jag the vaginal walls.

6. Wash out the cervical canal at the close of the operation with a recurrent flow syringe to remove any blood that may have found its way there during closure of the sutures. Have nurse wash out the vagina with warm, carbolized water within an hour after the operation is completed. The vagina is not syringed again until the sixth day, then daily until the patient is dismissed.

Cleanliness is the only antisepsis employed.—*Journal of the American Medical Association, Sept. 20, 1884.*

Aneurism of the Thoracic Aorta, with Death from Embolism of the Abdominal Aorta.

A case of aneurism of the thoracic aorta, with death from embolism of the abdominal aorta, is reported in the *Lancet*, Aug. 30th, from the Liverpool Northern Hospital:

A. H., a sailor, aged 28, was admitted to the hospital the 29th of last March, complaining of pains in his joints and in front of chest. No physical signs of disease were at the time discovered. On April 12th a slight cough appeared, and on the 16th an area of dullness over upper part of sternum, continuous with the cardiac dullness, was first noticed; no bruit was then audible; the right radial pulse was a little smaller than the left.

On April 30th distinct pulsation could be felt over the upper part of the sternum and costal cartilages on the right side. A bruit was also now audible at the right second intercostal space and conducted into the subclavians. A sphygmographic tracing showed a curve with rather slow ascent and well-marked, rounded top. Infuell's treatment was adopted. By June 23d he had become tired of lying still and insisted on sitting up in bed. Dyspnœa, cyanosis and œdema of the face, with distension of the veins of the neck, marked the increase of intrathoracic obstruction. The pain in the chest was now so severe that he could not sleep without morphia.

On July 9th he was feeling rather easier than usual, but at noon he was seized with rather violent pain in the abdomen became greatly callapsed and bathed in a cold perspiration He complained of numbness in his legs and of inability to move them. No pulsation could be felt in either femoral artery, and both legs were cold and livid. At six o'clock the same evening he spat up some blood, and gradually sank, death occurring at 10.30 P. M.

Necropsy—Immediately above the attachment of the aortic valves the aorta was dilated, forming a large, irregular, but more or less spherical cavity, about the size of a fœtal head. The aneurism involved the whole of the artery, from its origin to the beginning of the descending portion. Its walls were very thin, and little laminated clots were found adherent to them; but the cavity contained a large quantity of soft, dark clot, in places indistinctly laminated. The remainder of the aorta was fairly healthy, but was completely filled with a soft, dark clot,

terminating at its bifurcation. On cutting into the clot, no portion of different consistence was found in its interior, the whole clot resembled, very closely, that found in the aneurism. There was no other pathological change. The immediate cause of death was, no doubt, the detachment of a portion of the soft clot contained in the aneurism and its impaction in the bifurcation of the aorta, followed by secondary thrombosis filling nearly the whole vessel.

The Temperature of the External Auditory Canal in Disease.

A notable contribution from the pen of A. Eitelberg, of Vienna, upon the above subject, is found in the current volume of the *Archives of Otology*, based upon measurements of temperature of the external ear in over fifty cases of aural disease. His measurements were made with a delicate thermometer especially constructed and adapted to the purpose. He found "as a rule the temperature of the external auditory canal varied between 36.8° and 37.4° (Centigrade), these limits being exceeded to a marked degree in a few cases only. Increased temperatures in the external auditory canal were not found in any case without a similarly increased temperature of the body." In only one case was the temperature of the ear higher than that of the axilla. This was one of otitis media on the right side. "In tympanic affections of a less active character, the temperature was the same, or nearly the same, as a rule, in the two ears, and the relation between the temperatures of the ear and axilla was normal." When the temperature was considerable higher on the affected than on the healthy side, it did not exceed that of the body at all, or only a trifle, while that of the normal ear was lower than that of the body. Febrile temperature of the body is also accompanied with febrile temperature in the external auditory canal.

The question again arises, whether the temperature at the point of an inflammation is really higher than that of the body.

The facts of the author seem to indicate that it is not. Billroth, in 1865, gave the results of measurements of the temperature of forty-eight wounds. In only two cases was it higher at the point of inflammation than in the rectum. Jacobson and Bernhardt, in 1869, stated that they found, without a single exception, that the temperature of the inflamed pleura and the inflamed peritoneum was lower by several tenths of a degree than that of the heart. They believed that the idea prevalent in modern pathology that inflamed tissue is higher in temperature than the body was erroneous, and that John Hunter's dictum, that local inflammation does not increase the temperature of any part beyond the temperature of the organ of circulation, was correct.

Dietetic Treatment of Nutritive Disorders in Children.

Dr. Bidert has treated a number of cases of infantile digestive disorders without drugs, by means of a strict regulation of the diet. The diseases treated were dyspepsia, dyspeptic diarrhœa, chronic catarrh, extreme atrophy (tabes meseraica), ulcerative enteritis, cholera infantum, and one supposed case of epidemic dysentery. The children were most carefully watched, and the greatest care observed in carrying out the minute details of treatment. From the results obtained the author feels himself justified in recording the following deductions (*Centralblatt für Klinische Medizin*): 1. A surprisingly large number of gastro-intestinal disorders in infants stand in such close relation with the quality and insufficient quantity of food that the diseases, even in the most serious cases, may be cured solely by the administration of a suitable diet. 2. The quantity of food given is of the greatest moment. 3. The nourishment must often be given in greatly diluted form. 4. The proportion of albumen to fat plays an important role. The digestion of albumen is facilitated by mixing it with a much larger proportion of emulsionized fat than is found in cows' milk—that contained in

human milk being the proper amount. 5. It should not be forgotten that, at times, there is a diminished absorption of fat, in which case it should be greatly reduced in amount, or, in order not to interfere with the digestion of albumen, slightly reduced to a proportion midway between that of human milk and cows' milk.—*Medical Record.*

A Case of Tubal Pregnancy.

Dr. Hun, of Albany, reports in the *American Journal of the Medical Sciences*, for July, 1884, a case of tubal pregnancy on the right side, the corpus cuteum being in the left ovary. The sac raptured about the twenty-fifth day, followed by death of the patient. There were no local causes found to account for lodging of the ovum in the tube, such as occlusion of the tube by pressure of a tumor, inflammatory adhesions, or uterine displacement. If the corpus cuteum found in the left ovary were really the remains of the Graafian follicle, from which this impregnated ovum was discharged, the reason why it was not taken up by the left fallopian tube would be of interest.

Editorial.

The Tubercular Origin of Joint Diseases.

At a recent meeting of the Buffalo Medical and Surgical Association, Dr. E. R. Barnes, of this city, made the following pertinent remarks:

Mr. President—In advocating the theory of the tubercular origin of joint diseases, Dr. Park, of this city, stated, at the October meeting of this society, that Dr. Sayre knew nothing of the pathology of joint diseases, but had become prominent in this connection through the advocacy of two principles, or modes of treat-

ment, namely, extension and fixation. In relation to Dr. Barwell's non-acceptance of the tubercular theory, he stated that both English and American surgeons had, with singular obstinacy, refused to accept as final the conclusions of continental observers.

Now, Mr. President, I am not prepared to discuss this subject in a very learned or elaborate manner, but it seems to me proper that a word should be spoken about it, as it appears to the ordinary practitioner. Dr. Sayre teaches that some injury to the joint structures, perhaps but slight and not readily traced, is, in nearly all cases, the beginning of the series of phenomena which constitute the diseases under consideration. He does not believe that in most cases the disease is of constitutional origin. If it be said that Dr. Sayre's views, as to the pathology of these diseases, are incorrect, and that he has been rendered noteworthy only by the advocacy of certain modes of treatment, I would ask, Mr. President, what has been the consequence, to the profession in this country, of such advocacy? I think it has been that we have had placed in our hands by far the most valuable means for the palliation, and for the cure, of these diseases that we have ever possessed. It is a clinical fact that in the earlier stages, before destructive changes have taken place, the mechanical application of the two principles of extension and fixation will, alone, in a majority of cases, cause the pain to cease, the inflammation to subside, and place the patient in the way to ultimate recovery. He may recover with slight local impairment and with no subsequent appearance of constitutional contamination. Now. Mr. President, I am unable to reconcile the fact of such recovery, by the aid only of mechanical means, with the theory that the disease was of constitutional origin.

I do not know how true the statement may be that English and American surgeons often unreasonably refuse to accept the conclusions of continental teachers. But I recall the fact that it was reserved for a distinguished American surgeon, Prof. Willard Parker, of New York, to establish, by his advocacy and

by his practical demonstrations, though he did not originate, the method of relieving perityphlitic abscess by incision—a most valuable contribution to the resources of our art, though the learning of continental Europe had, as yet, led only to palliative measures. In this case, as in the before-mentioned advocacy by Dr. Sayre, I find it difficult to reconcile the ability to perceive and to teach the best method to treat a disease, with ignorance of the true nature of that disease.

The Gynecic Use of Hydrochlorate of Cocaine.

This new local anæsthetic, which has met with considerable success in the hands of ophthalmologists and laryngologists, has made its way into the field of gynecology, and the results of the few experiments already made with it are such as to promise considerable usefulness in operations upon the genital tract of woman, as well as in many other minor surgical procedures.

Dr. William M. Polk, of New York, on the 29th of October, 1884 (*Medical Record*, Nov. 1, 1884), closed rents of the cervix uteri in two cases, after painting over the cervix a four per cent. solution, with a camel's-hair brush. The application was also carried within the cervical canal and over the adjacent vaginal wall; three applications of the drug were made, at intervals of two or three minutes, and within three minutes of the last application the operations were begun. The first was an elaborate operation, requiring forty minutes to make, and the patient made no complaint of pain until the last ten minutes, when her discomfort was rather a sense of soreness than acute pain.

In the second case, there was considerable normal sensitiveness of the sexual organs, and less self-control on the part of patient. No pain, however, was felt until the lapse of twenty minutes, when it became so acute as to require another application (the fourth) which was made directly to the cut surfaces, after freeing them from blood.

The testimony of this patient is valuable, as she had, three years previously, undergone the same operation with ether, and when asked which method she preferred, she promptly answered, the last.

Another effect which Dr. Polk observed was, that the first appearance of blood upon the cut surfaces was retarded, which would tend to show that the new local anæsthetic also possessed some hæmostatic properties.

The recorded results reached with this new drug are yet too few for us to make definite deductions therefrom, but as experiments with it aggregate we shall lay the data before our readers from time to time. It is already being tested in reference to its effects upon the urethra, rectum, and other mucous membranes, in addition to its uses noted above, and the results thus far obtained are such as to justify a belief that it will prove of value in other directions as yet untried. We invite reports from any of our readers who may test the merits of this remarkable drug.

Ovariotomy with Extirpation of one Kidney.

The *Journal of the American Medical Association* has information that Prof. Donald Maclean, of Detroit, recently extirpated the left kidney, both ovaries, and a large piece of the omentum, from a married woman, aged 27 years, who proved to be in an early stage of pregnancy. The kidney and and both the ovaries were cystic, the former being very large.

The operation was done October 26, 1884, at Ann Arbor, Mich., in the presence of the medical class and a number of physicians; one week afterwards the patient was doing well, and the case promised well for success.

P. S.—Two weeks more have elapsed since the operation, and we learn, just as the Journal goes to press, that the case has continued to progress favorably, and is now considered convalescent. We hope to publish a full history of this remarkable case in a future number.

THE BUFFALO MEDICAL AND SURGICAL LIBRARY ASSOCIATION.

We direct the attention of our city readers to the circular calling together the members of the library association. The efforts of the profession should be actively enlisted in behalf of this enterprise, and we hope the active interest inspired from the coming meeting will encourage the directors to go on with their work in furnishing the latest literature on medical topics to the profession of this city.

The third annual meeting of the association will be held at the library, corner Pearl and Chippewa streets, on Friday evening, December 5th. Election of officers for the ensuing year, reports of Treasurer and Librarian will be presented, and other important business will be transacted. A large attendance is requested.

JAMES W. PUTNAM, *Secretary.*

WASHINGTON OBSTETRICAL AND GENECOLOGICAL SOCIETY.

At the annual meeting of the Washington Obstetrical and Gynecological Society, held October 7, 1884, Dr. Samuel C. Busey was re-elected President. The following officers were also elected for the ensuing year: Vice-Presidents, W. W. Johnston, M. D., and Joseph Taber Johnson, M. D.; Recording Secretary, C. H. A. Kleinschmidt, M. D.; Corresponding Secretary, Samuel S. Adams, M. D.; Treasurer, George Byrd Harrison, M. D. This young and vigorous society includes in its membership the best professional talent of the capital, and its proceedings are valuable contributions to the literature of obstetrics and gynecology.

DR. SULLIVAN, in his address as President of the Canada Medical Association, spoke on the subject of homœopathy and the question of ethics. He also gave a history of the medical act of Ontario, which will be interesting to us all. After referring to the deplorable condition of affairs which existed prior to 1874, when the present law took effect, he said:

"The great evil which afflicted the profession was the ease with which doctors of all kinds were made, and it was primarily with a view to correcting it that overtures were made the homœopaths. In the midst of the dismal and unpropitious surroundings, it was seen that the profession must 'stoop to conquer,' and despite the opposition of the schoolmen and the forebodings of many, the 'regulars,' 'irregulars' and 'defectives' united, and agreed to erect a common standard on the subjects of anatomy, physiology, chemistry, botany, jurisprudence, and certain parts of surgery and midwifery, to which the medical act upon which they agreed obliged all, regardless of their views on therapeutics, who might subsequently enter the profession, to conform. The one portal was thus opened for all, and all other doors were closed. The result has been a condition of affairs in Ontario for which 'the United States sigh in vain, and for which England is struggling.' A higher grade of men and fewer of them are coming into the profession to take the places of those who, in the natural course of time, are obliged to drop out of the ranks, and (a result quite unlooked for) homœopathy, eclecticism and the various other isms have quite disappeared. When young men find it not less difficult to become homœopaths and eclectics than to become 'regulars,' they have almost invariably graduated as 'straight' physicians, without deviousness or irregularity. In Canada they have no code of ethics, the profession trusting to the amenities which should exist between gentlemen to protect each in his rights. Not to the Hindoo alone is loss of caste a penalty, and the lopping off of a member of a medical society for unprofessional conduct has a mighty effect on professional morals. In spite of the 'No code' which prevails across the border, the Canadian profession are not such an objectionable lot of men. Of course they consult with homœopaths, but barring this they compare very favorably, both as gentlemen and as scholars, with the profession of this country."

This calls to our minds the recent fight in this State, when those who desired to advance the standard of medical education were ignominiously defeated. Be it said to the honor of the homœopaths that they were on the side of right. Who, then, did defeat the proposed advance? The very men who cry, "Give us advance in medical education"; men who cry "quack" and "irregular," and are yet not only not trying to advance the standard, but openly fight this advance by raising objections to every conceivable plan which can be made. It is time for us to act. As it will be remembered, the subject was before the State society last year, and referred to a committee which will never report, or, if they do, will never report any bill which will at all strike at the evil which now exists. It would be well for the Erie county society again to take action and bring the matter before the legislature, and not wait for the State society, which, as we all know, is not in the least a representative body. When we have a bill such as Canada, such as Germany has, we will soon see, as it did in both of these, that all sectarianism will die. We sincerely hope that the medical schools in the State will soon realize their folly in opposing legislation, which, in the end, could only benefit them. If a medical faculty were established, it could only do good to medical schools of high standing, but it would prevent the poor schools sending their illiterate graduates into this State to compete, and that too often successfully, with men educated at our own schools, and who are well prepared for work. Every medical school in this State should have in their charter, as the Niagara medical school has, a provision for a three-years' course. Then, by establishing a medical faculty who would examine all who desire to practice in this State, our own graduates would have nothing to fear, and outside schools would be prevented from sending their graduates into this State to practice unless they were well educated. Let us hope and work that the standard of medical education in this State will be advanced this winter.

We learn that Dr. Frederick Peterson, of this city, has been appointed, after a severe competitive examination, to the position of Assistant Physician at the Poughkeepsie Insane Asylum. Dr. Peterson has demonstrated, through diligent study, his fitness for the highest professional honors. Such have been conferred upon him in this city, and he has ably met the highest expectations of his many friends. In the new field of labor upon which he is soon to enter, we are confident he will, with marked ability, meet its requirements and do honor to the profession and to the city which, in the past has fairly acknowledged his intellectual power and his professional attainments, and from which he bears an enviable record for scientific research and the best wishes of the medical fraternity.

The Committee on Organization of the next International Medical Congress, which is to be held in Washington, D. C., in 1887, has been constituted, as follows: Drs. Austin Flint, Sr., New York; I. Minis Hayes, Philadelphia; Lewis A. Sayre, New York; Christopher Johnson, Baltimore; George J. Englemann, St. Louis; J. S. Brown, U. S. Navy; J. S. Billings, U. S. Army.

Dr. Lawson Tait has returned to his home across the waters, and Dr. W. S. Playfair, author of an excellent text-book on midwifery, is now visiting America. Dr. Emmet, of New York, gave him a reception on Sept. 26th, memorable for the unusually large number of representative men who were gathered together from that city and vicinity.

Dr. Thomas R. French, of Brooklyn, N. Y., photographs the larynx, and obtains pictures of great clearness. The process can be used, it is claimed, with untrained patients. It is, as the *N. Y. Medical Journal* truly says, "a distinct advance in the demonstration and recording of laryngeal affections."

THE Third International Otological Congress was held at Basel, Switzerland, from September 1st to 5th. The work of the Congress was of an original and interesting character.

Reviews.

The American System of Practical Medicine. By WILLIAM PEPPER, M.D., LL.D., Provost and Professor of the Theory and Practice of Medicine and of Clinical Medicine in the University of Pennsylvania, assisted by LOUIS STARR, M. D., Instructor of Diseases of Children at the University of Pennsylvania. In five imperial octavo volumes, containing about 1,000 pages each, with illustrations. Volume I. ready February 1, 1885; the other volumes will follow at intervals of about four months. Price per volume, cloth, $5.00; leather, $6.00; half Russia, $7.00.

No physician in America is more thoroughly qualified for the responsible editorship of such a work than Prof. Pepper, and we are confident that the work will be one of which the profession in America will be justly proud. The first volume will appear about February 1, 1885, and the succeeding volumes rapidly thereafter. We predict that the work will immediately take rank above any of the foreign encyclopædias or systems of medicine. The publishers may well feel proud in announcing this magnificent work. For three years it has been in active preparation and it is now in a sufficient state of forwardness to justify them in calling the attention of the profession to it as the work in which, for the first time, American medicine will be thoroughly represented by its worthiest teachers, and presented in the full development of the practical utility which is its distinguishing characteristic. A reference to the published list of contributors, shows the generous rivalry with which the most distinguished men—from the East and the West, from the North and the South, from all the prominent centres of education, and from all the hospitals which afford special opportunities of study and practice—have united in bringing together their vast specialized experience.

A Text-Book of Practical Medicine. Designed for the use of Students and Practitioners of Medicine. By ALFRED L. LOOMIS, M. D., LL. D., Professor of Pathology and Practical Medicine, Medical Department University of the City of New York. With 211 illustrations. New York: William Wood & Co.

The national reputation which Dr. Loomis enjoys would alone ensure the success of this book, but even a somewhat hasty examination of it assures us that his work does not need the prestige of a great name. Independent of the author's reputation, the book would command a position as one of the very best of its kind. The skill and learning of a great clinician are manifest in every part of the book. The author states that it is practically a revision and elaboration of his lectures, given during the last eighteen years, and it bears the marks of that origin, not only in its direct and practical bearings and the business and vigor of its style, but also in drawing the outlines of general principles in a dogmatic way, avoiding all discussion of unsettled questions. The abundance of illustrations representing the morbid changes and objective symptoms of disease is a commendable peculiarity of the book. The publishers have presented it in most attractive form, and we believe it is destined to be the most popular work in practical medicine yet published.

A Practical Treatise on Fractures and Dislocations. By Frank Hastings Hamilton, M. D., LL. D., late Professor of Surgery in Bellevue Hospital Medical College, etc. Seventh American edition, revised and improved. Illustrated with 379 wood-cuts. Philadelphia: H. C. Lea's Son & Co. 1884.

Dr. Hamilton's classical work needs no introduction, as it has held its own in professional favor throughout the last twenty years. It is sufficient to say that this last edition gives evidence of having been revised with elaborate care by its distinguished author. Beside the numerous additions drawn from his more recent personal experience, he has brought together a great number of the more lately recorded facts and observations

relating to his subject. This edition is thereby considerably enlarged and proportionately increased in value. This admirable edition of the work ensures its continued recognition as the most complete and practical treatise on the subject. With regard to the mechanical execution of the work, we could not suggest an improvement. The illustrations are admirable and abundant.

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 Graduates in Medicine. With two colored plates. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut St. 1884.

We are glad to welcome his little book of Dr. Van Harlingen. As a clinical teacher, those who have enjoyed his instructions know how thorough and painstaking he is. The book is, in its arrangement and practical bearing, peculiarly fitted for the general practitioner, and a careful perusal of it would save many physicians from maltreating cases of skin diseases which present themselves to them.

The Physician's Visiting List (Lindsay & Blakiston) for 1885. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut street.

With the approach of '85 the usual number of physicians' visiting lists are offered to the profession. The majority, however, hold to this old favorite, which, for thirty-four years, has appeared and which seems to flourish upon the competition. In our own opinion there is none better.

A Compend of Organic and Medical Chemistry: Including Urinary Analysis and the Examination of Water and Food. By HENRY LEPPMANN, M. D., Professor of Chemistry and Metallugy in the Pennsylvania College of Dental Surgery, etc. Philadelphia: P. Blakiston, Son & Co. 1884.

The aim of this little book is to present a sufficient outline of organic and medical chemistry to serve the purposes of the medical student. It is as valuable as such compends usually are.

THE

BUFFALO

Medical and Surgical Journal.

Vol. XXIV. JANUARY, 1885. No. 6.

Original Communications.

Cocaine Hydrochlorate Anæsthesia.

By A. A. Hubbell, M. D.,

Professor of Diseases of the Eye, Ear and Throat, in the Medical Department of Niagara University.

The discovery that a solution of cocaine hydrochlorate applied to certain parts of the body will render them insensible to pain, has, during the past few weeks, aroused the medical profession, especially its ophthalmological branch, to a degree of interest and enthusiasm unequalled in intensity since the introduction of general anæsthesia.

A local anæsthetic has been a great desideratum from the earliest history of surgical practice to the present time, and has been sought with poor success. Various appliances, agencies and drugs have been recommended and tried, such as heat, cold and caustics, but all have been so irritating and destructive that they have, at most, received very meagre and doubtful favor.

With the promise, then,—aye, with the acquisition of an agent that will answer, in a measure, at least, the great desire of ages in producing a local anæsthesia of even a part of the tissues of the body, no irritation, inflammation or pain following its use, naught could be expected from medical men but the most eager

attention and interest, leading to great activity of experiment and the up-lifting of many voices in its praise.

It was on the 15th of September last, that Dr. Charles Koller, a young physician of Vienna, through Dr. Brettauer, of Trieste, presented to the Heidelberg Ophthalmological Congress a short paper on "The Local Anæsthesia of the Cornea and Globe by Means of Cocaine." Following the reading of the paper, the properties of the cocaine hydrochlorate were demonstrated upon the eyes of patients from Prof. Becker's hospital. Various reports of the congress were sent to different parts of the world, and each referred especially to Dr. Koller's observations and the cocaine experiments. Dr. H. D. Noyes, who was in attendance, was the first to herald the new discovery to the American profession through a communication to the *New York Medical Record*, which was published in its issue of October 11th. Dr. Noyes, at the same time, addressed a letter to Dr. Edward R. Squibb, of Brooklyn, N. Y., and asked him to place some cocaine hydrochlorate in the hands of Drs. C. S. Bull, of New York, and A. Mathewson, of Brooklyn. Dr. Mathewson was out of town. Dr. Bull received a sample of the preparation on October 7th, and on the following day, October 8th, used it upon the eye for the first time in America, producing anæsthesia of the cornea and removing a cinder which had become imbedded in it.

When Dr. Koller's brief, but immortal, paper was read, only two weeks had elapsed since he began his observations with cocaine hydrochlorate. He was led to make his experiments by a knowledge of its benumbing effects upon the tongue and mouth, and of its application, during the past year, by laryngologists to the vocal cords and contiguous parts, whereby these were so deprived of their sensibility that they could be handled and treated with comparative ease and comfort.

It appears that Dr. Koller began his experiments in the laboratory of Prof. Stricker. He used a solution of the same strength as that which laryngologists had used, namely, two

per cent., and applied it first to the eyes of animals. He found that when dropped or brushed upon the cornea and conjunctiva it soon produced such a degree of insensibility of these structures that they could be pinched, scratched, torn or cut without the animals showing evidence of pain. He also noticed that no irritation was caused by the drug itself. He next applied it to his own eyes, and afterwards to those of other persons. The results of his brief experience, as given in his paper, may be thus summarized: 1. The strength of the solution was two per cent. 2. A few minims of this dropped into the conjunctival sac rendered the cornea and conjunctiva completely anæsthetic in from ten to fifteen minutes. 3. The anæsthesia lasted ten minutes. 4. There was slight mydriasis, which lasted a couple of hours. 5. There was some paresis of accommodation for a short time. 6. No irritation or pain followed the applica- of the solution, except a trifling smarting or burning for the first few seconds. (See *London Ophthalmic Review* for October.)

Since Dr. Koller presented to the profession the results of his experiments, Dr. Kœnigstein has come forward with claims to priority in the discovery of the properties of this drug. He stated, at a meeting of the Society of Physicians of Vienna, held October 17th, that simultaneously with, but independently of Dr. Koller, he had made experiments with cocaine applied to the eye, using a one per cent. solution of the hydrochlorate, and with much the same results as those obtained by Dr. Koller. He began his experiments towards the end of August at the suggestion of Dr. Freud, making them first upon himself and the members of his family, then upon his acquaintances, and subsequently upon a number of patients in the ward of Dr. Scholz in the Vienna General Hospital. (See *London Medical Times* for Nov. 8th.)

Upon Dr. Koller, however, must rest the honor of the discovery of the cocaine anæsthesia of the cornea and conjunctiva, and of first directing the attention of the medical profession to it.

As soon as Dr. Noyes' communication was published in the *Medical Record*, I at once procured a very small quantity of a two per cent. solution of the cocaine hydrochlorate from New York, and with it I was enabled to perform several operations upon the eye and ear without pain, a few drops having been applied to the parts two or three times at intervals of five minutes. A short time afterwards, having received a larger supply of a four per cent. solution, together with a quantity of the crystals, I had the pleasure of demonstrating, clinically, its anæsthetic properties by performing several operations painlessly upon the eye, before the medical class of Niagara University and a number of medical gentlemen whom I had invited to be present. The operations at this time included excision of a pterygium with a closure of the conjunctival wound with three sutures, tenotomy of the internal rectus muscle for convergent squint in a boy twelve years old, and two Bowman's operations (slitting up the lower lachrymal canaliculus), followed by probing of the lachrymal passages in a nervous old Irish lady. Each patient declared that there was no pain in the operation, and both spectators, patients and operator were delighted with the unmistakable and positive anæsthetic effects of the cocaine hydrochlorate there exhibited.

I have now performed a large number of operations upon the eyes of patients under its influence, using, for the most part, a four per cent. solution, instilling a drop or two of it every five minutes, till three applications have been made, when, in five minutes more, anæsthesia of the cornea and conjunctiva has generally been complete. In some patients, two applications have been sufficient, while in two or three the fourth one has seemed necessary. No unpleasant feeling attends the instillations, except occasionally a slight smarting or burning for a few seconds, and the anæsthesia lasts about fifteen to twenty minutes.

My patients have varied in age from ten to seventy-nine years, and in temperament from mild and quiet to very nervous and excitable. Many of the operations have, in themselves,

been painful. But, with the aid of the local anæsthesia, I have conducted them, in every instance, without being disconcerted in any manner by the patient and without inflicting any suffering or pain. The operations have been quite varied, and include removal of foreign bodies imbedded in the cornea, cauterizing indolent corneal ulcers, tapping the anterior chamber, performing iridectomies, manipulation by Förster's method for artificially ripening cataract, extraction of senile cataracts, discission of congenital and secondary cataracts, strabismus operations, excision of pterygiums and closing the wounds with sutures, excision of a polypoid growth from the caruncle and semilunar fold, slitting up the lachrymal canaliculi, passing the lachrymal probes, and some other procedures, the anæsthetic in every case annihilating, entirely, the pain ordinarily present without its use. In performing Bowman's operation and probing the nasal duct, I have followed the slitting up of the canaliculus with an injection of a few drops of the solution into the lachrymal sac and pressing it as far as possible into the nasal duct. After a few minutes I have introduced large probes without distress. In strabismus operations I have carried two or three drops beneath the conjunctiva to the insertion of the muscle to be cut, after making the opening through the already anæsthetized conjunctiva.

I have used both two and four per cent. solutions, but principally the latter, since it has been more rapid and deeper in its effects. Besides the anæsthesia of the cornea and conjunctiva, I have noticed early, but not complete, dilatation of the pupil and partial loss of accomodation. I have also observed that the conjunctiva has appeared distinctly pale and anæmic, while the anæsthetic influence continued, and that it bled less than usual when cut. No irritation has attended or followed its application.

Each case in which I have used this substance has had a special interest to me; but there is such a sameness in the manifestations of its effects and properties in different persons that to relate several cases would be unprofitable. I will, how-

ever, detail a little personal experience which it has been my privilege to obtain.

On November 18th, I arose from bed in the morning with a sensation of a foreign body in my left eye. I was unable, however, to find anything, and yet I could not get relief from my distress. At about 3.30 P. M., I called on my friend, Dr. F. W. Abbott, of this city, who upon examination found a minute "speck" imbedded in the cornea near the centre of its anterior surface. He made several attempts to remove it without success, first with a sharpened stick and then with a cataract needle. The moment the cornea was touched an uncontrollable spasm of the ocular and orbicular muscles took place which entirely disconcerted his movements. There were also profuse lachrymation and a severe reflex spasm of the tympanic, Eustachian and palatal muscles, accompanied by a distressing tinnitus. After these fruitless efforts, it was suggested to try the cocaine hydrochlorate, when a couple of drops of a two per cent. solution were applied to the cornea. Immediately there was a slight burning or smarting which lasted but a few seconds. In two minutes the lachrymation, pain and spasm of the muscles of the eye and ear began to cease, and in three minutes the eye was entirely at ease in every respect. In four minutes two drops of a four per cent. were instilled, and in five, the doctor removed the foreign substance without any sensation whatever, except the *sound* of the "click" of the instrument, and the *sight* of the vibrations of the lamp-light concentrated upon the cornea with a lens. Neither was there any lachrymation or reflex spasm.

In about seven minutes after the instillation the pupil began to dilate, and the accommodation began at the same time to diminish. In twenty minutes the pupil was dilated to about two-thirds its full extent, remaining in this state and not contractile on exposure to light for four hours, when it commenced to diminish in size and was nearly normal in eight hours. The accommodation was affected but little; began to return in two hours and had nearly regained its full power in six hours.

In a few cases I have used the cocaine hydrochlorate, four per cent. solution, in the ear. One case was that of a polypus, which I removed painlessly. In most instances the instillations into the auditory canal have been for aural pain and tinnitus, in which, however, the results have been negative. But in removing polypi, applying caustics, incising the membrana tympani, etc., I have no doubt that it will prove equally as potent in saving pain as in operations upon the eye.

When applied to the mucous membrane of the throat and nose, I find the anæsthetic effects positive and pronounced.

With such an interesting and satisfactory experience with this substance, I can but speak of it in terms of highest praise. I find it of the utmost service in nearly all operations upon the eye and in many upon the nose, throat and ear. It is *pre-eminently useful in cataract extractions*, as the absence of pain enables the patient to submit to the operation without agitation or movement, and there is no danger of rupture of the vitreous from the vomiting which might follow the administration of chloroform or ether.

The forms in which cocaine may be used may vary. Thus far the solution of the hydrochlorate has been principally employed, but solutions of its other salts are said to be equally as good. I have not yet known of triturations being prepared, but see no reason why these may not be eligible under certain circumstances. Dr. Squibb has recently suggested that it may also be used in the form of an oleate, as the cocaine readily unites with "oleic acid and forms a true salt." The facility with which the oleates are absorbed by the skin and the depth to which they may possibly penetrate, give, theoretically, great promise for the use of such a preparation in the relief of local pain. (*Ephemeris* for November.)

The strength of the preparations may range from two to twenty per cent. and may need to be varied according to certain peculiarities of the parts, or conditions or idiosyncrasies of patients. I have found, as already stated, a four per cent. solution suitable for anæsthesia of the cornea and conjunctiva.

The solutions should also be fresh, as the anæsthetic properties seem to be destroyed by very slight changes. A four per cent. solution in my possession became so changed at the end of three weeks that I was unable to produce anæsthesia of the cornea and conjunctiva with it, although it dilated the pupil early and rapidly as before. This failure occurred in several cases; but in the first one it was particularly annoying. It was the case of a boy thirteen years of age on whom I was about to do a second operation for discission of congenital cataract. I visited the patient at his home and carried with me only the old solution which I had previously used upon him and upon others with success. On instilling it into his eye, he complained of considerable smarting, but I paid little attention to it and continued the instillations every five minutes as usual. At the end of fifteen minutes I tested the sensibility of the conjunctiva and found it was not diminished. The solution was continued freely every five minutes for half an hour, but without any anæsthesia whatever. I then postponed the operation for twenty-four hours, when I applied to the eye a fresh solution of the same strength, twice, at an interval of five minutes. At the end of five minutes more the cornea and conjunctiva were examined and found insensible. The third instillation was then added to make "surety doubly sure," and in another five minutes I proceeded to incise the anterior surface of the lens, the child declaring that he "did not feel anything."

On examining the old solution, it was "musty" to the smell, turbid in looks, and, under the microscope, showed fungous growths and other evidence of decomposition.

The failures of an old solution to produce anæsthesia, as with a fresh preparation, indicate the instability of the anæsthetic properties of cocaine, and show how easily they are lost, although its mydriatic action remains. Is it not possible that the reported failures to obtain the anæsthesia may be attributed to decomposition or other changes of the cocaine solution?

Cocaine preparations may, possibly, be protected from decomposition and change by incorporating some antiseptic. Dr. Squibb suggests preparing solutions of any desired strength with equal parts of water and a cold saturated solution of salicylic acid, which will, he thinks, remain clear and free from microscopic organisms for an indefinite period of time. The solutions so protected he believes may be used without causing perceptible irritation.

Solutions may be applied in different ways, using a brush, a pipette, a syringe, paper or other material saturated with it, or, what seems to me most suitable for the eye, ear, nose and throat, a small and delicate spray, and especially since its high price makes economy in its use a matter of consideration.

My own interesting and most satisfactory experience with cocaine hydrochlorate, both upon myself and my patients, permits me to speak of it only in terms of confidence and commendation. I would not, however, lead my readers to believe that I can see only a bright side to its use, for I do recognize a dark side. In the first place, it may affect different persons in a different manner, possibly failing entirely in some. Secondly, when taken into the system in too large quantities it may produce unpleasant and toxic effects.

Just how much cocaine is necessary to produce toxic symptoms has not yet been fully determined. According to some experiments by Dr. R. J. Hall, of New York, upon himself (*New York Medical Journal* for December 6th), twenty minims of a four per cent. solution of the hydrochlorate (about four-fifths of a grain), could be taken hypodermically without constitutional effects; but a hypodermic injection of thirty-two minims of the same solution (about one and one-fourth grains), induced giddiness to the extent of his being unable to walk without staggering, quite severe nausea, cold perspiration and dilatation of the pupils. The nausea passed off in about twenty minutes, and the dizziness in about an hour and a half. The possible unpleasant effects of doses of more than one grain must, therefore, be borne in mind.

The experience of myself and that recorded by others has not only most fully corroborated the results of Dr. Koller's original observations, but it has also extended the range of application of cocaine anæsthesia far beyond the cornea and conjunctiva, till it is now used upon denuded surfaces and mucous membranes of all accessible parts of the body, and is also carried through wounds and by the hypodermic syringe deeply into tissues beneath the surface. When thus introduced beneath the skin, it destroys the sensibility of all the parts with which it comes in contact, and when it reaches the trunk of a sensitive nerve the branches of it given off beyond the point of contact are rendered more or less completely anæsthetic.

Thus cocaine may be made to reach and affect many parts of the body, and may be put to an infinite variety of uses. It may be used to allay the pain of many diseases and operations, and to assuage the throes of certain stages of child-birth by applying it to the perineum and labiæ. By using it hypodermically, even quite formidable operations can be executed with little suffering, the cocaine being thus applied directly to the parts to be cut. In this way, the eye-ball can be enucleated, tumors removed, and a variety of operations performed, it being only necessary to remember to restrict the amount introduced within the limits of safe dosage.

Since the time of the first discovery of an alkaloid of the coca-leaf (erythroxylon coca), by Gædeke, in 1855, and independently by Dr. Samuel R. Percy, of New York, in 1857, which both named "erythroxyline," and again extracted and studied by Albert Nieman, of Goslar, Germany, in 1860, who gave it the name "cocaine," this substance and all its salts have been regarded principally as chemical and pharmaceutical curiosities and treated with great indifference by the profession. But suddenly, through the wit of a Vienna medical gentleman, it rapidly attains a most distinguished position, and the whole medical world arises in profound astonishment and wonder at its mysterious power. Its properties are so unique, its effects

so simple and yet so positive, so free from annoyances and extraneous symptoms, and its action so generally uniform in character that it at once commands the admiration and confidence of all.

All honor to Charles Koller! But why should this discovery have awaited him? The anæsthetic effects of this alkaloid were hinted at by Percy and Nieman, and by subsequent writers. Moréno y Mäiz, in 1868, and Von Anrep, in 1880, stated that cocaine injected under the skin abolished the sensibility of the part. Rossbach and Nothnagel in their *Materia Medica*, 1880. referred to its "local anæsthetic effect on mucous membranes." Von Anrep applied it to the conjunctiva and observed that it dilated the pupil, but did not notice that it diminished the sensibility of the parts. Freud had also referred to the local anæsthesia by cocaine. Certain laryngologists of the continent, acting upon the published statements of those who had studied the subject, had, during the past year, produced anæthesia of the throat. But it still remained for Koller to clearly determine and demonstrate to the medical profession its distinctive properties of anæsthesia, and for him to become the distinguished discoverer of one of the most potent agencies for the local relief of suffering and the removal of the distressing apprehensions of pain in operations that has ever been added to our materia medica. Cocaine may have other excellent virtues, but it seems to us that its anæsthetic properties alone are sufficient to place it among the first in the list of drugs powerful to bless mankind.

Sanitary Advantages of the Electric Light.

By F. R. Campbell, M. D.,

Lecturer on Hygiene, Medical Department, Niagara University.

The ventilation of public halls, churches and theatres is a matter of the greatest importance from a sanitary point of view. These places are generally used in the evening, when not only

respiratory impurities, but, also, those derived from the combustion of illuminating gas vitiate the air. In devising methods of ventilation, impurities due to this latter source are seldom thought of, only the exhalations of the human body being taken into consideration. In reality, however, the products of combustion are almost, if not quite, as abundant and injurious as those of respiration. These should either be removed by the introduction of better systems of ventilation or avoided by the employment of the electric light, which neither consumes oxygen nor produces impurities.

In order to prove the advantages of the electric light in these places it will be necessary to state the evils of illumination by gas. A man exhales about six-tenths of a cubic foot of carbon dioxide in an hour. An ordinary small gas burner will give off four times that amount in the same time. To maintain the air of an enclosed space at the proper degree of purity, containing not more than six parts of carbon dioxide in 10,000, there will be required 3,000 cubic feet of air per hour for each individual and four times this amount for each gas burner, if the chandelier is not placed under a dome ventilator, a thing seldom done in churches and public halls. A church seating six hundred persons, lighted by one hundred and fifty gas burners, for example, produces as much carbon dioxide as the congregation itself. To change the air of such a place in cold weather with sufficient rapidity with any ordinary system of heating and ventilation, would be next to impossible, and the impurities will necessarily become exceedingly great, sometimes being nearly sufficient to extinguish the lights. In theatres the principal lights are usually placed in a ventilating dome, much of the impurities being thus removed. Besides, the lights burn low during the acts and the oxy-hydrogen light is now frequently used to illuminate the stage. But the cubic space allowed to each individual is usually less than in the church, which makes it all the more necessary to introduce a light producing no impurities.

Besides the carbon dioxide emitted by the gas burner, there is generally carbon monoxide, a far more injurious substance. This gas is found in considerable proportions, 7.85 per cent., in nearly all illuminating gas, and is not all converted into dioxide by combustion. Dr. Richardson says, in his recent work on preventive medicine, that this gas, diffused in small quantities from the burners in the air of badly ventilated rooms, is a frequent cause of dyspepsia, nervous disease and even diabetes mellitus. Moreover, the gas burner consumes oxygen and tends to overheat the atmosphere of a room. On this account it frequently becomes necessary in winter to restrict the amount of heated fresh air that can be admitted through the registers, and in summer the room, in a short time, becomes uncomfortably warm. The electric light, on the other hand, consumes no oxygen and produces very little heat. The danger of fire is also diminished by the use of the electric light.

Hitherto the great objections to the electric light have been its irregularity and the difficulty of controlling its intensity. These objections are valid with the Brush light, but will hardly apply to the Edison and Swan lights, where a platinum wire in a vacuum is the means of illumination. Even the Brush light is quite steady when used within doors, the great objection to its use in theatres being the inability to control its intensity. This difficulty is now overcome by using movable shades of varying translucency, so that the light may be diminished without attempting to alter the electric current. This method has been applied with success in London theatres, where the Swan light is used, a clear, manageable light being obtained with none of the injurious effects of gas. In Buffalo we have only the Brush light, but even this has been introduced into one of our theatres (Court street), thus diminishing but not avoiding the combustion of gas.

The Brush light undoubtedly produces ozone. This we have proved by actual experiment. Test papers of starch and potassium iodide were employed and the experiments conducted in a

store on Main street where three Brush lights are used. The papers, when placed over the lights, rapidly became blue from the liberation of iodine by ozone. The same papers became blue, it is true, when placed outside, but not so rapidly nor so markedly. We attributed the change in the papers, when not exposed to ozone, to impurities in the potassium iodide. The production of ozone by the Edison and Swan lights is not so evident, for in them we have no electric spark passing through the air. If the test papers were not placed in the air above the light they changed no more rapidly than those outside the room. This we attribute to the fact that ozone attacks organic matter and becomes destroyed, thus purifying the atmosphere. With the recent improvements in electric lighting we may confidently expect to see the use of gas supplanted by electricity in all places of public worship and amusement.

Society Reports.

Buffalo Medical and Surgical Association.

Adjourned Meeting Nov. 11, 1884.

President, F. W. Bartlett, in the Chair.

The minutes of the last meeting were read and approved.

The subjects for the evening being reports of cases and voluntary communications, Dr. Wetmore brought forward a little girl of Irish parentage, aged five years, who had a nævus covering the most of her face from forehead to chin, and upon which there grew an abundance of hair. The nose was flattened, the eyebrows bushy and grown together, and, upon the whole, the child had rather a Simian appearance. The doctor dilated upon the varieties of the nævus vasculosus, the venous, capillary and arterial. This he said was hardly of either class, for here the pigmentation was remarkable, and also the morbid condition of the hair follicles. The mother has had two children since, who

are perfect. The mother says the cause of this was a fright by some masked boys in the fifth month of pregnancy. The doctor believed the cause of these malformations to be impressions upon the fœtus in utero by the emotions of the mother. He thought careful dissection might remove much of this deformity, and a cicatrix would be less unsightly.

Dr. Cronyn felt that he must say something about this subject. He had seen the child when smaller. As to the relation between maternal emotions and birth-marks, there was a wide difference of opinion. The coincidences were not sufficient to warrant such a conclusion, scientifically. It is an inexplicable lusus naturæ. As to treatment, dissection of the skin was the only means. The child would never become intelligent, nor would it seem to belong to the human race.

Dr. Hayd mentioned a case where there was a similar nævus upon the back, but having the shape of a mouse. The mother said it was caused by being frightened by a mouse during her pregnancy.

Dr. Hubbell also thought the etiology at present inexplicable. In the treatment by dissections, there will be considerable contraction, and serious deformities may be produced, especially of the eyelids. Transplantation of skin should be added.

Dr. Stockton thought the thanks of the association due to Dr. Wetmore for exhibiting so instructive a case.

Dr. Montgomery also believed transplantation of skin would be necessary in such an operation.

Dr. Bartlett was sure the cicatrization at the completion of the operation would be worse looking than the nævus as it was, and doubted the propriety of an operation.

Dr. Wetmore stated that he would dissect off a very small portion of the skin at the time and scrape off epithelium from the arm to place upon it. He had thought some of using Squibb's cantharidal collodion, and also of several depilatory powders, containing chloride of zinc, etc. He has known these last to be successful. As to causation, he knew that Dr.

Cronyn would oppose the theory of maternal emotion. But many others were as strong in their convictions upon his side as he. Consider the functions of the vaso-motor system, which has charge of the vessels and of secretion. Fright or other strong emotion affected this system in different parts of the body. Churchill mentions the case of a mother, who, after a fit of anger, nursed her child, who thereupon died of convulsions. Here the action of the nervous system must have poisoned the milk. He mentioned cases of the hair's turning white after emotions of grief or fear.

Dr. Cronyn said these cases of coincidence of maternal emotions and birth-marks were very much like the alarm of women approaching the menopause. The millions of women who have no trouble at the climacteric period are never heard from, but the few who do are always in mind. He could see no analogy in the whitening of hair and the appearance of these nævi upon the body. The doctor took exception to the case quoted as from Churchill. The cause of the convulsions was not poisoned milk. There was no milk. The child sucked at the breast in vain, until an excess of gastric juice produced in it gastromalacia. He had known of two such cases in which he had been able to verify his diagnosis by post mortem examination. The vaso-motor influence was sufficient to stop the secretion of milk and turn the hair gray.

Dr. Bartlett asked Dr. Cronyn if any operation upon the jaw, such as the pulling of a tooth, during pregnancy, would produce hare-lip in the child.

Dr. Cronyn answered no. Indeed, if there was severe toothache, he would pull the tooth out to prevent abortion.

Dr. Hubbell stated that in twelve years of practice he had extracted teeth in pregnancy many times without causing harelip in the children.

Dr. Wetmore thought emotions, as a rule, increased secretion, as in hysteria the renal, and did not stop it. What if the milk were already in the breast before the fright?

A member said it would be re-absorbed.

Dr. Coakley asserted that physiology has established the fact that in emotions the secretions are augmented. It was manifestly so with the lacteal under the influence of the emotions of joy, grief, etc. He believed the milk in the tubes could no more be re-absorbed than urine from the bladder. He thought one took a peculiar position who said milk could not produce, in the nursling, great effect, such as diarrhœa, convulsions, etc. But he was sure that maternal emotions did not influence children in utero to cause malformations.

Dr. Cronyn knew that Dr. Coakley could not have got up to refute anything he had said, for he had not done so. He believed, with Dr. Coakley, also, that nerves have a great influence upon the breast.

Dr. Hayd thought Dr. Coakley right as to the breast. He believed the milk could not be re-absorbed.

Dr. Peterson said he could not see the analogy drawn by Dr. Coakley between the mammary gland and the genito-urinary system. Why did the doctor say urine could be absorbed by the bladder as easily as milk by the breast? The urine was not secreted in the bladder, but the epithelium in the whole extent of the tubuli lactiferi was capable of secreting milk. Why could not the fat and serum of milk be re-absorbed by the mammary epithelium, as well as gastric juice by the gastric epithelium or fat by the lacteals?

Dr. Stockton said the point of discussion had been forgotten. It was, can the milk of the mother poison the child? He believed it could not.

Dr. Cronyn again referred to the action of the gastric juice upon the walls of the stomach. He said that it was now an established fact in English law that most sudden deaths of children in bed, hitherto supposed to be due to the overlying of the mother, were really caused by this process of self-digestion in the stomach in gastromalacia.

Dr. Bartlett did not believe in the influence of maternal emotions upon the child in utero in connection with deformities. He mentioned two cases of premature development of teeth in children, with early union of sutures and supernumerary toes and fingers.

Dr. Cronyn spoke of cases of children born with teeth. He knew of one colored child with twelve teeth at birth. All such cases die soon after.

Dr. Wetmore asked: "How about Cæsar?"

Dr. Cronyn said Richard Cœur de Lion was an exception, but he did not remember that Cæsar was.

Dr. Montgomery mentioned the case of a lady, now twenty-four years of age, very frail and delicate, who had all her first teeth before she was eight months old. Her physicians said she would not live after puberty.

Dr. Cronyn spoke of a brother of his, aged sixty years, who had never lost a single tooth in his life.

Dr. Bartlett called attention to thumb-sucking. Recently he visited a lady, who, though twenty-six years of age, could not see him, because she was in the other room sucking her thumb. The thumb had now the appearance of a bird claw.

Dr. Stockton related the history of three generations of hereditary supernumerary toes.

Dr. Hubbell brought up the subject of the new local anæsthetic, muriate of cocaine. He gave the history of its discovery and subsequent uses, as related in recent medical journals. It has its anæsthetic effect upon the eye and mucous membranes, and, in fact, wherever it comes in contact with the nerves. He had used it himself in removing a polypi from the ear, in Bowman's operation, and in removing foreign bodies from the eye, with excellent success. Two drops of a two per cent. solution, repeated at intervals of five minutes, is sufficient. He thought the remedy had a wonderful future.

Dr. Barnes wished to say a few words with regard to osseous tuberculosis, upon which subject Dr. Park had spoken at the

last meeting. Dr. Sayre teaches that hip-joint disease is mostly of traumatic origin. Dr. Park had asserted that Dr. Sayre knew nothing about it, but had ridden into fame upon extension and fixation. Dr. Park had stated that American and English surgeons would not accept the tubercular theory because they were obstinate. The speaker believed extension and fixation one of the most important contributions to medical science. We would have to reconcile the cure of hip-joint disease by this means with the idea of tubercular causation.

Prevailing Diseases—Dr. Cronyn reported sore throat, diphtheria, scarlet fever, tonsillitis and measles; Dr. Barnes, malarial diseases; Dr. Stockton, remittent fever of a peculiar type; and Dr. Bartlett, dysentery.

The meeting then adjourned.

FREDERICK PETERSON, *Secretary.*

TRANSACTIONS OF THE BUFFALO OBSTETRICAL SOCIETY.

Stated Meeting, Nov. 25, 1884.

The President, Dr. W. W. Potter, in the Chair.

On invitation of the President, Dr. George E. Fell led a discussion on "The Value of the Hot Vaginal Douche in Pelvic Diseases."

Dr. Fell first called attention to the wide range of therapeutical application of heat and cold. By cold is meant a temperature below 26° C.; and by heat a temperature between 30° and 80° C. The physiological action of the warm bath—69° to 73° C.—causes, first, a soothing sensation with quickened pulse and respiration, and a more vigorous condition is temporarily produced through increased oxygenation. If prolonged, however, the stimulation is followed by depression, which is proportionate to the length of time of the immersion. In the hot bath—73° to 80° C.—these conditions follow each other with greater rapidity.

He then quoted from Dr. Ranney's paper, read before the New York Academy of Medicine, the present year, the author being a strong advocate of the beneficial effects of hot water, both as a local application and in its general use by imbibition. Used in the latter way it must be taken as hot as can be drunk, in order to avoid nausea. The functions of the abdominal organs are much improved by the prolonged use of this remedy; the nervous system, also, is favorably impressed, cases of hyperæmia and anæmia of the brain and spinal cord being greatly benefited. Dr. Ranney believes these favorable results are obtained through the influence produced upon the nerves of the stomach, and through them upon the solar plexus; *i. e.*, to a remote influence, upon the vaso-motor nerves or their centers.

Dr. Fell then proceeded to consider the benefits of hot water upon the female pelvic organs when diseased, calling attention to the fact that some of these results might be due to the proximal location of the hypogastric plexus to the uterus and vagina. The patient should be made to assume the dorsal recumbent posture, with the outlet of the vagina higher than its vault, to promote distention of the vaginal canal with the water. The bath should last, say, twenty minutes, and be given two or more times daily. Dr. Mundé recommends the gravity douche, while Dr. Emmet prefers the interrupted stream from a Davidson syringe. The temperature of the water has received much attention. It is best to commence with that of about 74 °C., and gradually increase the temperature until 80° to 85° C. is reached. Among the diseases in which this treatment has been found beneficial may be mentioned amenorrhœa, ovarian dysmenorrhœa, peri-uterine cellulitis, chronic cervical endometritis, metritis, vaginitis, and pruritus vulvæ. The purpose for which the injection is employed is somewhat of a guide to the requisite quantity; if for the toilet, a pint or a quart will suffice; if for disinfection, a larger quantity may be necessary, the flow to be continued until all odor is destroyed; if as an astringent, a

smaller quantity will answer, but it should be retained for some time; if a hæmostatic effect is desired, the temperature should be as high as can be borne, the quantity large and the force considerable. A stimulant, or a tonic effect, can also be produced by varying the force, the amount and the temperature, as will readily occur to the intelligent observer. He concluded with the statement that the use of hot water, in the manner and for the purposes described, was first due to American gynecologists; but it has now become a recognized remedy of great superiority by physicians throughout the civilized world.

Dr. Charles G. Stockton considered hot water indispensable in gynecological practice, and, after using it several years, he was prepared to indorse all Dr. Fell had said in its favor. He believed that cold water, as popularly used, had been the source of much harm to women; but the effect produced, by alternating hot with cold water, might possibly prove beneficial in some conditions. Rapid changes of temperature in this way would increase the tone of the part to which it was applied, but great caution would be necessary in such applications. He regarded it of the first importance to properly place the patient while receiving the injection. His directions in this matter had been so often disobeyed, that he had resorted to various expedients to attain the desired end. Finally, he hit upon the following plan, which served a good purpose: Where the treatment would necessarily be prolonged, a small cot bed, costing about $2.00, is purchased by the patient, which is arranged with leather straps across its center by which the hips could be raised above the level of the rest of the body; a piece of oil cloth and a gravity syringe holding three gallons, arranged to exhaust itself in twenty minutes, would complete the armament. Upon this cot a patient can take her bath in comfort, without the danger of wetting or soiling her bed or linen. He also proposed, when heat and moisture were required for improving the nutrition of the pelvic organs, and hot water for any reason could not be

made available, to introduce into the vagina a rubber tube crowned with sponge, the other end being attached to a steam atomizer. If dry heat was preferred, a gutta percha ball could be substituted for the sponge. He did not offer these suggestions as the result of experience; but, on theoretical grounds, he thought the plan, though crude, would warrant investigation, and believed it possessed considerable merit.

Dr. C. R. Jewett said that the first thing to determine was whether the disease which we propose treating by the method under discussion was acute or chronic, septic or idiopathic. While in chronic inflammations he believed in the use of hot water, in acute conditions more benefit could be derived from cold applications. In acute cellulitis, from any cause, he would apply cold by means of ice in rubber bags, placed over the abdomen. When the cellulitis was due to septic causes he would supplement this treatment with the hot vaginal bath. He believed that when cold was used early, it was capable of controlling any inflammation of the abdominal organs with reasonable certainty. It would produce all the effects which might be expected from the use of hot water, viz., contraction of the blood vessels, thereby diminishing the blood supply. Thereupon would follow a diminution of pain and a reduction of temperature. What more could be expected from hot water? In his opinion the benefits of cold had not been adequately recognized. For example, parametritis could be markedly relieved in from twelve to sixteen hours by its use, and general peritonitis thereby avoided. Certainly, a remedy that possessed such capabilities did not deserve neglect.

Dr. Jewett said he would not, however, be understood as disapproving the use of hot water as, in the main, described by the leader of the debate, in many of the chronic pelvic disorders of women. It promoted involution, and served to provoke absorption of plastic exudates in the pelvic connective tissue. It improved nutrition in many conditions where this was

defective, and, on the whole, had been productive of much good. He then described the apparatus used in the New York hospitals for administering the hot vaginal bath, which consisted of a board placed over the bath tub, fitted with stirrups, and surrounded with a gutter to carry off the water. Upon this the patient could rest and take a bath from a gravity syringe quite comfortably. He had often seen a number of them reading at the same time, which rendered the treatment less irksome by diverting the mind.

Dr. P. W. Van Peyma remarked that, as the clinical effects of the hot vaginal douche had already been so well discussed, he would say a word as to the physiological effects of heat and cold. The latter produces its effects by causing contraction of the arterioles, and, in this way, acts as a styptic; heat, on the other hand, accomplishes the same results, but through its power to coagulate the blood. Hot water acts in chronic inflammations by increasing the migration of cells, thus removing effete matter. In the use of these remedies the length of time of the application is an important factor in the production of therapeutical results; with cold, the application must be continued for a long time in order to obtain benefit, while heat acts beneficially sooner. These physiological effects would indicate the cases, and the particular stages of any given case, in which the one or the other of these agents should be chosen.

Dr. M. Hartwig said he had not given much attention to this subject, but he coincided with Dr. Jewett's views of the application of ice in acute inflammations. He believed strongly in the use of *cold* in all acute and sub-acute inflammations within the pelvic cavity. He would apply it outwardly and inwardly; outwardly by means of pounded ice to the abdomen; inwardly, by introducing the same agent into the vagina. He believed all these inflammations—acute and sub-acute—to be septic in character; consequently cold was the proper remedy, because it retarded the morbid processes which were taking place—

nipped them in the bud, so to speak—if only applied early enough. On the other hand heat quickened these phenomena; wherefore it should be employed only after the inflammation became chronic. In chronic pelvic inflammations hot water was theoretically preferable, its main effects being to hasten the processes of repair in the direction which nature pointed out or desired. Practically in them, however, he had little experience with the remedy, and less faith. He then described an instrument by which, in giving the vaginal bath, the water could be thrown backwards and forwards as long as it kept warm, by means of which the clothing was thoroughly protected. When the water cooled it was thrown away, and the instrument re-charged.

Dr. R. L. Banta held that an acute inflammation could, many times, be aborted by the proper use of hot water, and in this respect he would differ with Dr. Hartwig; but he also believed that this could be done by passing cold water through a coil of tubing which entirely surrounded the locality of the inflammation, after the method of Thomas. He related two cases where he had introduced ice into the womb to control hemorrhage, and in both there resulted inflammation of the uterus, and death of the patients. He believed now that had he used hot water, he could have checked the inflammation after it developed, and saved his patients. This was his opinion after a greater familiarity with the use of the remedy, and he was now a thorough believer in it. He referred to Dr. Emmet as the father of the hot water treatment in the diseases of the female pelvic organs, and thought his teachings had been of untold benefit to woman.

Dr. S. Y. Howell said there was an apparatus made in Vienna (known as Leiter's coil) of malleable leaden pipe, which could be adapted to any part of the body, and was a valuable means of applying either hot or cold water treatment. He wished to take exception to the statement that all inflammations in the pelvic cavity were septic in origin. It seemed to him that an

inflammation frequently arose into which sepsis did not enter as a cause. A woman has an attack of cellulitis after sitting on a cold surface, like stone or marble, which surely cannot be due to any septic influence. Given, a congestive state long enough continued, and inflammation would result in spite of any preceding septic condition. He quite approved of Dr. Stockton's cot, particularly the strap attachment to elevate the hips. He considered it one of the most effective ways a hot vaginal bath could be given. The syphon plan could be adapted to the greatest variety of cases, and in this respect must be considered the best. We must adapt our method, however, to the exigencies of each case, and not be tied to a set rule of procedure.

Dr. Thomas Lothrop thought the various points of the subject had already been pretty well covered by the discussion, though, in regard to the temperature of the water he had never found it expedient to resort to the higher degrees mentioned. About 105° F. was the average limit which he found useful; only rarely did he go beyond that point. One of the greatest difficulties to be met in private practice was the inconvenience which the treatment caused in some families. This seemed the principal ground of objection to it on the part of many patients, and he considered any plan good which combined efficiency with simplicity. Dr. Stockton's suggestion was a good one, but many patients could not, or would not, get the cot. If we try and carry out our plans with the material at hand we will often succeed, when, if too much be demanded nothing can be accomplished. The introduction of the hot water treatment had served to curtail the use of the speculum, and this he thought a great gain. In many cases, under intelligent advice and guidance, a woman could now cure herself, with only an occasional consultation with her physician. He believed the indiscriminate use of the speculum and the application of caustics, had caused many a woman to suffer needlessly, both physically and financially, who could have been relieved

promptly and certainly with the hot water treatment properly and systematically carried out. Its capabilities for good, thus applied, were inestimable, and he regarded it as one of the most valuable agents we possess for the successful control of many diseases of women.

Dr. Wm. B. Hawkins said that attention to details was all that was necessary to ensure success with this treatment when it was indicated. If there was failure it was because of inattention to these, and not to the fault of the method. He was very particular with his patients in this regard and often found it necessary to administer the bath himself, so that they might fully understand just what was required.

Dr. C. C. Frederick believed that the great value of hot water was found in its effects upon the lesser pelvic inflammations. If used properly and in season, these could often be controlled and prevented from developing into more formidable conditions. He was frequently in the habit of instructing his patients to take the bath upon the floor, the hips resting upon a vessel which would raise them above the level of the trunk. If protected from cold he found this a simple and effective way of accomplishing the desired end.

The President remarked that the interest in this subject—and there had been no more important one before the society—centered chiefly in the almost universal applicability of hot water to the pelvic diseases of women. Were he limited, in the management of these diseases, to the choice of one remedial agent, he would, unhesitatingly, name hot water as the remedy, *par excellence*, having more capabilities for both the prevention and cure of the maladies in question, than any other known to him. While this might seem strong language, he believed that he was not over-lauding the remedy, and that in the statement he would be sustained by the members of the profession who have the largest experience in its use. Vaginal injections are of very early origin, but it is only lately that they have been

properly applied to the treatment of disease. Dr. Emmet first taught the value of hot water at the Women's Hospital not more than twenty years ago, and to-day it is one of the standard therapeutic agents at the command of the gynecologist. It is probable, however, that its true value is not justly estimated by the profession as a whole. As the time had nearly arrived when the debate must close, he could only refer to two or three points pertaining to the subject. First, as to the position of the patient. The genu-pectoral posture was undoubtedly the best, because in it we have the important aid of gravity; it can, however, seldom be made available for this purpose, on account of the constrained attitude being illy borne for so long a time. The next most desirable is the dorsal position, which is the only really practicable posture for this treatment, and which has been fully discoursed upon. The crouching position, though quite common, is really worse than useless for any purposes of treatment, and need not claim further consideration. Second, as to the instrument. The Davidson's syringe serves as the type of the class furnishing the interrupted current, and this current on many accounts is preferable. The Foster's douche apparatus he had found the most convenient of any instrument of this class. The fountain syringe illustrates the class, deriving its force from gravity, of which there are many useful modifications. The gravity current is made to serve a good purpose where the patient must administer the injection herself, but when she could command an assistant he preferred the Foster's syringe. Whatever instrument is used the nozzle should be made of hard rubber without a central aperture, the reasons for which are obvious. Third, as to temperature. A safe guide was to adapt the degree of heat to the comfort of the patient, always having in view the purposes of the application; for it will be found that now a lower, and again a higher temperature, will be borne. In many diseases the highest temperature which could be tolerated was the most beneficial. The duration and frequency of the lavements must be determined by the necessities of each case.

He called attention to the fact that hot water *per rectum* could be made to serve a good purpose in many cases of pelvic disease. His attention had been first directed to this method of treatment by a paper by Dr. Chadwick, published in the transactions of the American Gynecological Society, Vol. V, and he had since employed it with satisfaction in a number of instances. He commended it to the society as a supplementary resource of great value in many cases.

Dr. Fell, in closing the discussion, presented a general review of the subject, calling particular attention to the fact that the action of heat applied in this way, exerted its beneficial effects through its action on the nervous system. He also pointed out that the degree of temperature mentioned, as employed by some of the members, was much too low to derive the greatest benefits from the measure.

Foreign Correspondence.

BERLIN, November 28, 1884.

Editors Buffalo Medical and Surgical Journal:

Lisfranc's method of excising the lower end of the rectum in cases of cancerous formations of the anus, seems now to be almost universally employed in the schools of Germany. The idea, when first suggested, was very favorably received, but the large number of fatal results caused it to fall into gradual disuse. Its revival, however, within the last few years, has been regarded with no little interest, from the fact that so much unfavorable criticism had already been passed upon it. Now that Germany has adopted this means of eradicating the cancer, better results might well be looked for; but if the three operations, which I have witnessed, may be taken as an index of its success in this country, the outlook is certainly far from satisfactory.

Of these cases, two resulted in death within forty-eight hours after the operation was performed; the other lingered some two weeks and then died, ulceration having attacked the small part of the deposit which the operator had failed to include in the excision. It the first two cases death was caused by a slight wound of the peritoneum, and, indeed, this has always been regarded as the chief danger attending such an operation. Add to this the great danger of hemorrhage, and we undoubtedly have the formidable obstacles with which the surgeon has to deal. It is usually necessary to remove from two to three inches of the rectum, together with a part of the ischio-rectal fossa, and when working within so limited a space, and at a distance so far from the surface, a wound of the serous membrane is almost inevitable.

The idea, suggested by Denouvilliers, of connecting with the incision drawn around the morbid growth, a deep incision in the middle line of the ischio-rectal fossa extending to the coccyx, enables the operator to work with a somewhat greater degree of certainty; at the same time the necessity of a careful dissection into the ischio-rectal fossa is scarcely benefited by this proceeding, and the danger of hæmorrhage seems to be increased. In order to avoid the risk of bleeding the thermo-cautery is sometimes employed in the deeper dissections, but this can only be used to advantage in the case of fast-growing and vascular tumors. In the ordinary epithelioma, which is by far the most common form of cancer in the region of the anus, the chief objection to excising the lower end of the rectum lies in the fact that the cancer is often found in disconnected parts, and frequently one or more of these deposits is situated above the part excised. A post mortem in one of the above-mentioned cases revealed this fact, and I dare say many of the unsuccessful operations result from the same cause. It is exceedingly dangerous to remove more than about three inches of the rectum, and, therefore, when a cancerous deposit is above this,

the operation avails nothing. The fact that the operator is unable to define with any degree of certainty the limits of the cancer, seems to me, in itself, sufficient to condemn the operation.

It would appear that in most instances of cancerous affections of the lower end of the rectum, equal relief might be derived by the operation of colotomy, and with much less risk to the patient. We now know that after successful colotomy, or, indeed, after the formation of an artificial anus in any part of the intestine, the patient's life is not by any means so miserable as might be supposed. The cancer is usually of the less malignant form, and if the irritation, which frequently results from mechanical obstruction, can be avoided, the patient may survive a long time. After excising the lower end of the rectum, if the patient lives, he rarely ever regains control over the fæces, and the danger of a speedy recurrence of the deposit, renders the operation useless except for temporary relief.

Sincerely, G. W. L., Jr.

Selections.

Herpes Laryngis.

Dr. S. H. Chapman, in the *New York Medical Journal*, relates the histories of five cases of herpes laryngis, a disease of rare occurrence. These cases presented the following symptoms: Pain and soreness in the throat, cough, hoarseness, pain in swallowing, slight dyspnœa and great nervous agitation and anxiety. Physical examination showed the presence of herpetic ulcers in some part of the larynx, especially on the epiglottis, with an occasional one in the pharynx. The duration of the disease was from a few days to several weeks. In some cases there were several relapses. The treatment consisted of quinine, arsenic and strychnia, and the local use of inhalations of tincture

of benzoin, oil of eucalyptus, oil of hops and the application of glycerine, glycerine with borax, and a weak solution of nitrate of silver. In some it was found necessary to administer anodynes.

From these five cases the author drew the following conclusions:

"1. There exists such a disease of the larynx as herpes.

"2. Its character is that of a neurosis.

"3. It is closely allied to herpes of the pharynx and other mucous membranes.

"4. It differs from other forms only on account of the peculiar microscopic anatomy of the larynx.

"5. It is peculiarly a disease of malarious districts, and one of the eccentric developments of malaria.

"6. It simulates tubercular inflammation of the epiglottis. The differential diagnosis, however, is easy. It is based upon the extreme rapidity of development, the absence of fever, the history of malarial affections, the previous or simultaneous development of herpetic eruption elsewhere and the rapid disappearance of the disease.

"7. Its seat is usually the posterior surface of the epiglottis.

"8. The nervous system is always profoundly affected."

Gunshot Wounds in the Stomach—Successful Laparotomy.

Last month we gave the conclusions of Dr. Charles Parkes, of Chicago, as to the necessity of performing primary laparotomy in gunshot wounds of the abdomen. In this connection the following case, reported by Professor Kocher, of Beme, has considerable interest as tending to support the views of Dr. Parkes. A boy, aged 14, was admitted into hospital half an hour after receiving a wound in the region of the stomach, from a pistol shot aimed at him from a distance of about five paces.

He was pale and complained of abdominal pain; the abdomen was swollen and distinctly dull in percussion inferiorly. Pressure on the abdomen caused pain. A quarter of an hour later hiccough, severe epigastric pain, vomiting, pallor, and symptoms of collapse came on. There was tympanitic resonance from the ensiform cartilage to the umbilicus, with complete dullness from the navel downwards, and in the flanks; the lightest percussion caused severe pain. Three hours after the injury laparotomy was performed. On opening the abdominal cavity, in the region of the navel, a great quantity of dark blood escaped. The bullet wound was discovered with comparative ease; it was situated on the anterior surface of the stomach, towards the greater curvature, in the direction of the fundus. The wound was circular, with sharp edges, and about half an inch in diameter. The bullet could not be found, nor was there any aperture of exit. The edges of the wound were united, first with two catgut ligatures, like an ordinary wound, then a continuous silk ligature was applied, for the distance of about an inch, so as to invert the serous coat around the wound. Recovery was retarded by an abcess which formed in the track of the sutures in the abdominal wound. Professor Kocher declares that, considering the impossibility of recovery in cases of gunshot wounds of the stomach, when active measures are not taken, it is the duty of the surgeon to perform laparotomy whenever an injury of the kind is suspected.—*British Medical Journal, July* 12, 1884.

The Relation of Over-Nutrition after the Acute Fevers of Childhood to Bone Disease.

Dr. Jacobi said he would refer to a class of cases which were not very uncommon, and which were interesting because of their connection with a number of physiological and pathological questions. A very simple and illustrative case was the following:

Some time ago a girl, eleven or twelve years of age, was present at his clinic for a swollen right humerus at its lower portion. The swelling was very slightly painful. There was a cicatrix about the middle of the arm, which had formed about six months before, after a sinus had lasted six years. A fistula opened an inch and a half above the elbow, on the anterior aspect, which led down to about the middle portion of the epiphysis apparently extending to the periosteum only. It was stated that the humerus began to swell when the child was four years old, and very soon after she had gone through a very severe attack of typhoid fever. The question arose, Had this swelling of the bone and periosteum anything to do with the typhoid fever? Dr. Jacobi thought it had, for reasons which he would state. While he might not be able to say anything that was not known to every person present, still the case was of interest in connection with a number of others which he had seen, and which were very interesting to him, particularly so because they opened up the question of quite a large number of cases of a similar description. There was one peculiar fact in the development and growth of children, which was known to physicians and also to the laity, that children not only appeared very tall after having gone through a severe illness, and particularly through a severe infectious disease, but they were really taller than before the sickness, and they grew very rapidly for a short time during and after such infectious disease. The growth or tallness was not only apparent, from the patient having become thin, but by measurement it could be shown that they actually were taller. The body became taller by an elongation of the bones; the bones grew by a rapid proliferation about the cartilage which separated the epiphysis from the shaft. If the bone grew, it must be in consequence of a nutritive process, which might become an irritative process, in that neighborhood. And the question arose whether high fevers, and infectious fevers particularly, had not the effect of producing such irrita-

tive disorder as proved, under certain circumstances, a cause of increased nutrition. Observation showed that after all cases of infectious disease, in particular the epiphyses and the adjoining cartilages were very hyperæmic. In such localities, if a post mortem examination were made, the blood would be found to ooze out, and where there was much blood there was at least an opportunity for over-nutrition. In rhachitical bones we knew that the intense growth and thickness were due to such over-nutrition. Thus it was that after most infectious fevers not only the epiphyses were apt to grow thicker, but also the diaphyses to grow longer, in consequence of the nutritive irritation of the cartilage (and periosteum). In cases in which the nutritive disorder, the hyperæmia, was not limited to its physiological condition, where it was a little more than physiological, it became pathological. In most cases the over-nutrition and growth ceased after awhile and returned to the normal state, but in others they were carried to such an extent as to become pathological and cause necrosis. Such over-nutrition of the epiphyses was one of the forms of so-called "growing-pain." Growing-pains occurred very frequently after a severe illness, and especially after a severe attack of an infectious fever, and were due to hyperæmia which might amount to inflammation. The other forms of "growing-pain" were either rheumatic or neuralgic in character.—*The Obstetric Gazette.*

Treatment of Cancer of the Rectum.

In a clinical lecture at the Necker Hospital, Professor Trélat drew the following conclusions with regard to the treatment of cancer in the rectum:

1. Cancers of the rectum should not be touched, unless they cause grave disorders. This rule should be positive, with the single exception that very small cancerous deposits may be

removed from the lower part of the rectum and the margin of the anus.

2. In all other cases the treatment should be confined to complications and palliative operations. In giving these rules I am in accord with Professor Verneuil.

3. As palliative operations, rectotomy may be done when the finger can be passed beyond the upper limit of the neoplasm. If the neoplasm is more extensive, the surgeon should abandon rectotomy, and work out a way of derivation; for by performing rectotomy in these cases, the surgeon is almost certain to injure the peritoneum. With the English surgeons, and Labbê and Tillaux, I am in favor of lumbar colotomy, because it is a simple operation, less dangerous, and affords a ready means of exit for the feces. Other surgeons prefer to make an inguinal anus; but there is risk of opening the small intestine, with all the attendant dangers and inconveniences.—*Revue de Thérap.*

Chloroform in Tic Douloureux.

Bartholow, in presenting a case of tic douloureux to his class, proceeds to make the following remarks on the treatment of this intractable disorder: "There is no fact in therapeutics more striking than the curative effects of a few drops of chloroform injected in the neighborhood of this division of the nerve (the superior maxillary branch of the fifth cranial nerve) when the seat of neuralgia. It is this division which is most frequently affected, and fortunately so, for it is this division which is most easily reached by the following method of treatment: Given a case of tic douloureux involving this nerve, lift the corner of the lip and insert a hypodermic needle at the junction of the mucous membrane of the lip and that of the cavity of the mouth, pass it up till its extremity comes in the neighborhood of the nerve and inject from five to fifteen minims of chloroform or ether, the

former the most efficient. In the majority of cases there is immediate relief of pain, which, if not permanent, lasts a considerable time. I have a patient in Boston who comes to me twice a year to have this injection practiced. In his case no other measures have answered. The relief which he obtains is complete, and lasts never less than six months.

Disappearance of Symptoms of Spinal Atrophy Following Removal of the Ovaries and Fallopian Tubes.

Dr. Mundé reports the removal of the ovaries and fallopian tubes of a lady, 32 years old, suffering from symptoms of spinal atrophy for seven years. She had been bedridden, unable to walk, during this period. A vaginal examination showed retroversion of the uterus and a prolapsed, tender ovary. All efforts to relieve this condition failed. Oöphorectomy was suggested, but abandoned because of the small chances of relief promised thereby.

No relief coming to her by other treatment, she requested that the operation be done. After due deliberation and consultation, it was agreed upon to give the patient this small chance of relief. Four days after the operation, she moved the toes of the left foot, the first time in seven years. In one week she bent the left knee. In fifteen to seventeen days she began to learn again to walk. She did not drag the left foot, as formerly, in attempts to walk, but placed it directly forward. Two months after operation, she was able to walk unassisted the full length of a double room.—*New York Medical Journal.*

Commencing Hernia.

All pains about the external inguinal opening are not neuralgic, nor inflammatory. I remember well the case of a sensitive young lady whose pains had been very puzzling to her physician, who had reasons for avoiding strict local inquiries. She was indeed sent to me to have these inquiries made, because much and varied treatment by medicines and rest had failed to

give any relief. The pain was confined to the region of the femoral opening on one side; rest removed it, exertion induced it, coughing made it worse; and a strong impulse was felt in the part by the hand applied when a deep cough was made. Knowledge of the seat and cause of the pain was nearly enough for its cure, and complete relief was got by wearing a truss. Cases of a like kind are not very rare.—*J. Matthews Duncan in Med. Times and Gazette.*

The death-rate of Russia is the highest in Europe. This is attributed to the paucity of medical men and the habits of the rural population. According to late returns the average duration of life is only 26 years, and the mortality among infants is frightful. More than 60 per cent. of infants die before they reach their fifth year, and nearly 2,000,000 children perish every year. Of 8,000,000 boys, only 3,770,000 attain the age of military service—that is to say, their twenty-fifth year, and of these at least 1,000,000 are found, by reason of shortness of stature and weakness of body, to be unfit for military duties.—*Ex.*

The chemist of the Sanitary Bureau has examined several hundred specimens of mustard, collected under the direction of Dr. Edson, and has submitted the results of his examination to the New York Board of Health. Three specimens contained flour and were colored by the addition of naphthol yellow. Ten other specimens contained flour or *terra alba*, and in some cases there was only 35 per cent. of mustard. Naphthol yellow is an irritant poison.

Editorial.

The Cholera and the Board of Health.

There seems to be a reasonable probability that the cholera will reach our shores during the coming spring. It is said that

it has never prevailed in France epidemically, unless it has soon afterwards appeared in the United States.

With the prospects before us in the nature of even a possible invasion of this formidable malady, it is the most solemn duty of all the authorities, National, State and Municipal, which are in any sense custodians of the health and sanitation of the people, to afford every protection to the citizen which science, energy and money can command. The responsibilities of health boards were never so great before, for the reason that the laws of prevention, as relating to infectious or contagious diseases, were never so well understood as at the present time; consequently they could never be applied with so near an approach to certainty of success, as now.

The municipal or local Board of Health is not only charged with the immediate execution of all laws and orders handed down to it from higher authority, but it can and must create ordinances and orders itself on all matters pertaining to municipal hygiene, sanitation, and health. The statutes confer adequate power upon these Boards to meet every emergency, and the people will hold them responsible for the faithful and zealous execution of their trust.

Petty politics, parsimony, and individual preference must stand aside, in the presence of a great public danger, and "the greatest good to the greatest number," should be the idea first and foremost in every thought and act of the members of Boards of Health at this time. *Now* is the time for them to exercise their plenary powers, to the end that preventive measures may be taken in season. It will not serve to carry out these measures in a half-hearted or perfunctory manner; it must be done with zeal, energy, and dispatch, with no particular reference to the individual, but with sole reference to the whole body-politic.

In this connection we are pleased to note that the Buffalo Board of Health has already taken some steps in the direction

named above by appointing a sanitary engineer and three sanitary inspectors, the latter being physicians. These are, we believe, thoroughly competent officers, and we have no doubt they will perform their duties conscientiously, promptly, and with a thoroughness commensurate with the high responsibilities resting upon them. Their duties, if we understand aright, are advisory in character, and it rests with the Board to see their recommendations carried out. Let this be done in a prompt and complete manner, and we have every confidence that great benefit will result from their labors.

Meanwhile the citizens, themselves, have a plain duty in this matter. It is to strengthen the hands of the Board of Health, and its officials, to the end that there shall be no captious criticism of methods, nor unnecessary delay in the correction of evils. Buffalo is already the third city in the State in size, and its population is rapidly increasing. It has outgrown the old methods which applied to its earlier days, relating to the internal administration of its affairs. These may have been well enough then but are too slow and incomprehensive for its present necessity. There should be a most complete and comprehensive examination of all dwellings (private residences as well as tenement houses), public buildings, manufactories and streets, to the end that everything pertaining to plumbing, drainage, water supply, ventilation, and cleanliness shall be put upon the highest plane of sanitary efficiency. . If more inspectors are needed, as doubtless there will be, they should be appointed to meet the demands of the service, as they arise, and this without cavil or niggardly complaint. That they should be men skilled in sanitary science goes without saying.

Buffalo, from its natural position, should stand in the front rank of large cities, as regards the health of its inhabitants and its low death rate. Its atmosphere is invigorating, pure, and wholesome, and its climate has been pronounced equal to any

in the world for the promotion of health, longevity, and both physical and mental vigor. If it has been rendered otherwise from artificial causes, these must be swept away by the considerate and timely action of the health authorities; and it is the first and bounden duty of every citizen to hold up the hands of these officials, to the end that our city may be placed in the best condition to resist the threatened invasion of cholera that sanitary science can possibly devise. This is but the reasonable demand of the civilization of to-day, and no intelligent citizen will be satisfied with anything less than the fullest protection which the State is seeking to provide.

Eulachon Oil.

Dr. E. L. Shurley, of Detroit (*New York Medical Journal*, Nov. 29, 1884), furnishes interesting information concerning eulachon or "candle-fish" oil. He has found it an efficient agent in the treatment of phthisis and other wasting diseases, and thinks it bids fair to become a rival of cod-liver oil in these cases. He has used it in twelve cases of phthisis,—seven in hospital, and five in private practice,—and, from the summary of these cases, which he publishes, it would appear that eulachon oil is, at least, not inferior to cod-liver oil in the class of cases to which it is adapted, and where patients can tolerate the ingestion of an oil.

In most of Dr. Shurley's cases, cod-liver oil had been previously administered, so that he was enabled to compare the relative merits of the two oils in the same individuals. The points of favor which he seems to fairly claim for the new fish oil are, first, its superior digestibility over that of cod-liver oil; second, its lessened liability to produce diarrhœa; and, third, its less disagreeable properties. The price, a matter of considerable moment to most patients who require such remedies, is reported to be as low if not lower than cod-liver oil.

For ourselves, we confess to the fact that we are, year by year, growing into the habit of recommending cod-liver oil less frequently, not because we do not value it highly as a food, *per se*, but because of the many difficulties surrounding its successful administration. The patients who need it most seem to be the least able to ingest, much less digest, it in sufficient quantities to render it beneficial in arresting or restoring tissue-waste. The various emulsions of commerce are of doubtful virtue to say the least; it were better to administer either the plain oil of a sweet and pure variety, or to extemporize an emulsion with yolk of egg, glycerine, and any agreeable flavoring combination.

Our readers are referred to an article by Dr. A. B. Lyons in the *Therapeutic Gazette*, September, 1884, for a description of the physical and chemical properties of eulachon oil. This oil is said to contain a substance analogous to paraffine, which may account for its apparent superiority to cod-liver oil, as claimed by Dr. Shurley. From his endorsement of this new aliment we are inclined to regard it as a medicinal agent of efficiency in phthisis and similar wasting diseases, and hope it may be put upon trial in our public institutions with a view to thoroughly and fairly test its merits and fix its status.

What is the Correct Name for the New Local Anæsthetic?

Dr. D. K. Shute, of Washington, writes to the *Medical Record* (November 29, 1884,) concerning the proper name of the alkaloid of cocaine, which is just now attracting so much attention on account of the wonderful results which are being recorded for it as a local anæsthetic. He says: "It strikes me that the correct technical name for this drug is 'chloride of cocaine.' In an editorial of *The Record* for Nov. 8th, it is stated that 'cocaine unites easily with dilute acids to form crystallizable salts,' therefore if it unites with dilute hydrochloric acid it

forms a crystallizable salt, which salt is a 'binary compound' and *not* a 'ternary' one. Modern scientific works on chemistry make the characteristic termination of 'binary compounds' -ide and not -ate. 'Ternary compounds' have the characteristic termination -ate. A scientific chemist never speaks of the 'hydrochlorate of ammonia' as the result of the combination of hydrochloric acid (HCl) and ammonia (NH_3); but he calls the resulting compound chloride of ammonia or ammonium chloride (NH_3HCl) or, more properly, NH_4Cl. It is no more correct to say hydrochlorate of morphine, or hydrochlorate of cocaine, than it is to say hydrochlorate of ammonia. The result of the union of cocaine ($C_{17}H_{21}NO_4$) and hydrochloric acid (HCl) is, as stated above, a 'binary compound.' Therefore, to be correctly specified, it should be written cocaine chloride ($C_{17}H_{22}NO_4Cl$). It is proper to say sulph*ate* or nitr*ate* of cocaine, because the union of nitric and sulphuric acids with cocaine form 'ternary compounds.' I write these few lines in the hope that a drug having such brilliant properties may be dignified by being called by its proper scientific name, viz.: cocaine chloride, chloride of cocaine, or cocaine chloridum."

Medical Society of the County of New York.

Dr. Daniel Lewis, one of the most prominent physicians of the metropolis, has been elected President of this society for the ensuing year. At an adjourned annual and stated meeting, held Nov. 24, 1884, he delivered an address, in the course of which he remarked that the law of 1880 regulating the practice of medicine in the State of New York had proved more far-reaching and effective than even its framers had anticipated. In regard to a State Medical Examining Board, he said that its necessity as a means of suppressing quackery and promoting a higher grade of medical education was obvious. Such a Board, however, should it be organized, as was probable in the near

future, he thought should have power to revoke a license to practice for sufficient reasons. These remarks possess an additional significance, from the fact that Dr. Lewis is a member of the standing committee on legislation of the State Medical Society. This committee, together with Drs. A. L. Loomis, J. G. Curtis, and A. Van Derveer, were, at the last annual meeting, constituted a special committee to draft a bill on the subject of a Board of Medical Examiners, and to report the same at the next annual meeting, which will occur February 3, 1885. By the terms of the resolution creating this committee, it was directed to communicate with all the medical societies throughout the State on the subject.

The composition of this committee is such as to justify the expectation that a bill will be reported satisfactory to all the interests involved; and we anticipate, as the result of its labors, a good beginning in the direction of a higher standard for the degree of the doctorate in medicine in this State.

Honors to a Buffalo Physician.

Dr. Edward N. Brush, formerly of this city and lately First Assistant Physician at the New York State Lunatic Asylum at Utica, has recently been appointed to the charge of the Male Department of the Pennsylvania Hospital for the Insane at Philadelphia. We understand that this appointment was made at the suggestion of Dr. J. B. Chapin, superintendent, by the unanimous vote of the managers.

Dr. Brush is a native of this city, where he graduated in medicine and engaged in practice for some years thereafter. He was formerly one of the visiting physicians to the Buffalo General Hospital, one of the editors of this Journal and a lecturer in the Buffalo Medical College. He was appointed one of the physicians of the Lunatic Asylum at Utica in 1878, where he has since resided. He is a physician of varied and

rare accomplishments, and he will carry to his new field a large experience in the care and management of the insane, which cannot fail to make his services of unusual value to both the State and its unfortunate wards.

We extend our hearty congratulations to the managers upon their rare good fortune in filling such a responsible position with so competent an officer; two conditions so very desirable to attain, yet, often, so difficult to fulfill.

Dr. Hughes Bennett, of London, has recently made a remarkable diagnosis, with localization of a brain tumor, and directed a surgical operation which led to its successful removal. It is believed to be the first of the kind thus treated. He diagnosed an encephalic morbid growth of limited size in the upper part of the fissure of Bolando, and requested a surgeon to trephine the skull over the suspected region. This was done by Mr. Rickman Godlee, and a mass of glioma, the size of a walnut, was extracted from under the gray matter of the upper part of the ascending frontal convolution. The operation was performed November 25th, and the patient was doing well on December 6th (*London Medical Times*). The chief symptoms which led Dr. Hughes to diagnose the extent and locality of the tumor were paroxysmal twitchings of the left side of the face, alternating with twitchings of the arm on the same side, followed by slowly progressive paralysis of the hand, and, later on, by twitchings of the eyelids and leg without paralysis. These symptoms were accompanied by double optic neuritis and violent headache.

Messrs. Mayer & Mammen, surgical and orthopædic instrument makers, have established themselves at No. 6 East Huron street, near Main street. These gentlemen are skilled workmen, direct from Tiemann's, of New York City. They repair and make all kinds of instruments, even the most delicate cutting

eye instruments, and, to our personal knowledge, their work is first-class. They merit the support of the profession in this and surrounding vicinity.

Reviews.

The Brain and the Nerves: Their Ailments and their Exhaustion. By Thomas Stretch Dowse, M. D., Fellow of the Medical Society of London. New York: G. P. Putnam's Sons, 27 and 29 West Twenty-third street. 1884. Price, $1.50.

This work is a supplement to a paper on "Nervous Exhaustion," read four years ago by this author before the Medical Society of London, which was received at that time with great favor, both in England and America. The contents are divided into six chapters, in addition to the introduction, of which the first treats of the facts which have been established in connection with the physiology and pathology of the nervous system up to the present time. The second chapter treats of nervous energy and exhaustion. The third chapter treats of some of the ordinary symptoms of the neurasthemic. The fourth chapter is devoted to some forms of mental derangement and bodily ailment due to nervous exhaustion. Chapter five treats of the hereditary and nervous constitutions which are especially liable to exhaustion and fatigue. The sixth chapter is devoted to the treatment of nervous exhaustion. At this time, when medical men constantly meet with this class of diseases, the present work is a valuable one for study and reference.

Osteotomy and Osteoclasis for Deformities of the Lower Extremities. By Charles T. Poore, M. D., Surgeon to St. Mary's Free Hospital for Children, New York, etc. New York: D. Appleton & Co., 1, 3 and 5 Bond street. 1884.

There has been a want of a concise treatise on osteotomy, and the author aims in this work to supply the void. He has succeeded fully in his object, and presents to the profession, for

their guidance in the treatment of a very common class of deformities, a very valuable work.

The contents are divided into ten chapters, as follows: The relations between rickets and certain deformities of the limbs; osteotómy; osteotomy for deformities at the hip-joint; genu valgum, its etiology and pathology; osteotomy for genu valgum; genu varum; osteotomy for anchylosis of the knee-joint; osteotomy for tibial curves; osteoclasis; statistics after osteotomies; bibliography. The subjects and diseases treated are such as the surgeon is compelled to consider and examine often in his daily practice, and the author has drawn from his own ample experience and that of other eminent surgeons in the preparation of a most admirable and useful work.

A Practical Treatise on Massage. Its History, Mode of Application and Effects, Indications and Contra-indications. With over fourteen hundred cases. By DOUGLAS GRAHAM, M. D., Fellow of the Massachusetts Medical Society. New York: William Wood & Co. 1884.

This work gives a history of massage, the mode of its application, its physiological effects, and the uses of massage in nervous exhaustion and anæmia of women, in uterine diseases, and the effects of massage upon internal organs; the central nervous system and its diseases in writers' cramp and other affections; neuralgia and peripheral paralysis, muscular rheumatism, sprains and joint affections, etc. The scope of the work is broad, and the author brings to his work a large experience and observation in the uses of this treatment in local and general diseases. We think its publication called for by the special attention now directed to massage in diseases not amenable to medication and the beneficial effects derived therefrom under skilled direction. We commend the work to those who are investigating the merits of friction, kneading, manipulating, rolling and percussion of the external tissues of the body, with a view to their curative, palliative or hygienic effects.

Intestinal Obstructions. Their Varieties, with their Pathology, Diagnosis and Treatment. The Jacksonian Prize Essay of the Royal College of Surgeons of England, 1883. By FREDERICK TREEVES, F. R. C. S., Surgeon to and Lecturer on Anatomy at the London Hospital; Hunterian Professor of Anatomy at the Royal College of Surgeons, England. With sixty illustrations. Philadelphia: Henry C. Lea's Sons & Co. 1884.

The accomplished author of this work emphasizes the importance of the subject he selected for the Jacksonian Prize Essay, by stating that in England alone over two thousand individuals die annually from various forms of obstruction of the bowels, exclusive of hernia. His own experience in the fatality of this form of disease is corroborated by medical men of large practice. We are interested in the subject and the manner in which it is here treated, and we find in its perusal a mine of knowledge which we are sure will add greatly to the resources of the profession in treating these formidable diseases. The work is such a one as the general practitioner should have in his library.

On Sclerosis of the Spinal Cord. Including Locomotor Ataxia, Spastic Spinal Paralysis and other System-Diseases of the Spinal Cord, their Pathology, Symptoms, Diagnosis and Treatment. By JULIUS ALTHAUS, M. D., M. R. C. P., Senior Physician to the Hospital for Epilepsy and Paralysis, etc., etc. With nine illustrations. New York: G. P. Putnam's Sons, 27 and 29 West Twenty-third street. Price, $2.75. 1885.

The frequency of spinal diseases, both organic and functional, gives the publication of this work of Dr. Althaus great value to the profession. Few have had a larger experience, and the obscurity which surrounds this department of medical science, the author has striven assiduously to brush away, by publishing the results of his observation, accurately taken during twenty-five years of hospital and private practice. Like all works issued by the enterprising publishers, the present one is of a high order of professional merit, and unfolds the clearest exposition of the diseases of which it treats of any we have examined.

Doctrines of the Circulation. A History of Physiological Opinion and Discovery in Regard to the Circulation of the Blood. By J. C. DALTON, M. D., Professor Emeritus of Physiology in the College of Physicians and Surgeons, New York, and President of the College. Philadelphia: Henry C. Lea's Sons & Co. 1884.

Professor Dalton gives, in this work, a history of physiological opinion and discovery as to the circulation of the blood from the times and writings of Aristotle down to the present century. It is not a work for criticism, being a historical as well as scientific presentation of this subject, which the author gives in his usual clear and common style. To students in physiology who desire to trace the theories of the circulation of the blood to their source, and investigate the gradual solution of this difficult problem, we especially commend the work.

Elements of Surgical Diagnosis. By A. PEARCE GOULD, M. S., M. D., London; F. R. C. S., England; Assistant Surgeon to the Middlesex Hospital, London, etc. Philadelphia: Henry C. Lea's Sons & Co. 1884.

This little work belongs to the series of manuals for students of medicine, and contains a condensed epitome of surgical diagnosis. For students who, in their earlier course, have but limited leisure for study, this compend offers many advantages. We commend the work to medical students, for whom it is written.

Handbook of the Diseases of the Eye and their Treatment. By HENRY R. SWANZY, A. M., M. B. F. R. C. S.; Ophthalmic Surgeon to the Adelaide Hospital, Dublin. With illustrations. New York: D. Appleton & Co., 1, 3 and 5 Bond street. 1884.

This handbook is intended for students in ophthalmology, and is among the best in this specialty that we have perused. The author is a clear writer and practical ophthalmologist, and gives here very practical instruction in this important department of medical science.

THE

BUFFALO

Medical and Surgical Journal.

VOL. XXIV. FEBRUARY, 1885. No. 7.

Original Communications.

MOSAIC AND MODERN DIETARY LAWS.

BY H. LASSING, M. D.

A writer in a foreign magazine accounts for the longevity of the Israelite by ascribing it to the observance of the Mosaic and Rabbinical laws relative to marriage, the relations of the sexes, the hygiene of married life, and their strict dietary regulations. These latter were evidently designed for the maintenance of their health and strength and the protection of their bodies against disease. Thus we find included among the prohibited sources of food all carnivorous animals, the rodents, the carnivorous and carrion eating birds, reptiles, amphibia and mollusca, a list comprising a complete group of beasts, such as the swine, the mouse, the rat, the cat and the dog, etc., known to be perfect foci of trichinal and other parasites. The communicability to man of parasitic diseases from animals used as food has long been placed beyond all doubt, it having been established that the parasite is simply transferred from the flesh of the beast to that of the man, in which it develops with frequent fatal results. The explanation of the reason for the prohibition of scaleless fish, such as the eel, only recently made by the scientists

bears out this theory. It is that, owing to the absence of scales, the eel becomes a positive absorbent of noxious gases, more particularly the noxious effluvia of decomposing, and, therefore, poisonous matter.

These dietary laws are not confined to a mere division of all animals into two classes, the "clean and unclean." They prescribe even how much of the bodies of permitted animals may be consumed as food. Thus the use of blood is emphatically and repeatedly forbidden. This prohibition and the importance evidently attached to it harmonize so exactly with the lessons of modern science that it is impossible to regard them as motived by any consideration other than the public health.

The possibility of the blood containing disease germs, not immediately affecting the quality of the flesh, is not the only circumstance tending to disqualify it for food.

The blood, in its normal condition, almost invariably contains noxious elements. From the very nature of the double office of the circulatory system this must be so; for while, on the one hand, the blood serves to renew the various parts of the system after their ordinary wear and tear, on the other, it has to carry off the natural waste of the tissues. This waste or refuse is ultimately eliminated by means of the kidneys, the sudoriparous glands, etc., and then appears in its avowed character of excrementitious matter; but it must always be, to a certain extent, present in the blood, and, in the event of any derangement of the action of the kidneys, accumulates in considerable quantities and highly poisonous qualities. It must, therefore, be evident that the blood is always an undesirable article of food, especially as it is impossible, when an animal is slaughtered, to separate the arterial from the venous blood, which would be the only means of overcoming the difficulty.

"We contend," says one writer, "that to use the blood as food approximates very closely to drinking urine, and is not merely loathsome, but, *pro tanto*, unsafe. That, like liquid and solid excrement, it is valuable for plant food, and that it serves as

pabulum for certain classes of animals, is no proof that it is fit for human consumption."

The old Jewish Rabbins well knew the importance of this, some seventeen hundred years ago, when they recommended that in slaughtering animals, in addition to severing the trachea and œsophagus, the blood should be poured out from the vessels of the neck, and this at a time when it was believed the arteries contained only air.

One of the most important features of the Jewish system was an elaborate examination of the carcass before it could be declared fit for Jewish food; this examination, prescribed by the Rabbins and faithfully carried out at the present day, is of an extremely vigorous and subtle nature, and completes the system by which the selection of animal food is governed. The conditions on which alone the flesh of animals is permitted to be eaten are singularly minute, and these laws, carried out in their integrity, render the consumption of meat affected with specific maladies practically impossible. The lung is especially ordered to be examined and tested so that pleuro-pneumonia, tuberculosis, bronchitis, and pulmonary maladies generally, have little chance of escaping detection. "The extreme care of these early students of physiology (the Rabbins)," says Dr. Maurice Davis, "in their examination of the lungs, seems to point to the dicta of modern science, which indicate the air passages, with their moist mucous membranes, as highly probable inlets of the morbid particles floating in the atmosphere." Dr. Behrend tells us that the animal diseases transmissible to man through ingested meat are seven in number, viz., cattle plague, swine typhoid, pleuro-pneumonia, foot and mouth diseases, anthracoid diseases, erysipelas and tuberculosis. By the observance of Jewish dietary laws it is impossible for animals affected by any of these diseases to be eaten. On the other hand, under non-Jewish systems these diseases are spread broadcast with criminal recklessness. Dr. Carpenter stated, some time ago, in the *British Medical Journal*, that an inspector of the Metropolitan meat

market, in London, had declared upon oath that eighty per cent. of the meat sent to the London market had tubercular disease; and a letter addressed by a Mr. Jenkins to the *Times* a few months ago, calculated in reference, to this same fact, that "at least 375,000 of the inhabitants (of London) annually run the risk of being tainted with consumption and of transmitting it to their unborn children." What wonder then that tuberculosis has so many victims?

One of the most important considerations for the physician is the quality and character of the diet of his patient, as well as of the community in which he lives. The most valued of articles of human food is beef. It was a favorite aphorism of one of our learned professors that beefsteak is the best tonic. This, to a very large extent, is true, and, therefore, all other things being equal, it must be of vital interest to the physician to have the supply of beef of the very best, and to have it in that condition which will furnish the greatest amount of healthy nutrition in the most suitable form, palatable, and at a comparatively low price.

To speak on this matter intelligently, it is necessary, first, to consider what are the characteristics of good beef, what should be avoided and what required in its production.

Good beef, then, should be bright red in appearance, the muscular parts firm and elastic, the fat hard and light, yellow or white, it should be free from all substances calculated to expedite putrefaction, such as exuded blood, bruises or extraneous dirt. To produce such beef it follows that the animal from which it is taken must be in a perfectly healthy condition and of the proper age when slaughtered, and that the process of slaughtering and preparing for market must be conducted in such a way as to obviate anything tending to vary from the conditions just enumerated.

Certain conditions may be enumerated which invariably tend to produce poor, unhealthy, as well as unsavory beef, while others, just as surely, will result in good, healthy and appetizing

meat. No one can deny that long driving and exhausting railroad journeys in crowded cattle cars, with insufficient food and water, the animals goaded, beaten and bruised by brutal drivers, frightened by unusual noises, will cause inflammatory, congested condition of the meat and can never result in good wholesome beef. Again, the careless handling of the dressed meat, filth and dirt allowed to accumulate about the meat in the slaughter-house, insufficient emptying of the blood from the carcass, all injure the quality of the beef.

And yet another consideration, which is, that beef should be long enough killed before it is cooked to have allowed of complete relaxation of the muscular contraction of the fibre without permitting even the slightest decomposition to take place. We must not for a moment lose sight of the fact that any process of decomposition may be arrested by antiseptics, yet can never be undone, or in other words, the destructive work can never be so remedied as if it had not taken place.

It is clear, then, that healthy animals of a proper age, well rested, fed and watered, killed in such a manner as to produce the least fright and congestion, dressed in the cleanest possible manner, completely deprived of the excessive blood and animal heat, and so kept as to prevent even the slightest decomposition, will furnish the best, most wholesome and appetizing beef.

The last consideration is the availability of such good beef to the largest number of people. The nearer to the point of production and the more direct a product is brought from the producer, the cheaper it must be.

Having thus spoken of the characteristic requisites and cost of wholesome, well-tasting beef, we will now briefly consider if such can be so found within our reach.

In Chicago, one thousand miles nearer the vast cattle producing pastures of the far West, are the largest stock yards in the world. Connected with the entire Union by the most extensive system of railways centering here, cattle are brought here from all directions, but more largely from the vast ranches of

Montana, Colorado, Nebraska and Texas, and after being fully rested, fed and watered, are picked out and bought by a vast army of buyers for local use as well as for re-shipment. The principal grades of cattle here represented may be divided for our purpose into home raised and range cattle, and it may be stated that the quality of these latter has been vastly improved during the last few years, not only by a more careful breeding, but principally from the fact that so many railroads are now operated through the country that it no longer pays to drive these range cattle on foot only for the shortest distances to the nearest railway station.

The cattle, having thus been carefully selected and purchased, are driven to the cattle-pens of the different slaughter and packing houses which surround the stock yards and form a very large suburb of Chicago.

To give a correct idea of what seems the best method of slaughtering and dressing animals for the supply of wholesome, good beef for the Eastern markets, we will now enter one of these establishments and follow a steer from the pen to the market in Boston, New York, Liverpool or London.

One of the largest of these beef dressing places, located on the edge of the stock yards, is that of the Swift Brothers, whose name on refrigerator cars and large refrigerators in the Eastern markets has become so familiar.

The other is that of Armour & Co. These are the two firms who are what are known as Chicago beef dressers. It may be added here that beef dressing simply means the preparation of beef after killing, by cleansing it of all uneatable debris and offal and not, as some intelligent people even have imagined, the application to the meat of any preservative mixture or wash.

The bullock to be killed is driven from the enclosure wherein he is confined to a separate pen and thence into a narrow stall where he is alone by himself. Here he is stunned by one or two blows upon the head, which has a double object, one to disable him, but the more important object is to drive all the blood

possible to the brain and forward parts. After this a chain is fastened to him and through a sliding door he is hauled upon what is called the bed of the slaughter house. Overhead throughout the entire buildings, is a system of iron tracks, intersecting, and connected by switches, to which are attached sheaves and blocks, with hooks, and these, being connected with powerful steam machinery, may be run in any direction. After the steer is thus placed upon the bed, his fore feet are so placed as to open as wide as possible the opening which is to be made in his arteries, and thus make sure of the perfect and entire exit of blood. He is again knocked in the forehead until his muscles relax, when a man opens, with a sharp knife, one of the largest arteries in the body at the lower throat; his head is then entirely severed from the body, and, by means of a chain on the hind legs, he is hoisted up clear of the floor, and shoved into another place to make room for a fresh victim; he is again lowered on the floor, where he is placed on his back, his feet taken off, the skin taken off the belly and sides, the breast and crotch sawed open and the caul taken off. This caul, surrounding the stomach, contains the purest fat in the steer, and is washed and cleansed to be converted into the finest and most valuable suet oil. At this stage the examination of the lungs is made, and if any evidence of disease is found the carcass is prepared for other uses than refrigerating, as it has already been shown that such meat will not keep. Thus, in the self-interest of these Chicago beef dressers, lies the greatest safety of the consumers of this kind of beef. The carcass is then wiped all over, and washed free from all blood stains and other impurities; he is then hooked and hoisted up part way, the tail is cut out, furnishing ample material for the celebrated ox-tail soup, the rump is skinned, and, after being hoisted clear of the floor, two men beat down the fell on the hind legs, another takes the hide off the back, the entrails are removed and the animal is sawn down the spine from the tail, the back is thoroughly washed off and wiped and split down the middle; he is then hoisted further and

run on the track to more thoroughly drain out the blood, the hide is entirely cut off from forelegs and neck, the last attachment, and this is done in such a neat, careful way, with clean knives and hands, that the hides from this establishment bring an extra price in the market. The neck is split and the carcass is trimmed carefully, cutting off all ragged pieces of fat or meat, all blood stains or bruises. It is again thoroughly washed in two waters and wiped dry, when it is allowed to hang at the back of the beds near the cooler, where, after being allowed to thoroughly drip some fifteen minutes or more, it is again wiped and trimmed and shoved in the cooler to be entirely deprived of its remaining animal heat. It will thus be seen that the carcass is not only kept very clean, thoroughly emptied of blood, being about one hour or more in transit from the pen to the cooler, but none of the meat is ever, under any circumstances, allowed to touch the floor. The number of men actually handling the animal from the pen to the cooler is forty-two. In addition to these there are large numbers carrying away offal, washing floors and posts, wiping the hooks and implements, so that at the close of each day's killing there is not any filthy debris or even blood left on the floor. While it is unavoidable for those who do the bloodiest work to keep from soiling their hands and clothing, they are, by the strictest discipline, compelled constantly to wash their bodies, and the clothing is changed and washed at every resting spell. All debris is instantly removed and worked up to some useful purpose, so that there can be nothing remaining to cause any foul smell or decomposition, and in the various buildings on the grounds, though every process of manufacture of the debris is carried on, no smell of an objectionable nature is perceptible, and cleanliness is carried to such an extent that a lady with kid gloves could fearlessly handle the woodwork of the coolers and the meat therein contained without soil or stain. The floors of these coolers are covered with clean, dry sawdust, which is changed every other day. These coolers or refrigerators are very simple in con-

struction, with hollow walls having an ice chamber overhead, the cold air from which is conducted downward, and thus is kept up a constant circulation of pure air at an even temperature of about 40° F. These refrigerators have ample room to hold about 7,000 cattle. The cars in which this beef is transported are built on a similar principle, and will each contain from twenty-five to thirty-four cattle. The meat is usually kept forty-three hours before shipment, by which time all animal heat is surely expelled from the meat. It is from three to four days on the way to Boston, New York, Philadelphia or Baltimore, and on the way the ice is re-supplied four times. Thus beef sent from this place is at least seven days old when it reaches the New York market. In the winter time the same temperature is maintained, but of course the ice needs only to be replenished twice.

Beef which has been thus refrigerated will keep out of the refrigerators perfectly sweet and wholesome two days, even in the hottest weather. It is unnecessary to state that ordinary beef, not so well cleansed and not having the animal heat so thoroughly removed will not keep nearly so long.

This concern uses about thirty-three car loads of fresh ice per day. As each car averages fourteen tons, this makes about 500 tons of ice per day.

Ice is very cheap here, so much so that it does not even pay to manufacture artificial ice, much less to use any chemical or other artificial means of cooling.

One notable fact connected with this process of slaughtering cattle is that the hearts of animals so killed are always empty of blood, whereas, those killed by other processes are generally full. Beef thus prepared is sent by rail to the coast, shipped in similar refrigerators on steamers to Liverpool and London, where it is taken out of the coolers, carted and sent by ordinary rail car to Smithfield and other markets in England and has always been in good condition and superior to English beef. In one

instance meat was thus kept forty-three days on a disabled steamer and yet was in fair condition on arrival in England.

There has been considerable prejudice created against this so-called Chicago dressed beef by ignorant and malignant misrepresentation, sometimes willfully confounding it with inferior canned beef, which, because it is also packed in Chicago, has been called "Chicago beef"; and, again, the writer has frequently seen butchers selling Chicago dressed beef as home dressed beef, while they were vigorously declaiming against this Chicago stuff and pointing out inferior home beef as being Chicago meat. It has got to be quite customary now, with careless reporters, whenever, justly or unjustly, meat has to be spoken of as the canse of sickness, glibly to describe it as Chicago beef, thus creating an unfounded prejudice against what is really a wholesome, palatable and cheap article of diet. Many districts of country which have heretofore suffered for the want of tender, toothsome beef, are now well supplied from this source. (About four thousand head of cattle are daily slaughtered in these establishments.)

Some of the prejudice against this beef has been created by the ignorance of the so-called leaders of working men, who led them to believe that by using Chicago meat they were injuring their fellow-workmen along the various railroads between Chicago and the Atlantic board, as well as those in the Eastern slaughter houses. The fallacy of this belief is too evident to require argument.

Diseases of the Scalp.—The Syphilides.

A clinical lecture delivered at the hospital of the sisters of charity.

By A. R. Davidson, M. D.,
Professor of Medical Chemistry and Dermatology, Niagara University.

Gentlemen—This man presents himself with a disease of the scalp. It will be an aid to you in your diagnosis of these cases, to remember that the principal cutaneous diseases, which

affect the scalp, can almost be counted upon the fingers of one hand. We may have eczema, psoriasis, seborrhœa, pityriasis, tinea tonsurans, tinea favosa.

The last two are due to the presence of a parasite which thrives upon the superficial or epithelial elements of the skin. Tinea tonsurans, tinea circinata and sycosis, though presenting somewhat different features, are all due to one and the same cause, the trichophyton, a vegetable parasite belonging to the fungi, and differing from the algæ as being devoid of chlorophyl and being unable to assimilate inorganic matter. Tinea favosa is also due to the development of a vegetable fungus, the achorion schoenleinii; it is characterized by the formation of "favus cups." These are peculiar, circumscribed, dry, yellowish umbilicated masses, which at first are firmly attached to the surface of the skin, but later may be easily detached. The microscope shows them to be made up of mycelium and spores, also epidermal cells and debris. It is, in this country, one of the rarer diseases, and I will probably not have an opportunity of showing it to you, but in *lieu* of that, this plate will give you an excellent idea of its appearance.

You are sufficiently familiar with the appearance of tinea tonsurans to know that this case presents no resemblance to that disease.

Pityriasis is a chronic squamous disease of the skin in which the scales are branny and are seated on a non-infiltrated surface.

The ordinary condition known as pityriasis capitis is due to an increased secretion of the sebaceous glands, and is, in no sense of the word, a pityriasis.

Later on, however, as a consequence of long continued catarrh of the sebaceous glands, there may be a secondary involvement of the epidermis. The scales are, then, true squamæ, dry, corneous and epithelial, but even this condition is better designated by the term alopecia furfuracea, as it is one of the commonest causes of permanent baldness.

Seborrhœa is a condition due to increased secretion of the sebaceous glands, and also, in most cases, to a change in the quality of the sebum poured out. As the sebaceous glands are mainly appendages to the hair, seborrhœa capilitii is not uncommon, and is vulgarly known as dandruff. As it never presents features in common with the present case, we will pass it over without discussion at present.

We have now only eczema and psoriasis to consider. I have shown you cases of both these diseases, and you know that the recognition of a pronounced case of either eczema or psoriasis is made with ease, even by those unskilled in cutaneous diseases; but in the atypical forms you may often have occasion for doubt. Without entering, at this time, into the general characteristics of these two diseases, a consideration of which will usually clear up any obscurity which might arise from the eruption itself, I will agree with those of you who have already expressed an opinion that this case most resembles a psoriasis. But let me call your attention to some important points: First, you will notice that the scales are dirty whitish and not silvery and lustrous in color; indeed, many of the lesions are more of the character of crusts, being agglutinated by pathological exudations from the patch. When I remove the scales, the subjacent skin is of a dull red color, not so bright a tint as is usually seen in psoriasis. You will notice, too, that there has been considerable loss of hair, and that what remains is dull and dry, and easily pulls out. Now, if this is a case of psoriasis, we are almost sure to find the eruptions upon other parts of the body, the sites of preference of the disease being over the extensor surface of the extremities, and especially about the elbows and knees, where it is decidedly most common. The man will now remove his shirt, and we will see what further knowledge we can gain by an inspection of his body. At once you see that there is no indication of psoriasis, but, instead, it is pretty uniformly spotted with a macular eruption, not elevated above the general level of the integument, and of a dull, mulberry hue.

The maculæ, you will notice, are mostly round. The color does not disappear under pressure with the finger, and he says the eruption causes no itching or other subjective sensations.

This man may now retire. I have allowed this man to withdraw because he was unwilling to be made the subject of remark upon the effects of a disease which is not usually looked upon with much pride by its possessor. You doubtless have all recognized this as a case of syphilis, but just here let me say that you must not charge every individual presenting symptoms, whatever his or her personal antecedents or character, with having indulged in illicit sexual intercourse. Up to a comparatively recent period it was believed that the chancre was the only contagious lesion. We now know that the generalized lesions, especially those which are suppurative in character, are among the frequent sources of contagion. Thus, infection may occur from the passage of a cigar or pipe from mouth to mouth, from the use of common utensils, from sleeping in the same bed; surgical instruments may convey contagion, or vaccination. Mucous papules and patches are frequent sources of contagion, and next to them the pustular syphilodermata, but do not forget that whether the infection be derived from a chancre or a secondary lesion, the initial manifestation of syphilis is always a chancre.

This man presented himself to me six months ago with all the secondary symptoms beautifully developed. Under specific treatment the rash disappeared and he was soon in apparent health. He was particularly ordered to continue the treatment, but considering himself well he stopped all medication. A week ago I was called to see him and found him in much the same condition he is now except that he then had an iritis which has now disappeared. For this he had consulted an ophthalmologist, who had again put him on a specific treatment. The case is an interesting one to you, as showing the recurrence of the original eruption, and also an instance of the manifestations of a disease which are protean in character. On the body we have

the macular, on the scalp a well-marked squamous syphilide resembling psoriasis and often called syphilitic psoriasis. Syphilis has been described as an imitator of other diseases; in its manifestations upon the skin it may present the different lesions common to other cutaneous affections, but there are always certain differences for a study of which we must be familiar with the syphilitic mode of disease.

Syphilis is a slow-staged specific fever, the result of a particulate poison which is conveyed only by contact. It runs a course tolerably definite in its main phenomena, but varying in character and detail. It is divided into various stages. Inoculation of the virus is followed by an interval varying from ten days to a month, in which no signs are manifested of its presence. This is the period of incubation. Well authenticated cases prove that the period may be extended to forty-five days, but we believe that the development of the chancre never occurs in a shorter period than ten days after infection; occasionally a slight redness indicates some local irritation at the point where the poison was introduced, which, however, speedily subsides, and unless chancroidal virus has been mixed with that of syphilis, nothing, as a rule, is seen; at the end of this period, which, you will remember, is about four weeks, the local sore, a chancre, has usually become characteristic. Then, unlike the other exanthemata, there follows a second stage of incubation which terminates in a month or six weeks with the appearance of a rash and fever.

The first stage is called the primary, and has for its phenomena the chancre and the bubo; its usual duration, including the stage of local incubation, is about two months. You will have abundant opportunities to study these initial manifestations of the disease, and time will not allow me to speak of the characteristics of the true or false sore. The bubo, associated with the true chancre, is usually like it, very hard, and shows little tendency to inflame or suppurate. That which attends the false sore not unfrequently suppurates; no constitutional symptoms

follow the chancroid. It is often extremely difficult to discriminate between the chancre and chancroid, and in doubtful cases no opinion should be ventured until the incubation stage (one month) is at an end.

The secondary stage commences with a slight fever, followed by an eruption on the skin, sores in the throat and mouth, aches in bones, joints and muscles, and occasionally inflammation of the eye. All parts of the body are liable to be affected, but all the inflammations produced are usually transitory and often very slight.

The eruptions on the skin in the secondary stage are very various in character. Roseola is often the earliest, and most commonly followed by the papular and squamous syphilides, which are well illustrated in these plates, but we may have eruptions resembling psoriasis, lichen, impetigo, acne, rupia, and many others; ulcers in the tonsils, sores on the cheeks or on the tongue and lips, and condylomata at the anus are also common. During the time the eruptions are making their appearance, chronic enlargement, with induration of the lymphatic glands throughout the body, are not uncommon, as, also, slight periosteal swellings, but they do not constitute large nodes, as in the tertiary stage. The patient is usually anæmic and thin, but not necessarily so.

All secondary symptoms are, as a rule, symmetrical. The course of syphilis is so much modified by specific treatment that it is difficult to assign correctly the duration of the secondary stage; it probably varies from a month or two, to a year or more. When it has come to an end the patient may never suffer again from any symptoms of the disease, or he may pass on directly to the development of those symptoms which are classed as tertiary. During the interval which intervenes between the secondary and tertiary stage, occasional relapses of the secondary symptoms may occur. The so-called psoriasis palmaris and sores on the tongue are the commonest symptoms,

but we also have occasional relapse of general eruptions, an instance of which we have had in the man before us.

In other cases the tertiary symptoms may appear before the secondary signs have subsided. Thus, there is no distinct line of demarkation between secondary and tertiary syphilis. The division into stages is arbitrary, but convenient; when the tendency to the formation of local, and usually unsymmetrical inflammation begins, we commonly say that the tertiary stage has set in. It lasts, unless cured, the rest of the life.

The most characteristic pathological product of this stage is the gumma, or, as it is sometimes called, the syphiloma or syphilitic granuloma. They affect the testes, the liver, the meninges of the brain, the cellular tissue, the muscles, the periosteum, the choroid or the skin. In the skin they produce serpiginous or lupoid affections, and in the periosteum nodes. Wherever they begin they are prone to be serpiginous, that is, to creep at their edges. When this action occurs in the central parts of the nervous system, it may produce such maladies as paraplegia, locomotor ataxia, ophthalmoplegia, and the like.

During the primary and secondary stages the disease is violently contagious. During the secondary it is transmissible to offspring, while during the tertiary it is probably neither contagious nor transmissible. Tertiary inflammations are usually not symmetrical, but they are locally self-infecting and may spread indefinitely, both as to extent and time, showing no tendency to spontaneous disappearance, as the primary and secondary ones do.

To further impress upon you the sequence of events in syphilis, I will give you Fournier's striking analysis, in which its apparition and development is likened to a "drama" with three acts:

First Act—Contamination. The virus penetrates the organism by one mode or another.

First Interval—Apparent repose of the organism—incubation. Nothing appreciable betrays the disease, as yet.

Second Act—Introduction at the point where the virus has penetrated, and only here, of a lesion called initial, which, for the time, constitutes the only expression of the disease.

Second Interval—Another period of repose of the organism. The initial lesion continues to be the only symptom by which the disease is expressed.

Third Act—Explosion of multiple and disseminated lesions, beyond and outside of the seat of contamination. This is the period of visible generalization of the disease.

From this description of the disease, which is a mere outline of its distinctive features, you will recognize that lesions of the skin may appear at any period in the course of syphilis, being among the earliest symptoms, and not unfrequently among the latest. They are, however, much more frequent during the first two years after infection. Syphilitic eruptions are caused by two distinct morbid processes, hyperæmia and cell infiltration. The hyperæmic or erythematous syphilides present several varieties and are peculiar to the earlier stages, being rarely seen later than two years after infection. They may resemble, in their lesions, most of the other diseases of the skin, as has been already said. It is the syphilitic behavior, rather than the syphilitic lesion, which guides us in our diagnosis. Some of the peculiar features of the early syphilides are—

Palymorphism—A patient may show maculæ, dry and moist papules, pustules, scales, crusts, etc., all associated together. It is quite different with non-syphilitic eruptions, which usually present a tolerably uniform character.

The peculiar color of syphilitic eruptions—The syphilitic tint is usually described as of a copper color, or as like the color of a slice of lean ham. This is well illustrated in this man, but you must not place too much dependence on this characteristic. There is no color peculiar to the syphilodermata which may not be seen in other diseases of the skin. The macular syphiliderms, which are the most frequent and earliest expressions of cutaneous

syphilis, are at first usually of a pale rose color; afterwards the color deepens, and as the eruption pigments and begins to pass away, the brownish color is developed; at first the color disappears upon pressure, but later is persistent.

The ham color is usually most marked on papules, while the coppery tint is more apt to be observed in tubercles.

The peculiar rounded or circinate form which the lesions very commonly present is often a valuable aid to diagnosis. Again, *their course*, as compared with that of simple eruption, is marked by chronicity and absence of inflammatory features, and of itching and pain—important diagnostic features.

Their amenability to the curative influence of mercury—A questionable eruption, which yields to this touchstone, may, with certainty, be regarded as syphilitic.

But, gentlemen, I have detained you over the hour, and I will say but a word as to treatment. We will place this man under the influence of mercury. The choice of the form in which it shall be administered is often little more than a matter of personal preference. There is sometimes an advantage, during a prolonged mercurial course, in using different preparations at different periods, as one long continued seems to lose its effect.

I am myself partial to the so-called "tonic" treatment, brought into prominence by the writings of Keyes.

We will give this man a pill containing one-sixth of a grain of proto iodide of mercury, after each meal, gradually increasing the dose, until, upon striking the jaws together, a little sensitiveness of the teeth is manifested. Having thus ascertained the patient's susceptibility to mercury, we will divide the full dose by half, and will recommend its continuance for six months to a year. When all symptoms have subsided, the quantity may be still further reduced, say one-third of a full dose, and this dose persisted in for at least six months after every indication of the disease has disappeared.

It is often difficult to induce patients to follow out so prolonged a course of treatment. The symptoms once fairly gone, the

patient gets tired of the continuous dosing, and if he stops too soon you are likely to have him back on your hands for the treatment of tertiary symptoms.

Clinical Reports.

Some Gynæcological Cases.

By F. R. Campbell, M. D.

Case 1. Removal of uterine fibroid. Mrs. G., age 34, multipara, has been troubled with dysmenorrhœa for the past twelve years. Five years ago the pain at the menstrual epochs was greatly increased in severity, and has been gradually growing more intense. There has been excessive menorrhagia for some time past, and the patient is now extremely anæmic, and somewhat jaundiced. Patient was first seen by me October 2, 1884. She was suffering the most agonizing pain, and flowing excessively. On making a digital examination I found the os dilated, and a tumor the size of a goose egg could be distinctly felt within the uterine cavity. The patient's temperature was at this time 104°, and, as she gave a history of intermittent fever, I prescribed quinine, and also morphine in sufficient quantities to relieve pain.

October 3d. Dr. C. C. Frederick was called in consultation. We examined patient under ether, and found that the tumor was a fibroid, sessile, and attached to the fundus of the uterus. It was decided to operate, as the patient was very anxious to be rid of her burden, even though the chances of recovery were slight.

October 6th. Although the patient was so weak that she could not leave her bed, and her temperature was 102°, we attempted the removal of the tumor by ecraseur. After several futile attempts, the wire breaking each time, we abandoned this method of operation. The cervix was incised bilaterally, a curved uterine scissors introduced and the tumor enucleated.

The cavity of the uterus was washed out with a solution of bichloride of mercury in warm water. There was but little hemorrhage, and the patient soon rallied from the shock and effects of the anæsthetic. The uterine injections were continued for two weeks, when all symptoms of pelvic inflammation disappeared. For four weeks, however, the fever, which had assumed a remittent type, continued and baffled all remedies. Quinine, gr. xx per diem, was finally given hypodermically with good results. The temperature gradually fell, but did not become normal.

Four weeks after the operation, a tumefaction appeared in the right hypochondriac region, causing considerable pain. In a few days there were evacuations of pus per rectum, and the swelling disappeared, with an improvement of the general condition of patient. A supporting treatment was continued with antipyrin, gr. x *bis die*, as the frequent hypodermic injections of quinine had irritated the skin. The patient has continued to improve, and writes me, Dec. 28th, that she is quite well, and has menstruated without pain for the first time in six years.

Case 2. Salivation by intra-uterine injections of bichloride of mercury. Mrs.W., age 18, had a miscarriage Oct. 17th, during the fourth month of utero-gestation. For ten days succeeding this event, she had frequent pains and hemorrhages, which became so alarming Oct. 27th that a physician was summoned. On examination, I found that the placenta was retained, but was unable to remove it, and consequently obliged to tampon the vagina. The patient's temperature was at this time 105° with all the symptoms of septicæmia.

In the morning, Oct. 28th, Dr. D. McNeil was called in, and we succeeded in removing the placenta piece by piece. Intra-uterine injections of solution of corrosive sublimate, 1 part to 1,000, were employed every ten hours, an antipyretic dose of quinine was given, and stimulants copiously administered. The temperature fell to 103° during the day, and the injections were

given at longer intervals. Oct. 31st, the patient complained of a sore mouth and said she could not masticate food. The breath showed a distinct mercurial odor and the teeth subsequently became loose. The bichloride was stopped and liq. sodæ chlorinatis substituted. The patient continued to improve and eventually recovered after suffering a month with a severe attack of phlegmasia dolens.

Case 3. Muriate of cocaine in the treatment of venereal warts. Kate H. has had venereal warts for three years. The labia majora, the perinæum and even the inner aspect of the thighs were covered with these excrescences. Chromic acid was applied under anæsthesia in August last, but the operation only caused a great deal of suffering and the warts soon returned. Glacial acetic acid was applied to them in my office, but caused so much pain that the application could not be repeated.

I decided to try the new local anæsthetic in the treatment. A four per cent. solution was painted over the warts, which were afterward carefully saturated with glacial acetic acid. There was scarcely any pain in this method of treatment. The warts rapidly disappeared, and although two months have elapsed since the last application of the acid, there is no indication of their return. Fluid extract of thuja occidentalis was administered internally in connection with the local treatment.

Case 4. Removal of urethral caruncle, using muriate of cocaine as the anæsthetic. Mrs. B., age 29, has suffered for two years past from painful micturition and dyspanuria. After taking various proprietary remedies, including twenty-four bottles of "Safe Kidney Cure," she decided to consult a physician. On inspection, I found a urethral caruncle nearly as large as a chestnut, projecting from the urethra. Passing a probe along side of it, the pedicle was ascertained to be about half an inch in length. The tumor was so extremely sensitive that manipulation with the forceps was impossible. Absorbent cotton on a probe was saturated with a four per cent. solution of muriate of cocaine

and applied for a few minutes to the caruncle. It could then be grasped with the forceps, and was removed with a Jarvis snare. There was but little pain experienced, except at the last, when the wire caused traction of the urethral mucous membrane, which had not been anæsthetized by the solution.

Society Reports.

Buffalo Medical and Surgical Association.

Regular Meeting, Dec. 2, 1884.

President, Dr. F. W. Bartlett, in the Chair.

Present—Drs. Hubbell, Cronyn, Macniel, Van Peyma, Wetmore, Hartwig, Runner, Weil, Coakley, Brecht, Hawkins, Stockton, Frederick, Park, Barnes, and persons.

In the absence of Dr. Peterson, Dr. Daniels was elected Secretary *pro tem.*

Under the head of "Reading and Discussion of Essay," Dr. Hartwig, the essayist for the evening, stated that he was hardly prepared, on account of the limited time that he had had to prepare his paper, and suggested that further time be allowed, but that if the association desired, he could give it in the form of a lecture from his notes, if he would be permitted to subsequently put it in proper shape for publication.

Upon a motion being put, he was unanimously requested to proceed. (The paper will appear in a future number of the Journal, entitled, "Atypical Case of Pneumonia.")

Discussion—Dr. Van Peyma said that the points made seemed to be more in the disagreement in classification of various authors. Also, that as for himself, he considered that the "cheesy" was a second stage of the "catarrhal" form. Tubercular disease he did not believe to be an entity, any more so than in other or all diseases. He did not believe in entities.

Dr. Cronyn said that the essayist had left very little tangible to discuss. He expected to hear the report of a typical case of pneumonia, which is rare. In the disease, if resolution does not occur within a reasonable time, something else does, and we may have many forms, and all the usual sequences, of chronic disease of the lungs. He did not wish to discuss the micro-organism nonsense, and felt that he had a right to differ from some of the authors. Dr. Flint had called it pneumonic fever, and gave large doses of quinine; also said that it was wise to consider separately the sthenic and asthenic forms.

Dr. Bartlett said that he thought a typical case would be described. He thought that in daily practice we should carefully differentiate tuberculosis. Believed, with Dr. Cronyn, that it was quite proper to differentiate the sthenic from the asthenic form. Thought it probable that the paper would come up for future discussion.

Dr. Hartwig, in closing, said that he expected to hear more from the older members. In replying to Dr. Van Peyma, he maintained that the "cheesy" had a definite form, destructive in and between vesicles, and should be properly so recognized. Thought it wrong to name anything else "cheesy." He admitted that other forms may look similar, but in reality were not of this distinctive form, as the true "cheesy" consisted of broken down interstitial tissue, and we should give it a nomenclature, and not confound it with phthisis or anything else.

Dr. Van Peyma further stated his belief that the "cheesy" form was only a secondary stage of the croupous variety.

Dr. Hartwig remarked that evidently some members were misled by the title of his paper, considering "Atypical" a misprint, intending to be two words, but that it was correct.

Dr. Bartlett said that with that explanation it would literally mean "irregular," and would explain why some were expecting to hear the report of "a typical case."

Prevailing Diseases—Rheumatism, scarlatina, diphtheria, sore throat of various kinds, and Dr. Bartlett had noted that the sequelæ of measles was unusually obstinate.

Reports of Committees—Dr. Hartwig said that the doctors who had been asked to report concerning midwives were somewhat dilatory, and asked that his committee be continued, which, upon motion, was granted.

The President stated that our Secretary, Dr. Peterson, had left the city to assume professional duties elsewhere, and that we were likely to be without a Secretary, and asked what action should be taken. He further stated that Dr. Peterson had not, as yet, formally resigned.

Upon the suggestion of Dr. Cronyn, it was decided to wait until Dr. Peterson be communicated with before formally filling the vacancy.

Adjourned.

CLAYTON M. DANIELS, *Secretary pro tem.*

TRANSACTIONS OF THE BUFFALO OBSTETRICAL SOCIETY.

Stated Meeting, Dec. 23, 1884.

The President, Dr. W. W. Potter, in the Chair.

Dr. Thomas Lothrop read a paper on "Rest during the Menstrual and Puerperal Periods."

He began by referring to the alternate conditions of activity and repose, as being essential in the economy of nature, and important factors in the problem of life; and showed their importance to the physician in analyzing causes and effects as pertaining to morbid phenomena.

He next proceeded to consider the local concomitants of the menstrual epoch, such as congestion or hyperæmia of the ovaries, uterus and mammæ; the exaltation of nervous force, both local and general, and the maturation and escape of the ovum. He contrasted the physiology of the past and the present, and proceeded to discuss the changes in the female economy

which take place at puberty, signalized by the establishment of the menstrual flow.

The perodicity of this newly-established function was referred to as its mysterious and inexplicable peculiarity; it is accompanied by an increase of all the vital forces of the body, and new activities are set in motion. Then comes prolonged rest, when the organs are quiescent, until the phenomena are repeated by the ripening of another ovum. The proportion of women who suffer morbid disturbances during menstruation was shown, according to reliable authority, to be forty-six per cent. How can this be explained of a function which is strictly physiological? The conditions, he asserted, which were imposed upon woman through her present social environment, depreciated vital force; and the standard of health was often affected by antecedent causes, which were created by the faulty hygienic conditions of infancy, childhood, and adolescence. Can we not, he continued, further explain the morbid phenomena which statistics unfold as accompanying the performance of the menstrual function, such as pain due to obstruction, congestion or uterine hyperæsthesia, and the manifold hystero-neuroses, on the theory that muscular development and nutrition are lost sight of in the fondness for artificial excitement, which unduly stimulates the nervous activities of the sex, and which build up a physique morbidly sensitive to every external disturbance, and finally develop weaknesses which cause sterility and premature decay? The conditions of the uterus and its appendages during menstruation are, he asserted, often upon the limits of pathology, if not precisely morbid.

Pain, he said, may depend upon—

1. Imperfect power of resistance in the nerve centers, rendering them unduly susceptible to the increased vascular tension.

2. Disproportion in the development of the uterus, resulting in organic defects in the genital canal.

3. Imperfect nutrition and development from prolonged celibacy or sterility; or, the sudden suppression of the menstrual flow; or, the accidents of pregnacy or parturition.

Again, the mucous membrane, at the menstrual period, is swollen to the extent of 0.118 to 0.236 inch, and of almost pulpy consistency; showing that the uterus is in that peculiar condition in which any disturbance of the vascular equilibrium may easily convert a natural physiological engorgement into a pathological state. The morbid processes once set up are quite likely to persist, and gravitation further aids in the development of the various displacements to which the organ is liable.

The essayist then proceeded to show how rest tends to enable the vital forces to regain lost vigor, to allay morbid irritability, and to restore the equilibrium between the nervous and muscular forces where the nervous is excited at the expense of antagonizing force. The neuroses of menstruation, such as hysteria, convulsions, paroxysms of insanity, headache, cramps, catalepsis, etc., he classified as cases of reflex irritation upon the nerve centers, whose powers of resistance have been abnormally diminished. For the want of control of nervous and muscular action in these highly sensitive organizations, rest is the *sine qua non* at each menstruation. In strictly normal menstruation nature takes care of herself; but, in the very large per cent. of cases which are not natural, and which have passed beyond the confines of physiology into the domain of disease, rest fulfils an indication which can be practically applied with incalculable benefit. He further elaborated the meaning of the term rest, as here used, as being absolute physical and mental repose.

He next took up the subject in its relations to the puerperal state, where the morbid phenomena are varied, and often sadly fatal. Here, he asserted, the responsibility of the physician is very great, even the weightiest of all his professional duties.

High civilization and refinement render women less able to bear the shock of parturition; pain and difficulty in parturition

are probably artificial consequences of these social conditions. In South Africa, Iceland and among savage tribes there is less suffering and greater fertility than in the higher states of civilization. Accepting these data, and recognizing that the same antecedent causes which lead to disturbances in the menstruating woman, may affect the puerperal state, it is interesting to inquire whether the complications and difficulties which surround the latter may not be arrested or diminished by hygienic measures? In the changes in the constituents of the blood, such as the diminution of the red corpuscles and albumen, and the increase of white corpuscles and fibrin; also in the decrease of its density, and the increase of fatty phosphorized matter, may be found the *raison d'etre* of inflammations, of septic infections and the allied diseases. The changes in the respiratory organs were alluded to, particularly with reference to the increased consumption of carbon during pregnacy, and the query propounded: Is the arrest of tubercular disease in the gravid woman, and its rapid progress after parturition, due to the strict solidarity between the uterus and the respiratory function, the first supplementing the other, as declared by Barnes? The dynamic state of the circulation during pregnacy was referred to: First, superior arterial hyperæmia; and, second, inferior venous hyperæmia; and the relations these may bear to hypertrophy of the heart, and to venous obstructions in the lower extremities, pointed out. The changes in the glandular system were next considered; enlargement of the thyroid and the spleen, together with the changed dimensions and relations of the liver, the salivary, sebaceous and sudoriparous glands were referred to, and the conclusions drawn from this brief review of the changes in the organs and fluids of the body, was that the border-land of pathology is near at hand in the puerperal state; that nature is jealous of any imprudence in her victims, and that the *vis conservatrix naturæ* fails to guard the sex from the dangers of this important period.

The local changes in the pelvic organs were next considered. The measurements of the uterus at the full period after expulsion of the fœtus were stated to be from 12 to 19 centimeters; at the expiration of two weeks it is reduced to 9 to 12 c., the length of the cavity of the non-puerperal woman being 6 to 7 c. The weight of the uterus immediately after parturition is from 22 to 24 oz., and even 30 oz. At the end of the first week it is reduced to 19 to 21 oz.; second week, 10 to 11 oz., and at the end of the third to 5 to 7 oz., the normal weight, 1½ to 2 oz., being gradually reached at the end of two months, when not impeded by disease. The failure of this process of reduction to normal size and weight—subinvolution—is one of the great hindrances to puerperal convalescence.

The change in size and weight of the uterus is brought about by, first, action and tonic contraction of the muscular fibres; second, by absorption and excretion. If the first is interfered with, we have resulting blood-stasis, disposition to hemorrhage, and often feeble glandular action and impaired nutrition. The regeneration of the new mucous lining is frequently delayed. Subinvolution of the vagina is often a sequence of parturition of no small moment.

For the prevention of the various pathological sequences of pregnancy and parturition, as well as for the promotion of early convalescence after delivery, the essayist urged that puerperal women be encouraged to take physical and physiological rest, more or less prolonged, according to the conditions surrounding each case. The authorities cited by the essayist in support or elucidation of the various asseverations, histological, pathological and physiological, were numerous and the quotations trite. He concluded with the following summary:

1. That rest during and subsequent to menstruation, under the artificial conditions of the environment of the sex in this age, is indicated: first, as a preventive to disease, and, second, as a prudential measure for physical suffering.

2. That rest or repose, after parturition, is indicated for the restoration of the organism to its *status quo.*

3. That the traditional custom of strictly observing the lying-in month has the sanction of experience.

4. That the conditions of the sex under the influence of barbarism, or the imperfect civilization of Iceland, cannot be accepted as a standard to guide the profession in our more advanced civilization.

5. That the altered conditions of the organism under the influence of menstruation and pregnancy present abundant data to sustain the physiological and prudential necessity for rest for self-reparation.

Discussion—Dr. J. W. Keene, in opening the discussion, remarked that it was quite possible to over-estimate the importance of rest. He regarded the performance of the menstrual function as a physiological one, and the organs involved in its office are but obeying the natural law of habitual rest after a period of activity, which characterizes the functions of all the organs of the body. The heart beats and rests; the brain acts and rests; the activity of the stomach is periodical; the phenomena of menstruation obey the same law. There was danger, he thought, in the enjoining of physical repose in these cases as a routine practice, in laying the foundation or habit of chronic invalidism. We find, in the wealthier classes, a great tendency to indolence and a condition of chronic invalidism. They like to be sick. We should, therefore, be careful how we enjoin upon a girl, at a period when she is full of morbid fancies attendant upon the establishment of new functions, a period of a week's rest.

We all agree, he continued, with the main features of the paper, that in some cases rest is imperatively necessary. In other cases it seems to me not only unnecessary, but is liable to do harm. Ordinary care and the avoidance of unusual exertion should, no doubt, be carefully enjoined, and the young female

should be taught the significance of this function. Right here is a great field for missionary work before the physician. Inculcate in mothers the necessity of teaching their daughters the significance of these things, so that a girl will know how to care for herself during the menstrual week, and avoid undue and unnecessary exposure. It is interesting, said he, to notice the grouping together of the phenomena of menstruation, and those before and after parturition. Baudelocque, so far as he knew, was the first to voice this idea, and who held that every menstruation was a miniature abortion, in which an ovum was lost or did not go to full term, and only lacked the more or less important factor of impregnation.

He wished to speak of one or two points further: First, the elucidation of the modification of phthisis by the pregnant condition. He supposed that to be one of the ideas of the older writers which was now exploded; that the latest teaching is that the existence of pregnacy serves to hasten the development of phthisis, even in cases where it had not yet appeared. Exceptions to this rule could be explained on other grounds. Second, physicians very generally agree, now-a-days, as to the propriety of rest during the puerperal state at certain periods, notably in those where abortions have been found to be especially imminent. Just how long rest should be enforced after parturition was still a question. The ninth or tenth day does well as routine practice; some can get up, however, on the fifth, while others cannot do so without risk until the fifteenth day. The guide should be the general condition of the female, and especially the condition of the uterus. If it has undergone involution, so that it has escaped above the pubes, there seems no good reason why a woman should be kept in bed two or three weeks subsequent to that time.

Dr. W. D. Greene said that he was impressed with the remarks of the essayist as to women in the olden time having no pain during parturition. This he could hardly accept if the lower

animals furnished an analogue to judge from. He also thought that there were certain conditions during menstruation when a woman would be benefited by the erect posture and moderate exercise; for instance, when there was a narrowing of the canal which served to dam up the fluids. Here the law of gravitation might prove beneficial.

Dr. F. H. Potter said that the vital point in this matter was, not what a barbarian woman can do, but what a civilized woman *does* under her present environment. A few years ago he had occasion to look into the subject in one of its branches, and, in doing so, he was led to tabulate the work required of the pupils at Welles and Elmira colleges. He found the time devoted to mental work was out of all proportion to the time given to rest. They arose early in the morning, and studied and walked, or worked in the gymnasium until nine o'clock at night. Something was going on all the time, without pause, or rest, or cessation from duties. It seemed to him that just at this critical time in life, when nature required all the strength she had to properly develop the new function, it was abominable for persons pretending to be educators to insist that young women should do this great amount of work without proper periods of rest.

Dr. W. S. Tremaine remarked that he had been favored with opportunities of observing parturition, and its effects in the civilized and the uncivilized. Menstruation and parturition in females who live in a natural state are perfectly normal processes. They are not perfectly normal processes in civilization. One reason for this difference, he said, was to be found in the fact that civilization makes an immense demand upon nerve tissue. When the tissues of the body are perfectly balanced, that constitutes health; when an extra demand is made upon any one tissue, a tendency to disease is produced. In regard to uterine displacements, as alluded to by the author, he remarked that the evil of the present day seemed to him to be too great a tendency to localism. There could be no question of the

value of rest, and he referred to Dr. Wier Mitchell as having taught us valuable lessons on this subject. Among Indian women menstruation amounts to nothing more than expectoration, as far as its effects on the economy were concerned; and parturition was purely a physiological process. If there is some reserve force in the nerve tissue, the evils attendant upon the performance of these functions will be avoided. Hence, he believed in the propriety of rest, for it served to store up strength in the exhausted nerve tissues.

Dr. H. D. Ingraham was in favor of rest during the menstrual period, especially in the case of young girls; did not believe a woman would properly develop unless she took considerable rest during the period in which she was changing from girlhood to womanhood. He did not believe the brain and the ovaries could be developed at the same time without material harm to one, and the ovaries generally suffered most. He thought our boarding schools and female colleges turned out a larger proportion of invalids than of healthy girls. With regard to Dr. Goodell's practice in getting his puerperal women up early, while it is true he does so, yet he guards them with a careful hand and keeps them very quiet after they do get up.

Dr. George E. Fell said that this question of the schools was an important one, and physicians should take hold of it in an interested and earnest way, with a view to prevent the physical disasters from over-work on the part of young girls. There is no question, he said, but that there are radical defects in the methods of teaching, not only in the higher schools and colleges for females, but in our common schools, and these evils are having an influence for harm upon the health of the future mothers of the land. As to the question of rest during the puerperal period, he believed that in many instances it was very necessary; while, on the other hand, there were many conditions of the puerperal woman where activity seems to benefit her. He thought that the intelligent physician would govern these

various conditions according to their necessity, and that no other rule could be laid down.

Dr. R. L. Banta found that the subject had been so well and thoroughly gone over, that he had very little to add; but it was his privilege to see all sorts and conditions of puerperal women, some of whom would get the family dinner on the second day after accouchment, and would make a good recovery, while others he had seen in bed three or four months, yet they, also, finally got well. Now he was of the opinion that Dr. Fell had struck the key-note of the whole matter when he asserted that this was a question for the individual judgment of the physician in charge, who should either permit or interdict activity according to the necessities of the particular case in hand. He even thought it was rest for some women to get up soon after labor.

Dr. Lothrop said, in closing the discussion, that there had been too little opposition to his views for him to make extended remarks in reply; but one thing he would amplify a little was in relation to the effect of pregnancy upon phthisis. He had witnessed the phenomena mentioned in the paper too often to feel doubtful as to the fact that the progress of the malady was often arrested by gestation, and as often had he seen these cases proceed to a rapidly fatal termination after parturition.

Proceedings of the Erie County Medical Society, Annual Meeting.

The annual meeting of the Erie County Medical Society was held in the Young Men's Christian Association Building, Jan. 13, 1885. The President, Dr. J. C. Greene, called the meeting to order and the following members were present, viz.: Drs. Gay, Cronyn, Crego, Pryor, F. H. Potter, Root, Marcley, Andrews, Ring, Gregory, E. H. Long, W. D. Greene, Briggs, Frederick, Thornton, F. W. Abbott, Wetmore, F. F. Hoyer,

Nott, Storck, Lynde, Runner, Ballou, Hancock, Brecht, Coakley, Dagenais, B. L. Lothrop, J. H. Potter, Hopkins, B. P. Hoyer, Diehl, Davidson, Howe, Keene, Samo, Thompson, Berkes, Prince, Campbell, Daggett, W. W. Potter, Strong, Bissell, Bailey, Dambach, Geo. Abbott, Kamerling, Haberstro, Dorland, Grove, Hawkins, Rochester, Jackson, Fowler, Boardman, Earl, Meisburger, Macniel, Hebenstreit, S. S. Greene, Van Peyma, Hauenstein, Wilson, Warren, Walsh, Hubbell, Wyckoff, Cary, Barker and Clark, and, by invitation, Drs. Sheehan and D. W. C. Greene.

The minutes of the semi-annual meeting of June 10th were read and approved.

After the reading and adoption of the minutes, Dr. Gay moved a suspension of the rules so that the society could at once listen to the annual address of the President. Carried.

At the conclusion of the President's address, Dr. Geo. Abbott moved that a vote of thanks be tendered to the President for the able and instructive paper which he had presented for their consideration. Carried.

The Committee on Membership presented the following report, which was received, and recommendations contained therein adopted:

Your Committee on Membership would respectfully report that they have examined the credentials of the following named gentlemen, and find that the diploma of each was granted by a legally constituted medical college in good standing. We therefore recommend that the following named gentlemen be now admitted to full membership in this society, viz.: William Pask, James Porter, J. C. Parmenter, A. B. Wilson, William G. Ring, F. P. Vandenburg and F. W. Hinkel.

Concerning one of the above applicants your committee would offer the following:

Resolved, That the Erie County Medical Society learns, with regret, of the early and sudden demise of William Pask, M. D.,

who, at our last semi-annual meeting, made application for membership in this society.

Resolved, That the foregoing expression of sympathy and regret be entered upon the minutes of our society, and a copy thereof be transmitted to the family of the deceased.

Respectfully submitted,

E. T. DORLAND,
T. M. JOHNSON,
Committee on Membership.

The newly-elected members who were present were introduced to the society and requested to sign the by-laws. As many were absent, Dr. Storck moved that the Secretary be directed to notify members of their election, so that they could be present and sign the by-laws.

Carried.

Applications for membership were received from Drs. D. W. C. Greene, C. F. Howard, E. E. Johnston and Thomas J. G. Sheehan, which were referred to the Committee on Membership.

Under the head of " Reports of Committees and Officers," Dr. Gay, chairman of the committee appointed to secure rooms for the society's use, presented the following report, which was received and adopted:

Your committee, appointed at the last meeting to procure a suitable room for the accommodation of the society, recommend the hall in the Y. M. C. A. building. Annual rental will not exceed twenty, and may not be more than ten dollars.

C. C. F. GAY,
H. R. HOPKINS,
U. C. LYNDE,
Committee.

Dr. F. W. Abbott, the Treasurer of the society, presented his annual report, which was as follows:

FRANK W. ABBOTT, TREASURER, IN ACCOUNT WITH THE ERIE COUNTY MEDICAL SOCIETY.

1884.			*Dr.*	*Cr.*
Jan. 8.	To Cash on hand		$ 7.82	
" 8.	" Dues and initiation fees		137.50	
Apr. 7.	" " " " "		5.00	
" 8.	" " " " "		50.00	
June 10.	" " " " "		40.50	
Nov. 19.	" " " " "		2.00	
1885.				
Jan. 1.	" Interest on deposits		6.76	
1884.				
Jan. 8.	By Paid John Ferguson, Janitor			$ 10.00
" 9.	" " Peter Paul & Bro., printing, etc			13.90
Feb. 4.	" " H. R Hopkins, State Society dues			25.00
" 5.	" " Norman E. Mack, printing			25.25
" 23.	" " Ed. Storck, Chairman Board of Censors			25.00
Mar. 31.	" " Rent Cadet Parlors, Sept. 8th			3.00
Apr. 16.	" " Illustrated History of Buffalo			17.00
June 12.	" " Peter Paul & Bro., cards and printing			36.85
July 21.	" " Flint & Dorr, insurance			3.00
Nov. 6.	" " Rent of Y. M. C. A. Hall			10.00
1885.				
Jan. 5.	" " Rogers, Locke & Milburn, for legal opinion in regard to Charter of Niagara University			25.00
Jan. 5.	" " Rogers, Locke & Milburn, services at the hearing before the Governor			50.00
1885.			$249.58	$244.00
Jan. 12.	By Balance in treasury			5.58

Respectfully submitted,

F. W. ABBOTT, *Treasurer.*

On motion of Dr. F. H. Potter, the report of the Treasurer was received and referred to an Auditing Committee.

The Chair named as such committee, Drs. F. H. Potter, A. H. Briggs and U. C. Lynde.

The Librarian, Dr. J. B. Samo, submitted the following report, which, on motion of Dr. Ring, was received, adopted and placed on file:

MR. PRESIDENT—The report of the Librarian showeth that the general condition of the library is good; that the additions thereto, since the last report, have been some volumes of the Syd. Society's publications, and two volumes of the "History of Buffalo and Erie County;" that the number of volumes drawn out have been few, the most reasonable inference from which would seem to be that members of the Erie County Medical Society have ample libraries of their own, or else that they are not aware of the many valuable works the society's library contains. The Librarian would urge upon the younger members, at least, the importance of improving their acquaintance with the library. The regulations in regard to the drawing of books are, as stated in the by-laws, that any member not indebted to the society and residing within ten miles of the library may have at any time two volumes drawn in his (or her) own name, and retain the same one month, and if residing more than ten miles from the library may retain the same three months.

The library is accessible every day, from two till ten P. M., at 396 Pearl street, corner of Chippewa.

All of which is respectfully submitted.

J. B. SAMO, *Librarian.*

Dr. Storck, chairman of the Board of Censors, stated that the board had no written report to present. He reported orally that during the last six months the board had endeavored to prosecute physicians who were practicing in violation of the law in this county. In these efforts Dr. Storck stated that the board was indebted to its attorney and to Police Justice King, for their earnest and efficient co-operation in seeking out and punishing the offenders. He was sorry he could not say the same of the gentlemen connected with the District Attorney's office. He stated that there were still some illegal practitioners in the city and county, mostly females, who had not been prosecuted, because the board had not been able to procure proper and sufficient evidence against them. In regard to Mrs. Kim-

ball's establishment, evidence sufficient to warrant proceeding against her had not been procured. Concerning Dr. Don's dispensary, he stated that it was in charge of two regular physicians, one a graduate of the Buffalo Medical College and a member of this society; consequently, the board had no right to molest them in their work.

On motion, the report was received and adopted.

The Auditing Committee presented the following report, which, on motion of Dr. F. H. Potter, was received, adopted, placed on file and the committee discharged:

Your committee appointed to examine the report of the accounts of the Treasurer of this society for the past year, would respectfully report that they find said accounts true and correct.

(Signed) F. H. Potter,
A. H. Briggs,
U. C. Lynde,
Committee.

No report was received from the Committee on Legislation.

There being no other reports of committees and officers, business was opened under the head of "Election of Officers," and Dr. Wm. Ring moved that this society now proceed to the election of President for the ensuing year. Carried.

The Chair appointed as tellers Drs. A. A. Hubbell and Mary Berkes.

Dr. Geo. Abbott moved that Dr. Berkes be empowered to cast the ballot of this society for Dr. J. B. Andrews for President. Carried.

One ballot was cast, which bore the name of Dr. J. B. Andrews. Dr. Andrews was therefore declared unanimously elected President for the ensuing year.

Dr. Storck moved to proceed to a formal ballot for Vice-President. Carried.

The tellers announced the result of the ballot as follows: Total number of votes cast 53, of which Dr. Dorland received 31, Dr. W. W. Potter 10, Dr. Hopkins 3, Dr. O'Brian 2, Dr.

Thompson 2, Dr. Van Peyma 1, Dr. Pryor 1, Dr. Strong 1, Dr. Clark 2. Dr. Dorland having received a majority of the votes cast was declared duly elected Vice-President for the ensuing year.

On motion of Dr. Dambach, Dr. Dorland's election was made unanimous.

The President directed the members of the society to prepare their ballots for Secretary, and declared that nominations were in order. Dr. Rochester presented the name of Dr. Wm. H. Thornton, which nomination was endorsed by Dr. Barker. Dr. Crego placed in nomination Dr. Edward Clark. A single ballot was taken, resulting as follows: Total number of votes cast 56, of which Dr. Thornton received 27 and Dr. Clark 29. Dr. Clark was therefore declared duly elected Secretary for the ensuing year. The election, on motion of Dr. Rochester, was made unanimous.

Dr. Howe moved that Dr. Hubbell be empowered to cast the ballot of this society for Dr. F. W. Abbott for Treasurer, which was carried. One ballot was cast, which bore the name of Dr. F. W. Abbott. Dr. Abbott was therefore declared unanimously elected Treasurer for the ensuing year.

Dr. Wm. Ring moved that Dr. Hubbell be empowered to cast the ballot of this society for Dr. J. B. Samo for Librarian, which was carried. One ballot was cast, which bore the name of Dr. J. B. Samo. Dr. Samo was declared unanimously re-elected Librarian of this society for the ensuing year.

Dr. Andrews moved that the present Committee on Membership, consisting of Drs. Dorland, Mynter and Johnson, be re-elected, substituting the name of Dr. Berkes for that of Dr. Dorland, who had been elected to the office of Vice-President. Carried.

Dr. Cronyn offered the following resolution and moved its adoption:

"That inasmuch as the Laws of 1880 did away with the powers and duties of the Board of Censors as heretofore existing, resolved, that said board be abolished."

Dr. Hopkins moved as an amendment that this society now proceed to elect a Board of Censors.

Dr. Warner moved as a further amendment that a nominating committee of three be appointed, which was lost.

Dr. Cary offered as an additional amendment that the tellers be empowered to cast the ballot of this society for the present Board of Censors.

Dr. Cronyn insisted that the society must proceed in the regular form, whereupon Dr. Cary withdrew his amendment. The vote recurring upon the original resolution, as amended by Dr. Hopkins, it was carried, and the President directed the members to prepare their ballots for Censors.

While the tellers were counting the ballots for Censors, Dr. Barker moved to open under the head of "Miscellaneous Business." Carried.

Under this head Dr. Geo. Abbott offered the following intended amendment to the by-laws, viz.: "That the order of business as given in Article IV., Section 1, of our by-laws, be so amended as to make No. 13, namely, the valedictory address of the retiring President, as No. 5 thereof, and that the numbering of the several orders be made to conform to such change of order."

Dr. Hopkins offered the following resolutions, which, on motion of Dr. Crego, were adopted as read:

WHEREAS, This, the Medical Society of the County of Erie, has, during the year last past, frequently placed upon record its appreciation of the importance of the matter of State license of practitioners of medicine, and

WHEREAS, This subject is now receiving the earnest attention of the medical profession of the State as represented by the Medical Society of the State of New York, therefore,

Resolved, That this society would respectfully represent to the Medical Society of the State of New York its confirmed sense and conviction of the importance of securing to the profession and the public the advantages of a State Licensing Board.

Resolved, That it is the further sense of this society that such State Licensing Board should be comprised of men having no connections with any medical institutions liable to conflict with the full and unbiased discharge of duty as State Examiners.

Resolved, That the foregoing be officially transmitted to the Medical Society of the State of New York.

Dr. Storck offered the following intended amendment to the by-laws:

"That Article II. of the by-laws, entitled Officers, be amended by striking out after the word Censors the words: 'The Censors to be severally designated and named in the ballot as follows: Examiner in anatomy, physiology and surgery; examiner in practice of medicine and obstetrics; examiner in chemistry and pharmacy; examiner in materia medica and botany; examiner in medical jurisprudence and pathology.' "

Dr. Abbott moved that the Treasurer be instructed to pay all bills and indebtedness incurred by this society. Carried.

Under this head Dr. Barker moved the adoption of the following amendments to the by-laws, which were offered by him at the semi-annual meeting in June:

To amend Section 1, of Article V., so that it shall read: "Every physician or surgeon residing in the county of Erie who may hereafter wish to become a member of this society, shall make his application to the Secretary, who shall present it at a regular meeting of the society. It shall be referred to the Committee on Membership, who shall report the result of their investigation, accompanied with a recommendation for or against the applicant at the next regular meeting of the society. The applicant shall be admitted by a majority-vote of the members present."

To amend Section 4, of Article V., by striking out the words, "pay the Treasurer one dollar," so that it shall read:

"SEC. 4. Every member, when admitted, shall sign the by-laws and be entitled to a certificate of membership."

To amend Section 5, of Article V., so that it shall read:

"SEC. 5. Applications for admission to the society shall be accompanied by the initiation fee of two dollars, and shall be presented at a regular meeting, but shall not be acted upon until the next regular meeting. The application shall be in the handwriting," etc.

To amend Section 6, of Article VI., so that it shall read:

"SEC. 6. The Committee on Membership shall carefully investigate, and, if possible, determine whether or not all applicants are of temperate habits, good moral character, and legally authorized to practice physic and surgery in this State, and report the result of their investigation at a regular meeting of the society."

The amendments were adopted as read.

Under this head Dr. J. D. Hill moved that a committee consisting of the President of the society and Drs. Barker and Hopkins, be appointed to revise the by-laws, and report at the next regular meeting of the society. Carried.

A communication from abroad relating to the welfare of the insane was read, which, on motion of Dr. Crego, was received and placed on file.

The tellers at this point announced that the following named gentlemen had received a majority of the votes cast for Censors, and they were declared duly re-elected a Board of Censors for the ensuing year, viz.: Drs. H. R. Hopkins, E. Storck, A. H. Briggs, P. W. Van Peyma and F. F. Hoyer.

Dr. Crego moved that the present Committee on Legislation, consisting of Drs. J. C. Greene, E. Storck, M. D. Mann, A. R. Davidson, A. H. Briggs, H. R. Hopkins and F. S. Crego, be continued as a Committee on Legislation for the ensuing year. Carried.

The President-elect, Dr. J. B. Andrews, was duly inducted into office, and thanked the society kindly for the great honor they conferred by electing him to preside over their deliberations.

He said he felt it to be no small honor to be called to preside over the third largest county society in the State, and that he would endeavor to discharge the duties devolving upon him as President in a fair and impartial manner.

There being no other business before the society, the meeting adjourned.

EDWARD CLARK, *Secretary.*

Selections.

STRANGULATED UMBILICAL HERNIA.

Dr. H. R. Burrell, in the *Boston Medical and Surgical Journal* of October 16, 1884, reports a very interesting case of strangulated umbilical hernia. The patient was a woman aged fifty-two and weighing 230 pounds. When admitted to the Carney Hospital it was found that she had a strangulated umbilical hernia. The tumor had existed four years, and had always been reducible until for about sixty hours before entrance, and was now of a doughy feel, livid in spots, and of tympanitic resonance. The patient was in intense pain, with a temperature of 101° F. and pulse of 150, small and wiry. An attempt was made, under ether, to reduce the tumor by taxis, but as this was without avail, an operation was decided on. An incision was made, three inches in length, over the superior part of the tumor. When the skin was divided, a large serous exudation escaped, showing that sloughing would have followed in a few hours. The constricting band was divided after some difficulty, owing to the tenseness of the tumor, and the hernia liberated. Upon being reduced there was found considerable adherent omentum remaining. This was removed by ligation. The redundant skin was then removed, leaving an abdominal section four to five inches in length. Hemorrhage was

not troublesome. Small sponges were packed into the bottom of the wound to prevent the blood getting into the abdominal cavity. The wound was closed by wire sutures, deep and superficial, and dressed with bichloridized gauze. A binder was also adjusted. The patient did well until the third day, when she became very stupid, with flushed face and contracted pupils. Temperature, 100° F.; pulse, 122. Upon removing the dressing, a quantity of offensive, sanious fluid escaped from the wound. All the sutures were then removed excepting a deep wire one, and the wound thoroughly washed out with chlorinated soda, a drainage tube was then inserted into the cavity, and iodoform used as a dressing. The wound was syringed out night and morning with the antiseptic solution. Upon the ninth day a mass of necrosed tissue was removed and the flaps were found to be undermined. The temperature, kept practically normal, and the thorough escape of the discharge prevented any constitutional disturbance.

Upon the twenty-fourth day after the operation, during the dressing, a supposed piece of necrosed tissue was seized in the forceps, when, to the surprise of all, a small piece of sponge the size of a chestnut was removed. This had been packed beneath the flaps at the time of the operation to control hemorrhage and had been overlooked. The convalescence was somewhat delayed, but she was finally discharged, well. The interesting features of this case were the abdominal section, and the disturbance caused by leaving a small sponge in the wound.

By the abdominal section a penetrating wound was changed into an incised one in which the edges could be brought accurately together, and, as the result showed, perfect union occurred, notwithstanding the aggravating delay. The lesson to be learned from not removing all the sponges from the wound is obvious and need not be enlarged upon. It is hardly possible to be over-cautious in this matter, and in all surgical operations accidents of this kind should be carefully guarded against.

Editorial.

Reports of Contagious Diseases to the Board of Health.

Our City Board of Health is unusually active at the present time, and never before, in the history of Buffalo, has the vigorous action of this body been more necessary. While the city, to the superficial observer, may appear to be in fair sanitary condition, in reality there are but few towns in the Union that contain a larger proportion of disease-breeding hot-beds. There are tenements swarming with inhabitants, many of whom sleep in rooms that the light of heaven has never seen; water-closets reeking with filth and exhaling deadly miasms; yards filled with putrefying heaps of garbage that have been accumulating for months, and whole districts that are not properly sewered or supplied with wholesome water.

While the sanitary authorities are doing all in their power to abate nuisances of this character, they will, at the same time, adopt new measures to arrest the progress of contagious and infectious diseases.

Blank cards have been sent out to the physicians requiring a report of the contagious diseases coming under their observation. These reports are to be given to the heads of families, who will déliver the same to the clerk of the Board of Health within twenty-four hours. If deemed necessary, the Board of Health will cause a placard denoting the character of the disease to be placed upon the house in which the infectious disease exists.

This plan has been successfully carried out in Milwaukee and Detroit for the past six years and has recently been adopted in Rochester and other cities of this State.

The objections to the plan are obvious but not insuperable.

1. Many physicians, on account of carelessness or ignorance, will object to this addition to their already numerous duties. But the work required is slight, and no intelligent practitioner will fail to see the importance of the matter. If any one should

be so perverse as to refuse to do his duty in this respect, a prosecution by the City Attorney would serve to enlighten him.

2. People will object to having their houses placarded as an infringement upon their personal liberty. But people do not object to have small-pox signs placed upon their houses. Why should they object to publishing the presence of diphtheria and scarlet fever, which number their victims by thousands to the hundreds destroyed by small-pox?

But the advantages of this plan are so great as to more than counterbalance these objections.

1. The householder is protected against prosecution by law for allowing a person to become infected on his premises without due warning of the danger. It has been decided by the courts that "If a man has contagious disease in his house, and fails to give due notice thereof, or allows people to come into his house without sufficient warning, or in any avoidable way exposes the public to contagion on his own premises, he is liable to indictment at the common law." (People vs. Townsend, 3 Hill, N. Y., 479; Welch vs. Stowell, 2 Doug. Mich., 332, etc.) "It is held that where a person knowingly communicates a contagious disease to another, and death results therefrom, the crime is manslaughter." (*Medico-Legal Journal*, Vol. I., No. 3, p. 394.)

2. By reporting contagious diseases to the Board of Health, their extent and location can be definitely known, and the percentage of mortality can be definitely ascertained, thus affording a valuable means of studying the relations of various sanitary conditions to the progress and mortality of each disease.

3. The spread of these diseases will be greatly diminished. Children coming from infected houses can be rejected from school, and all who can read will avoid the dangerous premises.

4. The health authorities are enabled to provide for the prompt removal of the dead and the thorough disinfection of the infected premises. During the past summer we saw the body of a child, dead with malignant scarlet fever, kept for two days in

rooms inhabited by other children, and within ten days every child in the house died of the same disease. Such a crime as this should no more be tolerated than infanticide. By compelling the prompt removal of the dead and the suppression of public funerals, many of these horrible consequences could be avoided.

The Niagara Medical College.

This young and vigorous institution occupied the new building, erected for its special use, the first of January, and the lectures have been given, and dissections made, in its well-appointed rooms. The building is admirably adapted for its purposes, is conveniently arranged, and possesses all the facilities for the training and education of its students. We are happy to say that its classes are composed of excellent material and exhibit, in their progress, the careful and painstaking instruction which the faculty impart.

It is not too much to expect that the profession will soon learn to appreciate the efforts of this institution in the labor it bestows for the higher education of its students. The establishment of this college is now assured; its aims and purposes are for the benefit of the profession, and not of its faculty, and it is expected that the profession, already committed to improved systems of medical education, will support their efforts and liberally endorse the college in its mission of educating medical men thoroughly equipped for the duties and responsibilities of the profession.

We have before us the first number of the *Annals of Surgery*, edited by L. S. Pilcher, M. D., Brooklyn, and C. B. Keetley, F. R. C. S., of London, England, with an able corps of collaborators. As surgeons and as writers upon surgical subjects, both of the editors are well and favorably known. There is no other journal in the English language exclusively devoted

to surgery. The contents of the initial number give promise that the *Annals of Surgery* will be a valuable addition to the library of every working surgeon. Subscription, $5.00 a year. Published by J. H. Chambers & Co., 405 North Third Street, St. Louis.

We have received, through the politeness of Prof. George E. Fell, the "Proceedings of the American Society of Microscopists," at its seventh annual meeting, held at Rochester, August, 1884. The volume contains 300 pages of matter, interesting especially to those who are devoted to microscopical investigations. It is highly creditable to our American scientists that their work enlists so much sympathy and co-operation at home and receives an appreciative recognition from the savants of the old world. This volume demonstrates that earnest work is directed in this important avenue of scientific inquiry.

Reviews.

The Diagnosis and Treatment of Chronic Nasal Catarrh. Three Clinical Lectures, delivered at the College of Physicians and Surgeons, New York. By George Morewood Lefferts, A. M., M. D., Professor of Laryngoscopy and Diseases of the Throat in the College of Physicians and Surgeons. Reprinted from the *Medical News* of Philadelphia. St. Louis: Lambert & Co. 1884.

These lectures treat of the methods of examination of the nasal passages and pharynx, diagnosis, including the instruments for diagnosis, the treatment and appliances for treatment, etc. The work is a practical one, written by one of the most able of the specialists, and is just such a compendium as the physician needs who aims to acquire a practical knowledge of this class of diseases. We recommend it to our readers.

THE

BUFFALO

Medical and Surgical Journal.

VOL. XXIV. MARCH, 1885. No. 8.

Original Communications.

DISEASES OF THE TESTES.

A CLINICAL LECTURE DELIVERED AT THE BUFFALO HOSPITAL OF THE SISTERS OF CHARITY.

BY W. S. TREMAINE, M. D.,

Surgeon U. S. A. Professor of Surgery, Niagara University. Surgeon in Chief of the Hospital, etc.

REPORTED FOR THE BUFFALO MEDICAL AND SURGICAL JOURNAL.

GENTLEMEN—I present to you to-day a case full of interest, as it exemplifies, in a marked degree, some of the difficulties of the important art of *diagnosis*, about which I have so often spoken to you. The history of this case is as follows :

This man, who is thirty years old, came under treatment some months ago with acute orchitis, not due to gonorrhœa. The usual method of treatment for inflammation was carried out, but the swelling and induration did not disappear ; there remained an enlarged condition of the gland without much apparent change for some time. Having had the primary lesion of syphilis a few years ago, he was put on anti-syphilitic treatment, viz., large doses of potassic iodide, without effect on the enlargement of the testicle. Three or four weeks ago some white nodules made

their appearance beneath the skin of the scrotum, which was adherent to the gland. A few of these nodules coalesced, and soon an ulcerated patch, about the size of a silver half dollar, made its appearance gradually, indeed, I may say rapidly. The fungus-like mass that you see to-day grew out from this ulceration and is now enlarging, being at least twice the size to-day that it was a week ago.

You see its present condition; the whole gland is swollen, and this protruding mass is as large as a hen's egg, unhealthy looking, with an extremely offensive odor; there is some pain, not much; the inguinal glands are but slightly enlarged, and are not indurated.

It is very necessary in cases of this kind to arrive at an accurate diagnosis, for on this your treatment must be based. And, as I hinted at the outset of my remarks, the difficulties are not few. The testicle is subject to a variety of diseases, and it will at times test your skill and knowledge to the utmost to arrive at a correct conclusion. A distinguished London surgeon has devoted a good-sized book to the elucidation of the diseases of these important organs. I allude to "Curling on Diseases of the Testis," which will amply repay your perusal. Let me briefly enumerate some of these maladies: Inflammation of the testicle, acute and chronic, called orchitis. Of this there are different varieties: first, in the order of frequency, that due to gonorrhœa, rheumatic or gouty orchitis, and that following mumps; syphilitic and tubercular orchitis; fungus of the testicle, formerly considered malignant encephaloid; the different forms of sarcoma, lymphadenoma, cystic disease, enchondroma and fibroma.

In this resume I have not included hydrocele and hematocele, as they are not, strictly speaking, diseases of the testes, yet must be taken into consideration in making out your diagnosis in this region.

But, you will say, you have given us the names of a number of diseases of the testes, how are we to separate them one from

another and recognize each one? A proper question. Not so easily answered, however. Let us take the case before us as an illustration, and see if we can lead up to an intelligent answer, in other words, make a correct diagnosis in this case, and, *pari passu*, learn something of the natural history and signs and symptoms of diseases of the testes in general.

Let us refer to the history. An accute attack of inflammation of the organ which gradually subsides, *i. e.*, *some* of the symptoms of inflammation subside, the acute pain, the tenderness disappears, but the swelling remains, the "*tumor.*" Nothing peculiar about *that*, you will say, and you say rightly, for it often happens that what we call "inflammatory thickening," a term I don't like, remains after the more acute symptoms disappear; indeed, this is the rule. Now then, if the "tumor" or swelling is due entirely to that it will, under appropriate treatment, such, for instance, as pressure applied by strapping, or the application of iodine ointment, etc., subside; the newly formed products of inflammation will be absorbed gradually.

This is the general history of a purely inflammatory condition, gonorrhœal or otherwise, in its origin.

That such was not the case here, you are already aware, but in spite of the most persistent and careful treatment, the "tumor" remained, and, indeed, increased.

Now then, knowing that this patient had had syphilis and that such chronic enlargements of the gland are often due to this potent and protean disturber of nutrition, anti-syphilitic treatment was faithfully carried out, *i. e.*, large doses of the potassic iodide, combined with minute doses of mercury, or what is technically known as the "mixed treatment," was given, but still with no effect; and let me say to you here that this is almost, if not quite, proof positive that the tumor is not due to syphilis; for, as a rule, these chronic indurations, when of syphilitic origin, yield very readily to appropriate treatment.

Now, we have excluded two very common diseases, viz., chronic inflammatory induration and the syphilitic "*gumma*," and

we have also learned another important fact, that the tendency of this "tumor" was to increase in spite of the treatment; that the tendency was not towards a cure, but the reverse.

Pursuing this mode of reasoning, what is left to us? Recalling what I told you of the whitish nodules, and seeing this fungus, you will say, perhaps, "tubercular" disease. I think not. I will tell you why I exclude this. In tubercular testes there is usually no pain; it generally occurs in youth or about the age of puberty; it originates in the epididymis; the organ is found to be hard, irregular and unevenly nodular; these nodules have a tendency to suppurate; the vas deferens is knotty; the inguinal glands are enlarged; it occurs in strumous subjects; there are generally evidences of tubercular deposit in the lungs and other organs; fungus is rarely present. True, I have seen fungus present as the result of one of these abscesses common to tubercular testicle, but it differed greatly from the fungous mass present in the case before you. This, as you see, has an extensive fungus, bleeds easily, with a very offensive odor and a tendency to increase rapidly. These are not the characteristics of tubercular testicle. We have left, then, the various forms of tumor that I have before enumerated, benignant and malignant. Time will not now permit us to go elaborately into all the various symptoms and the differential diagnosis of these, but now, from what I have said, and from the evidences before you, the rapidly-increasing, unhealthy looking, foul, ill-smelling tumor, taken with the history of the case, and the futility of all treatment, and the evidence that there is no tendency towards a cure if left alone, this must be classed as malignant. Of the various forms of this, cancer and sarcoma are the most common. You know that modern teachings in pathology assign cancer or carcinoma to epithelial origin, and sarcoma to connective tissue, and it is now believed that of these, sarcoma is by far the most common in the testes; they are said, by pathologists, to be combined in the same tumor; but this is a matter of little moment from a clinical point of view. The sur-

geon must satisfy himself from the microscopical appearances, from the history of the case, and from his knowledge of the natural history of disease, as to the nature of the tumor before him.

The whole subject of the diagnosis of tumors of the testicle is full of difficulty. The importance of these organs to the individual render it peculiarly necessary that they should not be hastily removed, as I must tell you has been done unnecessarily, even by able and experienced surgeons.

Do not infer from what I have said that the histological arrangement of the tissue elements indicating the nature of the growth, as determined by the microscope, is of no value; it is of great value in determining the liability to return, and so being able to reassure your patient, or, on the other hand, to put him on his guard for the future.

Experience has shown that there is a greater liability in some forms of even malignant growths to return than in others, and of these cancer, or the "fungous hematodes," of the older writers, is extremely liable to return after excision; in some other organ, that known as sarcoma does not necessarily return. If the view of some modern pathologists is correct, that all these malignant growths of the testicle should be referred to the sarcomata, then the difference in the liability to return, a well recognized *clinical* fact, must be due to the different forms of sarcoma. Possibly the history of this case may lead you to think it bears testimony to the doctrine of the *inflammatory* origin of tumors, a modern view held by some able pathologists, that, I confess, has to me, at least, an air of great plausibility; but I must not wander off into this fascinating domain of pathogenesis of tumors just now, but come back to the practical clinical work in hand, and say to you that believing, as I do, with the light before me, and past experience to guide, that this is a malignant disease of the testicle, having already obtained the consent of the patient, I will proceed to remove the diseased organ, by the operation known as castration.

I desire to do this without opening the septum, and, as you see, the disease has left me but little margin. I make an incision commencing about an inch below the external abdominal ring and extending to the bottom of the scrotum.

I now expose the cord above the growth and carefully examine it to see that the disease has not extended to it. I find it looks healthy. I now pass a temporary ligature of silk around the cord to prevent its retraction into the inguinal canal after I divide it. I now, as you see, make a second incision around the outer side of the growth, saving as much of the scrotum as possible and yet taking care to keep well clear of the diseased tissue. This incision joins the first at its lower point, the two forming an ellipse. I now enucleate the testicle, and, dividing the cord, remove it.

I separate the vas deferens from the vessels of the cord, and placing a harelip pin beneath them, with a few figure of eight turns of silk, secure the vessels.

I might tie the arteries of the cord separately, but as you see, they are small and retract very much. I advise the plan I have used, which you will find, I think, easier of execution.

I now search carefully for every bleeding point in the scrotum and tie it carefully with fine catgut ligature. This is a point I wish to impress upon you, for owing to the laxity of the tissues and the impracticability of applying pressure in the dressings, troublesome after-hemorrhage is very apt to occur.

I unite the edges of the wound with carbolized silk, and, inserting a drainage tube, apply some antiseptic gauze over the wound and support the scrotum with a sling. The operation and dressing is complete.

I will make some sections of the tumor, and its nature will be made known to you on a subsequent occasion.

NOTE.—The tumor has since been examined and found to be round-celled sarcoma.

Dr. Koch's Cultivation Experiments in Cholera Bacillus.

By George W. Lewis, Jr., A. B.

On October 1, 1884, the German government completed arrangements with Dr. Robert Koch by which he was to establish, in the city of Berlin, a laboratory well equipped with apparatus and assistants for the purpose of acquainting the German physicians with his theory of the cause of cholera, and the mode of cultivation of the so-called "comma-bacillus." The time specified for the duration of this course was to extend from October 1, 1884, to the end of January, 1885, and the four months were to be divided into periods of ten days each, that time being sufficient for a thorough understanding, not merely of the theory, but also of the practical work necessary in the cultivation and detection of the cholera bacillus. Delegations from the principal cities and towns were to be received in groups of from four to six at a time, and all their work was to be under the direct supervision of Dr. Koch, aided by a competent corps of assistants, most of whom have accompanied him during his investigations in Egypt, Italy and France. At the expiration of the ten days allotted to a single group, another was to take its place and receive a similar course.

Some two weeks ago I had the good fortune to receive one of the two appointments granted to Americans, and should like to give the reader some idea of the thoroughness and practicability of such instruction. Before doing this, however, a few words with regard to the present understanding of the disease may not be entirely out of place. Perhaps no visitation of the epidemic has afforded a better opportunity for studying its characteristics and tendencies than the recent outbreak in Italy and France, and for this reason most of our knowledge comes from these sources. The idea that cholera is of spontaneous origin is now no longer entertained by those who have given particular attention to the subject. Dr. Koch, who is undoubtedly the oldest investigator in this direction, is of opinion that its home

is in the Delta of the Ganges, and his reasons for thus closely confining its limits seem at least plausible. The conditions that favor the spread of cholera in India are of a very peculiar nature. It was formerly maintained that the disease was indigenous in Ceylon, Madras and Bombay, but later research indicates that the almost constant existence of the infection in these places in due to the active traffic between them and certain parts of the Delta. The only region, however, in India where the cholera prevails continuously and without apparently any fluctuation, is the Delta of the Ganges. This entire tract is the unceasing home of the epidemic. It even extends up the banks of the Ganges as far as Benares. The upper part of the Delta is densely inhabited, while the lower part or base of the triangle is unapproachable to man on account of the the inundations and pernicious fevers which invariably attack any one who passes its borders. In this uninhabited district may be found a luxuriant vegetation and an abundant variety of animal life, and one can easily imagine what quantities of animal and vegetable matter are here exposed to putrefaction. As Dr. Koch maintains, there is perhaps no better place in the world for the development of micro-organisms, and especially micro-organisms of an infectious character. In this respect the boundary between the inhabited and uninhabited parts of the Delta would seem to be exceptionally favorable, where the refuse from an extremely thickly populated country is floated down by the small streams, and mixes with the brackish water below, which flows backwards and forwards and is already saturated with putrefied matter.

The theory that the comma-bacillus belongs to a special fauna and flora of micro-organisms whose growth and development are adapted to these surroundings, is very probable, for everything points to the fact that cholera derives its origin from this frontier territory. This statement may appear more valuable when we consider that all the greater epidemics have been accompanied by a corresponding increase of the disease in the

south of Bengal. We now know that the comma-bacillus finds, in the districts adjoining the supposed habitat, the most favorable conditions for obtaining a footing and transferring itself from man to man. The entire stretch of country known as Lower Bengal is only slightly raised above the sea-level, and during the rainy season almost the whole extent is submerged. For this reason the inhabitants are compelled to build their huts upon raised ground. This is effected by taking the earth near where the hut is built in order to raise the ground on which the house stands. The result of thus displacing the earth is to leave a large tank adjoining each hut in which soiled water and putrefied matter from the household rapidly collect. Strange as it may seem this very water is used for drinking and other household purposes, and in turn receives much of the refuse matter which is necessarily thrown out. Under these circumstances can it be wondered at that the deadly cholera germ should take its origin and be transferred from one to another until it reaches all Europe and America?

In the first place, the differential diagnosis between cholera Asiatica and cholera nostras is by no means apparent from the clinical presentation of the disease, nor can they be distinguished with any degree of certainty from cases of acute arsenic poisoning. For these and other less obvious reasons, it is extremely difficult to tell, from a single case, whether it is really cholera or the result of poisoning; and when a new part has become infected, the physicians have found themselves in hot dispute as to whether, after the first suspicious case, the strictest sanitary measures should be enforced. In this way the most precious time is consumed, and the cholera germ, if it proves to be such, has gained a wide-spread circulation.

Through the discovery of the cholera bacillus, which has received the very characteristic name of "comma" bacillus, a speedy diagnosis is rendered possible. In spite of all opposing assertions, this characteristic biological and microscopical bacillus is found in no other infection save cholera, and by means of

Dr. Koch's simple yet comprehensive method of "pure culture," every physician would be able to detect the existence of the organism with perfect certainty. The possibility of thus being able to speedily diagnose a case of cholera will undoubtedly, in time, render a most valuable aid in checking its spread, and by taking the proper precautions after recognizing its presence, the danger of an epidemic will be greatly lessened. From a medical point of view, however, its utility at the present time is very slight, but it must be remembered that rational therapeutics for the majority of diseases, and especially for those of an infectious character, cannot be obtained until we have ascertained their precise causes. It is certainly to be hoped that the presence of the comma-bacillus may be of service in diagnosing Asiatic-cholera, and more especially so, in the early cases of its visitation. For the diagnosis, however, cultivation experiments are indispensable, and few have either the knowledge or the conveniences to enable them to carry this out. It is with a view of relieving the former of these wants that I have written this paper. No doubt, if Dr. Koch's theory is confirmed, some steps will be taken, in places threatened with an epidemic, to have means at hand for the satisfactory and rapid determination of the disease in suspicious cases. At present, if the discharges from suspicious cases were forwarded for examination to those who are interested in this work, much useful knowledge might be acquired, and an early intimation of its existence gained.

The method in itself is so easily understood that a physician possessing an ordinary knowledge of microscopical research would have little difficulty in cultivating, in the pure state, any bacillus with which he may be especially interested, and in a comparatively short time. The method is essentially the same as that employed in the cultivation of many of the different classes of bacilli known to us at the present time. Among these may be mentioned the typhus bacillus and tuberculosis bacillus, both of which are of recent discovery. A single week, perhaps, would be sufficient for developing and studying the peculiarities

of any one species, but in order to appreciate minute differences, several species should be cultivated at the same time. In the course under Dr. Koch are cultivated, side by side, the Finkler-Pryor bacillus, the comma-bacillus, the typhus bacillus, besides several forms of micrococci, all to render stronger the contrast between them. The method of introducing, for example, the Finkler-Pryor bacillus and the comma-bacillus into the same re-agent glass, is also resorted to, and with the result of always finding their modes of development perfectly distinct one from the other. Nor is the same nourishing medium employed in all cases. Gelatine, bouillon, agar-agar, blood-serum and potatoes are all used as nourishing substances, and the various methods of preparing them will be explained further on.

The one precaution to be observed in bacteria cultivation is to thoroughly sterilize all vessels and instruments used in the promotion of the culture. This is effected either by a dry heat of 160° Centigrade, or a vapor heat of 100° Centigrade. The former is on all accounts the more satisfactory, although somewhat destructive to the fine tempering of steel instruments. The substance known as "food-gelatine" is most commonly employed as a breeding medium by the students in Dr. Koch's laboratory and its mode of preparation is as follows: Take 250 grams of fresh beef as free from fat as possible, and, after cutting it up into fine particles, add 500 grams of distilled water. Allow this to stand over night in an ice-chest or cellar and then strain it through a towel of ordinarily fine texture. The resulting mass will amount about to 400 *ccm.* Place the jar containing this substance in a metal vessel partly filled with water, and over a gas-jet allow it to reach the body-heat. Now add 40 grams of stick-gelatine, 4 grams of peptone and 1 gram of salt. It requires one-half hour for the gelatine to become thoroughly dissolved although this time may be somewhat lessened by occasionally stirring the mass with a sterilized glass-rod. The addition of a little carbonic acid will enable one to prove the reaction. For this purpose small pieces of red and blue litmus paper are

used. Enough of the carbonic acid should be added to prevent the blue paper from changing color when a drop of the nourishing substance has been poured upon it. As a further test a single drop should cause the red paper to become blue in color. When this result is obtained, the whole mass is to be thoroughly cooked until it has the appearance of the white of an egg. In order to insure the utility of the entire mass, a little should now be strained into a sterilized re-agent glass and the reaction again be taken as above mentioned. If this proves satisfactory, the whole solution is to be strained through a double thickness of filter-paper arranged in the form of a funnel. Of course this process is an exceedingly slow one, and, if possible, it is best to have several funnels at work at the same time. The filtered substance is perfectly clear and transparent, and while still warm should be poured into re-agent glasses. These are prepared by first cleaning them and then closing their openings with wads of cotton. The process of sterilization is the same as that employed in other vessels, but the cotton-wadding, by turning slightly brown, enables one to tell very nicely when the glass is sterilized. It requires from forty to fifty re-agent glasses to hold the filtered mass, each one being filled to about one-third of its length. The idea of utilizing only a part of each tube will be better understood when the process of cultivation is well under way. After filling the requisite number of glasses and carefully replacing the cotton corks, they are to be placed together in a metal pot and boiled for the period of one hour. At the end of twenty-four, forty-eight and seventy-two hours respectively, they are to be again boiled for the period of three-quarters of an hour. We now have the medium in which all future cultivations can be carried on in the most satisfactory manner, and although certain characteristics may, perhaps, be better observed in some of the substances to be described further on, this food-gelatine is the one to which the greatest preference is given.

Another substance, which has considerable merit as a breeding medium for comma-bacilli, is agar-agar, or what is more com-

monly called "Ceylon moss." Its mode of preparation is similar to that of food-gelatine, except that one-half per cent. gelatine instead of ten per cent. is added. After being thoroughly cooked, it must be filtered through a double-walled hot-water funnel and then placed in the re-agent glasses. Agar-agar jelly is not liquefied by the colonies of comma-bacilli, and in this respect possesses a marked advantage over food-gelatine.

The cultivation of comma-bacilli in bouillon and on the cut surfaces of boiled potatoes will include a description of how these substances are prepared, and I will, therefore, proceed to explain the cultivation in food-gelatine. A small-sized platinum needle is the most convenient instrument with which to transfer materials of this kind, and after carefully sterilizing the point, remove from the contents of the intestine a single drop, so small as to be scarcely perceptible. Insert the needle into a tablespoonful of food-gelatine in liquid form, and shake it for a few seconds in order to thoroughly distribute the germs in the nourishing medium. From this tablespoonful take a platinum-pointful, and insert it into a second tablespoonful of gelatine, and in a similar manner one from the second into a third, always being careful to sterilize the needle before and after using it.

We now have three masses of gelatine, each inoculated with the cholera germ: the first directly from the excrement; the second indirectly from the excrement, having passed through one of the gelatinous masses; the third, apparently quite free from all germs, is still indirectly derived from the excrement, although having passed through two of the gelatinous masses. These are numbered, for convenience, 1, 2 and 3 respectively, and are to be poured upon three plates of ordinary window-glass for the purpose of cooling, and thus rendering them accessible for microscopical examination under a low power. A piece of glass eight inches long and six inches wide, well sterilized, will be found to serve the best purpose. Exposure to the cold causes the food-gelatine to become hard in a very short time, and the cholera bacilli, distributed through it, will begin

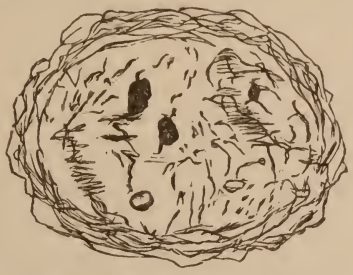
to form colonies in the exact place where they are poured out. In order to prevent foreign matter from entering the gelatine before it has become hardened, the three plates are placed one upon another with an intervening bridge between them, and the whole covered with a bell-jar. Through this mode of development a perfectly safe diagnosis of the comma-bacillus may be made in from twenty-four to thirty-six hours. It moreover facilitates, in a marked degree, a further inoculation in firm, hardened gelatine, or in bouillon, and makes the preparation of colored microscopical specimens a comparatively easy task.

At the end of twenty-four hours the three plates should be examined under a magnifying power of 100 diameters. It has been my experience, during Dr. Koch's course, that in twenty-four hours' time only plate No. 1 gives any satisfactory indications of colony-formation, although I believe this depends somewhat upon the strength of the inoculation. In the early stages of its growth the colony resembles a small white spot upon the yellow background of food-gelatine; its form is nearly circular, with but very little symmetry on account of the rough and jagged appearance of its outline; the centre seems to be hollowed out, and here and there a small dark spot may be seen. A little later a very noticeable granulation of its contents takes place and certain changes in form and size easily distinguish it from colonies of other bacteria. With the gradual growth of the colony this granulation becomes more and more evident, and at last looks like a little mass of strongly refracting granules. During the more advanced stages, the gelatine in the immediate neighborhood of the colony undergoes liquefaction and causes the latter to sink much deeper into the gelatinous mass. A funnel-shaped cavity is thus formed, in which the colony is seen as a small whitish point. This appearance, according to Dr. Koch, is quite peculiar to the comma-bacillus. It is seen, at least, in very few other kinds of bacteria, but never shows itself in such a marked degree. The following cuts will serve to illustrate the

various stages in the growth of the cholera colonies, as they appear upon the gelatine platè:

Youngest colonies.

More advanced.



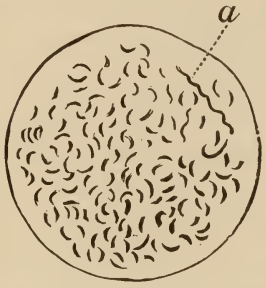
After the gelatine has become liquid.

The sinking of the colonies can be better observed by carrying out an artificial cultivation. In order to do this, select a suitable colony, using a magnifying power of 100 diameters, and, with a fine platinum needle, well sterilized, remove from the colony a small drop and place it in a re-agent glass of food-gelatine. A cultivation of this kind then grows in the same manner as the colony on the gelatine plate. At the end of twenty-four hours a little funnel-shaped film marks the place of inoculation, with perhaps a slight extension of the film into the gelatinous mass. This increases more and more until finally the gelatine begins to liquefy around the point of inoculation. Then the little colony extends itself, and at the lower end of the film may be seen a deep spot which gives the appearance of an air-bubble hovering over the colony. Dr. Koch regards the air-bubble appearance as peculiar to the growth of the comma-bacillus, and as identical with the apparent cavity above the white spot on the gelatine plate. Any number of artificial cultivations can, of course, be made from such a growth, but the same precautions must be observed in all cases in order to insure successful results.

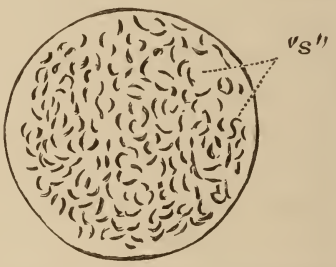
The mode of cultivating the comma-bacillus in agar-agar jelly is the same as that employed in food-gelatine, and by following out the methods described for the latter a luxuriant growth can be obtained. The fact that the agar-agar is not liquefied by even the advanced growth of the colony renders this substance very valuable as a breeding medium. In potato-culture, however, an entirely different process is resorted to. The potatoes should be as fresh as possible, not mealy or in any way discolored, and with few eyes. Those having bruises or scratches that have penetrated the surface should not be used. After carefully washing them and cutting out the eyes, they are to be placed in a five per cent. solution of sublimate for half an hour. At the expiration of this time they are to be thoroughly cooked in a steam-pot. While they are cooling the preparator can spend the time profitably in sterilizing half a dozen knives with which to cut them open; he must also wash his hands, but more especially the thumb and first finger, in the sublimate solution. In cutting open the potatoes great care must be taken not to touch the cut surfaces with the fingers, nor should the same knife in any case be used twice. With cut surfaces up, the potatoes are placed in a bell-jar, lined with filter-paper, and saturated with sublimate solution. The inoculation should take place immediately after cutting the potatoes, and the method is the same as the one first described. The contents of the platinum point should be spread over the greater part of the cut surface, then inoculated from the first potato into a second and so on. During the growth of the comma-bacilli upon potatoes the appearance is the same as that presented by the bacilli of glanders. A thin, pulpy and somewhat brownish coating spreads over the entire surface; the brownish tint, however, is not so intense as in the bacilli of glanders. Comma-bacilli flourish best at a temperature between 30° and 40° Centigrade (86° to 104° Fahr.), although they can be cultivated in temperatures both higher and lower, but their growth is greatly retarded.

So far I have endeavored to explain the methods of cultivating the comma-bacilli so that they can be examined in colonies under a low magnifying power. No reference, however, has been made to the mode of preparing specimens for microscopical examination under a high power, and for studying the characteristic appearance of the organism itself. For these purposes a bouillon cultivation is the most satisfactory, although dry preparations can easily be made from the colonies as they appear on the gelatine-plate, or from the potato-culture just described. The bouillon should be fresh and free from all germs, and, before using, should be boiled. A peculiar kind of object-glass is employed for bouillon preparations; it is of the same size as the ordinary microscopic-slide, but the centre is hollowed out similar to the cavity of a table salt-holder, thus giving ample room for the growth of the colony. A little vaseline is spread around the edges of this cavity to enable the cover-glass to rest firmly over it. With a sterilized platinum needle place a drop of the bouillon in the middle of the cover-glass and inoculate it with a small drop taken from one of the colonies on the gelatine-plate. Then place the cover-glass over the cavity of the slide, taking care not to have it touch the sides. The vaseline keeps the air out and at the same time serves the purpose of Canada balsam or some other mounting medium. Several slides should be prepared in this manner and then placed in a cool room for twenty-four hours. They are now ready for examination with the Abbe artificial lighting apparatus and an oil-immersion objective. The appearance presented is that of a swarm of white particles in constant motion; the form is scarcely discernible; now and then, however, their length is seen to be greater than their breadth. An almost infinite number can be noticed, but their violent movements prevent the characteristic "comma" form from being detected. This is, to say the least, an unsatisfactory picture, but the only means of rendering it more real is to apply some artificial coloring substance such as fuchsin or methyl-aniline blue. From a single bouillon preparation some twelve or fifteen dry

specimens can be made. This is effected by carefully removing the cover-glass and inserting a sterilized platinum point into the cultivation. The contents of the platinum point are spread upon a dry cover-glass and a drop of the staining fluid added. After washing off the superfluous coloring matter with distilled water, and mounting the preparation in Canada balsam, the best possible view of the comma-bacillus can be obtained. The following cuts are taken from preparations made during the ten days' course under Dr. Koch, and will serve to indicate the form and size of the bacilli as they appear under a magnifying power of 600 diameters :



Object-glass preparation, from bouillon cultivation. (*a*) Screw-shaped threads of bacilli, magnified 600 diameters, stained with fuchsin.



Object-glass preparation, cholera-dejecta several days old, showing "S" shaped bacilli, 600 diameters, stained with fuchsin.

To give the dimensions of comma-bacillus would, indeed, be useless, because only a very poor idea could be derived from the extremely small numbers which would be necessary to represent its length, breadth and thickness. To compare it, however, with some other well-known bacillus, such as the "tubercle," will enable the reader to form at least some notion of its size, and at the same time admit of a comparison as to form and general appearance. The comma-bacillus is about three-fifths as long as the "tubercle," but much thicker and more bulky. A very evident curve, similar to that of a "comma," is noticed midway between the two extremities, hence its name. Occasionally the curve is so marked that it resembles a semi-circle. Then, again, two bacilli may cling together, but in opposite directions, thus pre-

senting the appearance of the letter "S." Often in artificial cultivations the comma-bacilli grow in wavy threads, as is seen in one of the above illustrations. The wavy appearance is peculiar to the comma-bacillus; straight threads, however, are frequently seen among other bacilli; for example, the "anthrax." Dr. Koch inclines somewhat to the theory recently brought forward, that the comma-bacillus is not a genuine bacillus, but only a transition form between bacilli and spirilla. By further investigation perhaps this question can be decided, but at present, it matters little to which class it belongs, so long as its death-causing property can be definitely established.

BERLIN, Jan. 6, 1885.

Clinical Reports.

SOME EXPERIENCE WITH COCAINE HYDROCHLORIDE ON THE EYE.

BY B. H. GROVE, M. D.,

Assistant Surgeon to the Buffalo Eye and Ear Infirmary.

The expression cocaine hydrochloride is used because that is preferred by a large majority of the authorities on chemical terminology. Cocaine was first used in this country to produce anæsthesia of the eye on Nov. 8, 1884. In from two to three weeks thereafter most of our medical journals were "charged and primed" with descriptions of what cocaine powder would do. It is not my purpose, therefore, to make a general review of this agent. I wish, however, to add to the galaxy of contributions already furnished a concise account of my experience with this agent on the eye. Continued experience with this drug must surely result beneficially, either by corroborating the investigations of others, or showing, in various ways, what it will not do. Up to the present time this agent seems especially applicable in ophthalmic surgery. With certain exceptions it causes complete anæsthesia of the conjunctiva and cornea, as

well as deeper structures of the visual organ, but in no respect interferes with the vitality of the parts. Owing to such peculiar qualities this drug became, in a few days, one of especial merit. It was brought out from among the dust and rubbish of the materia medica storehouse, and was made important and conspicuous on account of its innate virtues. Up to Dec. 10, 1884, I had applied cocaine more than one hundred times to normal or diseased eyes. I wish to mention, especially, its mydriatic and anæsthetic properties. My experiments were made upon my own eyes, upon the eyes of rabbits, and patients attending the Buffalo Eye and Ear Infirmary. The cocaine was always obtained in powder form, as manufactured by Merck of Damstadt, and fresh solutions were made as required, water being the solvent. Such solutions remain clear for about two weeks, when microscopic growths appear. I have used one, two and four per cent. solutions. According to Dr. Squibb, these are only three-fourths as strong as the figures represent, owing to impurities of the alkaloid. On different days there was instilled in one of my eyes one drop of a two per cent. and four per cent. solution respectively. In each case my pupils began to dilate in sixteen minutes. The two per cent. solution caused no unpleasant sensation. Some dilatation was apparent fourteen hours afterwards. The accommodation was not affected. In the course of eight minutes partial anæsthesia of the cornea occurred. The four per cent. solution caused some smarting in the conjunctiva, and also a gummy, sticky feeling. Some dilatation remained twenty-four hours after its use. My accommodation was noticeably affected, since my near point had receded two inches. This endured for forty-five minutes. In most of my experiments I used a two per cent. solution. After the instillation of one drop, a slightly unpleasant sensation was said to be experienced in the conjunctiva. The same mucous membrane became slightly pale. The cornea became partially insensitive in from eight to fifteen minutes and continued so for about ten minutes. The pupil began to dilate in four to twenty minutes.

It is a curious fact, to which I have seen no reference made, that in dark brown irides the pupil never began to dilate before ten minutes, and in most cases not before sixteen minutes. In thirty cases there was only one exception. For this peculiarity I can assign no cause. The dilatation, at the end of about two hours, began to diminish. The accommodation was not affected, nor was there any apparent increase of tension of eyeball. I found a one per cent. solution caused dilatation about as rapidly and as extensively as a four per cent. solution. With this exception a four per cent. solution was in all respects more decided in its action. That the cocaine is absorbed, and passes through the structure of the cornea, can be nicely demonstrated by experimenting with rabbits. At various times I used two per cent. and four per cent. solutions. As a rule, there was dilatation of the pupil in from four to fifteen minutes. In one case, after several applications, no dilatation occurred. After dilatation was manifest, I drew off the aqueous humor by a hypodermic syringe, or else after thoroughly drying the conjunctival sac made paracentesis of the cornea, and drew up the escaped fluid of the anterior chamber into an ordinary eye-dropper. A few drops of this fluid, dropped in the eyes of other rabbits, caused dilatation in about ten minutes. To produce anæsthesia, for operation or otherwise, a two per cent. or four per cent. solution can be used. In case a two per cent. solution is used, the applications must be more frequent, and there is liable to be a loss of the solution from overflowing the lids. On the eye, therefore, a four per cent solu tion is the best. I proceed as follows: Ask the patient to look down, and let two drops fall upon the orbital conjunctiva. Repeat this proceedure every five minutes until four applications have been made. Then wait five minutes and begin the operation. If during the operation pain is experienced, apply the solution as becomes necessary. I have thus far, in my experience, with a few exceptions, been able to produce complete or nearly complete anæsthesia. I have made use of cocaine in one case of senile cataract extraction, various cases of iridectomy, pterygium

strabismus; also, one case of sclerotomy and the removal of several foreign bodies from the cornea, besides some minor operations.

It is well known how essential perfect quietness is, in the operation for cataract extraction. The thoughtful operator was ever wont to thus question himself: Has the patient sufficient self control or should chloroform or ether be given, and the risk of vomiting be incurred? The decision is not always easily made. In this uncertainty cocaine comes to our aid. Its use is especially applicable in extraction cases, for with it, all reflex contractions of the globe are overcome, and thus the chances of the escape of vitreous are lessened—that complication which represents both the Scylla and Charybdis between which every operator on the eye must pass. In my case of cataract extraction, the various steps of the operation were made in their usual order, successfully. I mention this because in such a case the anæsthetic virtues of cocaine are well tested. After making the usual incision through the sclero-corneal border, and just before I drew out the iris to make iridectomy, I dropped two drops of the cocaine solution into the wound. This virtually amounts to the same thing as applying the anæsthetic to the anterior chamber by syringe, as some recent contributors have made especial mention of. After the operation the patient said she had experienced no pain whatever with the exception of that produced by the lower blade of the speculum pressing upon the infraorbital ridge. In fact, in all cases where the speculum is necessarily used I find the stretching apart of the eyelids is the cause of most of the pain. One of my cases of strabismus was divergent. Wishing to bring the optic axes for the far point parallel if possible, without making advancement of the internal rectus muscle, it was necessary to loosen the attachment of the external rectus and the capsule of tenon very thoroughly. The operation was made without any pain. In cases of strabismus, cocaine is a very serviceable anæsthetic, for with its employment one is able to judge accurately whether or no the tenotomy has been made

sufficiently. With chloroform, or ether, one does not know until the effects have passed off. Other operations were made as a rule without pain. But it is in those cases of foreign bodies in the cornea where cocaine proves of service, especially to the general practitioner as well as the specialist. To remove these little foreign particles nicely, two factors are essential—a quiet eye and a steady hand. These being present, one person can accomplish about as much as another.

One week before I had obtained any cocaine, a young man came to my office with a particle of iron in the cornea of his left eye. He kept his eye in continual motion, but after some time, and causing much pain, I succeeded in removing the particle. Two weeks afterwards he returned with a piece of iron in the same cornea, only more deeply imbedded. After instilling a few drops of a four per cent. solution of cocaine, the particle was removed without causing any pain whatever. Simple blepharospasm of the lids and photophobia arising from various lesions of the cornea in a majority of cases can be overcome at once, after two or more instillations of a four per cent. solution. In some cases, however, complete anæsthesia of the cornea may be produced and still the photophobia remain as decided as before. I have likewise applied the cocaine before treating granulated lids with the copper crystal. For a time no pain was experienced, but in fifteen to twenty minutes it seemed to be more severe and last longer than when cocaine had not previously been used. My experience teaches that sometimes cocaine fails to be a perfect anæsthetic, even when fresh solutions are used. In one case of pterygium, after the use of a four per cent. solution for a number of times, only incomplete anæsthesia could be produced.

I will mention, also, a case of partial pannus of the cornea, where I wished to make an artificial pupil. Two drops of a fresh four per cent. solution were applied every five minutes for six times, still the anæsthesia of the conjunctiva and cornea was only partial. In many cases of lachrymal trouble I have injected cocaine solutions into the sac before passing Bowman's probes.

In most cases only partial anæthesia was produced. Although the most constant property of cocaine is its mydriatic effects, still there are cases where little, if any, dilatation can be produced. I will mention one case of hyperæsthesia of the retina. The cornea was clear but the pupil somewhat contracted. A four per cent. solution was used. The irides were dark brown. After thirty minutes the pupil had only slightly dilated, but not sufficiently for ophthalmoscopic examination. Twenty-four hours afterwards, when the effect of the cocaine had completely passed off, I found that one drop of a one-tenth of one per cent. solution of atropia sulphate dilated the same pupil in twenty minutes fully three times as much as the cocaine had produced in thirty minutes. Pardon me for referring here briefly to atropia as a mydriatic. We are all familiar with its peculiar action upon the iris, but the extreme sensitiveness of its nervous structure to this drug cannot be fully appreciated until very weak solutions are used. I made a solution of atropia sulphate so that one drop represented $\frac{1}{2\,3\,0,0\,0\,0}$ of a grain of the drug; one drop of that solution dilated the pupil in one hour and five minutes. In other words, put one grain of sulphate of atropia in nearly four gallons of water; mix well. One drop placed in the eye will cause dilatation of the pupil in about an hour. In such weak solutions, you understand, the accommodation is not at all affected and the dilatation disappears in a short time. Cocaine has been used hypodermically to produce anæsthesia for operations on the lids and enucleation of the eyeball. Most of the attempts were not altogether satisfactory, and in some cases when six drops of a four per cent. solution were injected, unpleasant symptoms were produced. The summary of my experience with cocaine on the eye is as follows:

1. That solutions continue clear for about two weeks, when a fungus appears. Such solutions retain their mydriatic properties but lose some of their anæsthetic virtues.

2. That one drop of a one per cent. solution dilates the pupil about as rapidly and as extensively as the same quantity of a

four per cent. solution, but never causes any paralysis of accommodation.

3. That its mydriatic properties are noticed two or three times sooner in blue eyes than in dark brown.

4. That it will serve to dilate the pupil in most cases for ophthalmoscopic examination, but is not so reliable as sulphate of atropia, nor is the dilatation so extensive; therefore, when it is desired to examine the periphery of the lens or fundus of the eyeball, atropia is the better mydriatic.

For operations, a four per cent. solution is the best.

Society Reports.

Buffalo Medical and Surgical Association.

Regular Monthly Meeting, Jan. 6, 1885.

President, Dr. F. W. Bartlett, in the Chair.

Present—Drs. Cronyn, Hubbell, Tremaine, F. H. Potter, W. W. Potter, Dorland, Crego, Fowler, Brecht, Strong, Stockton, Berkes, Thornton, Hopkins, Van Peyma, Daniels, Coakley and Pryor.

Minutes of last meeting were read and approved.

Essay by Dr. C. G. Stockton, entitled, "Some Untoward Effects of Opium."

Discussion—Dr. Strong considered that the case described was very instructive. He thought that during the first stage the patient would bear more than when the reaction had occurred, as there would then be another state of the system.

Referring to suppositories, he thought we did not know what proportion was absorbed. There had been, in the case stated, doubtless,a large accumulation of opium in the bowel. Considered opium a wonderful drug. He always felt elated when he saw its wonderful action. He would as soon think of going into battle

with one arm tied behind him, as to practice medicine without opium. He feared that mistakes had been made in estimating doses, and that it had been given too largely, and believed we should only use it when absolute weight is given, and be especially careful in its hypodermic administration. Speaking of the tolerance of the drug, he referred to an astonishing case, of a child of eight months, who had diarrhœa. Paregoric was minutely used at first, and the opiate was gradually increased until, at the end of two weeks, it was receiving half drachm doses of laudanum.

Dr. Dorland expressed his enjoyment at listening to the paper, as it interested all practitioners. His especial choice of opiates was the "Dover's powder." He had been greatly surprised, sometimes, at the effect of some other forms. He advocated the "Syrup of Dover's," for children. Had seen some alarming effects from paregoric. He thought there might be something in the combination of "Dover's powder" (the ipecac) that modified the effects of the opium.

Dr. W. W. Potter came to be instructed, and was not disappointed in his expectations. He had heard of the case referred to, in the paper. Considering the large doses given, he said no man knew the effects of drugs better than the late Dr. White, and that as the case was under his control and direction, his judgment could hardly be questioned. Dr. Potter thought it wise to administer atropia in connection with opium. The popular idea was that opium, hypodermically, was dangerous, but he considered it safest where the dose was properly graded. Referring to idiosyncrasies, he thought that giving opium in highly neurotic cases was not good practice. But sometimes, where pain was great, that it would then be well borne.

Dr. Hubbell said Dr. Stockton had referred to one case where opium had produced very great excitement. He had one case himself, as follows: Boy thirteen or fourteen years old, previously had inflammatory rheumatism with some endocarditis and valvular lesion. After a time pain and angina appeared; at one

time a paroxysm was very severe, and he administered morphia in one-sixth grain doses every two hours for three doses. The first produced excitement, the second increased it, and after the third the patient became fully delirious, scarcely knowing who were around him. He then gave chloral and bromide of potash, five grains each, in solution, every half hour. At the end of one and one-half hours, the patient became quiet and went to sleep; at the end of the third hour, pain subsided, and he made a good recovery from that attack. He thought this corroborated the case of Dr. Stockton regarding "Some Untoward Effects of Opium."

Dr. Cronyn remarked that the effects of opium were known; accidents were constantly happening which were not so fortunate as the cases of Drs. Stockton and Hubbell; opium was not the same to all. The idiosyncrasies were, with all range of drugs, the same. Opium's well-known action is stimulant, anodyne, soporific and narcotic, but may occur in opposite degree with different individuals.

He had known those who could take large doses, and again others who could not take it at all. Before prescribing it he always tried to find out if the patient had ever taken it before.

He believed in the curative effects of the crude opium, and recommended quinine in combination with it, believing it to be a valuable adjunct; advised others to try it. Where opium has been given to those who illy bore it he thought the utmost caution should be used in following it with chloral, as ten grains of chloral with one-sixth grain of morphia is more potent than thirty grains of chloral alone. Regarding the absorption of opium by the rectum, he said that many agents were as active there as in the stomach, chloral being one. He did not think the hypodermic method more safe than by the stomach, for the reason that an emetic could not be used, or the dose in any way reached or neutralized. He had combined morphia with atropia, giving small doses of morphia frequently repeated, beginning with one-twelfth grain and repeating every fifteen to seventeen minutes.

He supposed that opium was among those medicines that were cumulative in character. He had seen a case of opium excitement controlled by placing a very brilliant metal before the eyes of the patient. Opium had been used to quiet nervous irritability of a maniacal character. Believed that in opium we had a medicine of great value, but that we could not be too cautious in its administration.

Dr. Tremaine had once heard a keen observer say that when a doctor had solved the problem of the proper administration of opium he had learned how to practice medicine.

Dr. Van Peyma believed that much depended upon the form of opium used, and that some were more harmful than others; considered its combination with other drugs advisable. He had tried, in one case, the large bright object referred to by Dr. Cronyn, but without success.

Dr. Crego had observed the action of morphia and hyoscyamin. He was once called to see a young lady that had delusions; as she was taking medicine that he believed to contain opium, he ordered it discontinued, and in thirty-six hours the delusions had disappeared. Had seen similar conditions after very small doses of the drug. Among the insane, where he had opportunities for observation, he had noted that it seemed to increase the excitement. In melancholia, if given largely, it quiets; in small doses it excites. Recommended that it be combined with bromide of potass. He had seen no unpleasant effects from opium and chloral combined, but had been cautious. Would give the pot. brom. with it. He had noted that morphia, in small doses, often repeated, did not seem to agree so well as large doses longer apart. Opium was eliminated from the system much more slowly than the bromide or chloral. In a paper which he read some time since he had tried to point out that where morphia would not answer hyoscyamin often would, as he had seen it practically demonstrated. He considered the amorphous preparation of hyoscyamin the best. Speaking of the excessive quantities of opium that could be taken, he had a recent case

where the patient took sixty grains daily. In such cases the pulse becomes very slow and weak; he had seen it go to thirty-four per minute; and on the skin the symptoms were an intolerable itching and there were, frequently, discolorations which were peculiarly characteristic.

Dr. Coakley said that during the war opium, quinine, calomel and whiskey constituted the surgeon's materia medica. The soldiers would tolerate opium largely. He attached great value to it, but of late years had at times regretted its use. Thought it required the greatest discrimination to decide when it ought to be used. In his own practice he had a case of excessive alcoholism, and patient asked for an opiate. He gave him, as he supposed, about one-third, and certainly did not exceed one-half grain of morphia. In about three hours patient attempted to go across the floor and dropped dead from apoplexy. He could not say the morphia was the cause but it was an unpleasant occurrence and made him cautious. He had seen a case where the doctor gave a woman who was eight months pregnant, one-sixth to one-fourth grain of morphia hypodermically; she appeared to have opium poisoning and died very soon. He now used the drug preferably by the bowel in suppositories, combined with belladonna, but limited its use as much as possible, preferring to substitute bromides, chloral, etc.

Dr. Hopkins had seen some of the untoward effects of opium, and especially referred to two cases of his own where a peculiar condition followed immediately upon a hypodermic injection of morphia, a red glow coming upon every portion of the exposed skin, pulse very greatly accelerated, going up to two hundred and faster than could be counted, the blood seeming to rush to upper portion of body in great quantity, all this occurring before it was possible for the solution to be absorbed, and almost before the needle had been withdrawn. All the alarming symptoms passed away in about five minutes, doing absolutely no harm. He believed the action was upon the nervous system, on account of the symptoms appearing before absorption

could occur. He wished to dissent from the present form of discussion, as it was not confined to the subject.

Dr. Bartlett, in referring to Dr. Hopkins' remark, said that we were likely to drift into personalities, which it was hard to avoid. One of the untoward effects of opium was the habit of its use. It was usually given first for temporary relief, and it grew until the victim was unable to discontinue its use. He thought the habit more frequently followed hypodermic medication. Referred to a case where great deception was practiced in order to obtain it in this manner, and where it was estimated that the man received more than fourteen hundred injections within two years, some being more than two grains each. He was against giving opiates in any form in childhood where it could possibly be avoided, as he believed the habit and demand for the drug could be then formed. Had seen a case where a child of six months had been given a teaspoonful of laudanum every night for some time. He had also attended a family where the man took sixty grains of morphia daily. As to hypodermic use of opium, the number of deaths that have occurred in this city from it should cause us to use the greatest caution. One-eighth of a grain had caused death of a case in his own practice. In nervous people he found that svapnia was well borne. Some had recommended large doses of opium in eclampsia, but he did not believe in it.

Prevailing Diseases—Diphtheria, scarlatina, rheumatism, influenza, pharyngitis, and Dr. Stockton had seen some cholera morbus.

A letter of resignation from Dr. Peterson, the Secretary of the association, which had been received by the President, was read, and, upon motion, his resignation was accepted.

Balloting for a Secretary being in order, Dr. F. H. Potter was elected Secretary to fill the vacancy.

Adjourned.

CLAYTON M. DANIELS, *Secretary pro tem.*

Transactions of the Buffalo Obstetrical Society.

Stated Meeting, Jan. 27, 1885.

The President, Dr. W. W. Potter, in the Chair.

The subject for discussion was announced as, "Is there a Kinship in the Infection of Puerperal Fever, Erysipelas and Sarlatina?"

Dr. W. S. Tremaine, in opening the discussion, said that in regard to the nature of so-called puerperal fever, there were two schools which had been characterized as the "Essentialists" and the "Absorptionists." He thought it was always well to have a definite idea, if possible, as to the nature of the morbid process to which we give a distinct name. For his part, he believed there was ground for reconciliation between the opposing views —perhaps, even, both were right.

There was, he said, a form of septicæmia to which puerperal women were subject, as, indeed, were pregnant, and even non-pregnant women, accompanied, of course, by that rise of temperature ordinarily called "fever," but which did not differ materially from septicæmia occurring from wounds in either males or females. On the other hand, cases of fever of a continued, or slightly remittent type, were seen in puerperal women by physicians of any extended experience, which were not apparently caused by any septic poison, unless all varieties of fever were, indeed, due to some forms of septic infection, which latter would seem not an impossible view to take, if the modern teachings of some pathologists as to the potency for evil of the different microbes which they describe was true.

But, he continued, the nature of fever in general, and the different theories in regard to its causation, was too extensive a subject to dwell upon here. To return, therefore, to that particular species usually designated as "puerperal fever," he believed that puerperal septicæmia would be a better term for it. There seemed little room for doubt that it was due to a *contagium.*

He presumed the real question for discussion at this time was: Is that contagium identical with that of erysipelas and scarlet fever, or, is there any distinct relation between them?

From a clinical standpoint there were cases which seemed to prove their common origin; while, on the other hand, there were facts which appeared to conclusively contradict this view. There were so many factors to which it was difficult to give a determinate value, that the solution of the question could, for the present, at least, be, perforce, only an approximative one, and, as it was obviously impossible to carry on, carefully and *intentionally*, inoculation experiments in puerperal women, the question must be determined, if determined at all, by inference from the behavior of other well-known varieties of *contagia*, and also from a study of the clinical history of the disease.

He had seen one case of well-marked *pyæmia* in a puerperal woman, at a dry, elevated point, isolated, where no other case had ever happened, and where, certainly, there had never been any cases of erysipelas or scarlet fever. This disease rarely occurred sporadically; it was generally epidemic, or endemic, in a particular locality. There was, unquestionably, at times a greater tendency to all these forms of disease than at others, either from a higher concentration of the *contagium*, or from an increased susceptibility. But vital statistics did not show that during epidemics of scarlet fever there were more cases of puerperal septicæmia.

He did not, in conclusion, for his own part, think that the identity of the poisons was yet proven. Why not, said he, include diphtheria? for he had repeatedly seen a diphtheritic membrane on the gentalia of women suffering from so-called puerperal fever.

Dr. M. Hartwig said that it was difficult to arrive at an absolute understanding of the etiology of puerperal fever, because of the inadmissibility of experimental reproductions of the same in man, but observation and experiment in regard to putrefaction, and the intrduction of this process into the animal economy, had

shed much recent light on the subject. His personal convictions were in favor of the Fordyce Barker idea, viz., that there are two forms of puerperal fever, one septic or putrid, the other a disease, *sui generis*, probably possessing a peculiar germ of its own. The first, or putrid form, comprises the vast majority of cases, and can originate by the introduction of putrid matter from without, as well as from the body itself. It manifests itself according to the several ways in which the poison courses within the system, as parametritis, perimetritis (*sive* local peritonitis) then general peritonitis, lymphangitis and venous metastatic pyæmia. Though he was formerly doubtful as to putrefaction ever originating within the body—*i. e.*, whether so-called self-infection exists or ever occurs—he now does not question the fact. Billroth's and Zeller's researches show that the bacteria of putrefaction exist constantly in the blood, and probably within the tissues of the living body; and further, that they do not have an opportunity for development generally, because either the oxygen or ozone of the blood destroys them incessantly, or because the living cells, fighting for their own life, do not give them a chance to develop. Only peculiar circumstances—a weakened condition of the human frame—afford them, occasionally, an opportunity to start into a violent activity.

Dropping theory, for the present, he asserted that practice had exhibited the fact to him that self-infection—at least purulent if not putrid processes—does occur in the body, though seldom spontaneously, except from the introduction of a germ from without. That putrefaction, without germs, does not occur, we know, from the fact that goods properly canned never spoil.

He then related several examples of purulent inflammation without an external lesion or outer introitus for the entrance of germs,and cited his personal experience to show how rarely putrefactive changes occur spontaneously, for in twelve years of practice he had not witnessed a single case. He had dwelt broadly upon

this subject, for only through an understanding of putrefactive changes in general can the true clue to the proper view of puerperal fever be obtained. Now, said he, in the womb we have a surface communicating, often, only too readily with the outside world, and thus germs might be introduced without especial occasion for such introduction at the time of child-birth, and even without examination on the part of the attendant. A seemingly spontaneous puerperal fever can undoubtedly occur, though it must be rare, for, as a rule, the uterus escapes the introduction of germs from without, especially the germs of putrefaction, unless they are brought into its cavity by manipulation during labor. He cited two examples illustrating this point. Once he was attending a case of abortion where he purposely abstained, totally, from digital examination of the gentalia for eight days of constant flowing. At last it grew too violent, the discharges began to smell, and he evacuated the uterus with the curette. About one-half of the mass was in the vagina, the other half in the uterus. The latter was in a normal condition with regard to putrefactive changes, but the vaginal part was decayed. At another time, lately, he left one-half the membranes in utero, after a timely birth. His antiseptic precautions were perfect. Four days later the membranes came with colicy pains, not putrid in the least.

In conclusion, he thought these facts, as well as others which he had not time now to cite, went to show that the opinion which he expressed at the outset was correct, viz., that puerperal fever is, as a rule, a putrid change introduced from without, and proper antisepsis is the guard against it. Self-infection from the uterus and vagina, and infection through other channels of entrance, like the lungs, the skin, the intestines, etc., are rare and not of practical consideration now, but they seemingly do occur occasionally, and must not be altogether overlooked in the general discussion of the subject. He thought he had seen one case of fulminant puerperal fever, without putrescent or inflammatory changes in or around the uterus, which he took to be the puerperal fever, *sui generis* (Barker's).

Such cases might have something to do with erysipelas or scarlet fever, or might have a germ of their own. As a rule he did not think handling an erysipelas or scarlet fever patient prevents attending a confinement on the same day, if proper antisepsis is used. He had seen, only once, a mother with parametritis while the child had erysipelas, but the child's affection was later. On the other hand, he had seen several normal puerperia where scarlet fever existed in the same room. Modern research, especially Koch's, shows conclusively that each infectious disease has a specific germ of its own, and thus we may get, in the future, besides the germs of putrefaction and ordinary puerperal fever, one of the puerperal fever *sui generis*.

Dr. S. Y. Howell said that he believed mainly in the views expressed by Dr. Hartwig, and related the history of a case showing the connection between malignant scarlet fever and puerperal fever, and where, unquestionably, scarlatinal poison caused the puerperal septicæmia.

Dr. P. W. Van Peyma said that in one of the hospitals, at the time he was a resident there, a number of cases of erysipelas were in the surgical wards at the same time that puerperal fever occurred in the lying-in ward. There was, of course, some communication between the wards, though the attendants were, as a rule, limited to their respective wards. Still there may have been inoculation. At one time it became necessary to close up the lying-in ward for a number of weeks. Similar experiences had occurred in other hospitals, as, for instance, in Bellevue, when he was there with Dr. Lusk, when it was the opinion that the original cause was erysipelas. It seemed to him quite important to recognize the fact that a puerperal woman may also have any disease that any other woman may have. It was quite important to always empty the uterus thoroughly at the time of labor. He had had very few--he did not remember a single instance—of puerperal fever in women whom he had attended from the beginning. He had often seen it in cases attended by midwives, who are very careless in leaving portions of the placenta behind.

Dr. Thomas Lothrop believed that we have a puerperal fever, which is a distinct entity, though the great majority of cases are antogenetic. There are cases, however, which cannot be traced to any such cause. The lochia will be perfectly free from putridity, and, as far as we can observe, there is no avenue for the absorbtion of septic material, and yet a violent form of puerperal fever is present. If it was not a disease, *sui generis*, he did not know what to call it. He believed, however, that the greater number of cases were antogenetic—distinctly septic in origin. As to the relationship between puerperal fever, erysipelas and scarlet fever, he thought that great care should be exercised in attending puerperal women when these cases are also under observation, at the same time. He could not say that he had ever seen puerperal fever arise from any such source, but he had always been afraid of it, and thought that practitioners who are treating zymotic diseases should be exceedingly careful in their relations to puerperal women.

Dr. C. C. Frederick's practical experience had been limited, but he had discovered a great diversity of opinion among medical men on the subject, and thought that the truth must be found between the two extremes. He thought he had seen cases that were undoubtedly due to septic infection, and he was equally sure that he had seen cases where there was no discernible cause of the disease. The first case he ever saw, he thought he communicated to the patient himself, while he was yet a student. He went directly from the dissecting-room, only washing his hands with warm water and soap, and attended her. Four or five days afterwards she developed metritis, perimetritis, etc., and came very near dying. It seemed to him that, in reading of the epidemics in different places, there must be a puerperal fever developed from a specific germ.

Dr. R. L. Banta thought that we were in the dawn of discovery in this matter, though discussions, thus far, had not given us great light. Nobody yet seemed fully satisfied, no matter what theory was advanced or advocated. He related the case of a

physician where the poison, or infectious material, lurked about him for a number of weeks, when he finally abandoned obstetric practice to get rid of the apparently strong suspicion that such was the fact. During the last ten or twelve months he himself had been using corrosive sublimate water, washing his hands in it freely every time he approached a puerperal woman, which he thought was a safe plan, to say the least. About two months ago he had two children (his own) sick with diphtheria, which he believed was one of the causes said to produce puerperal fever. His wife had diphtheria, and he, himself, had a mild attack, during which he attended a woman in labor, being careful to use the sublimate solution, and she had no signs of puerperal fever.

Dr. C. G. Stockton said that the subject seemed to be shrouded in mystery, but he believed it to be a zymotic disease in the majority of cases. Dr. Tremaine had given us a very interesting instance of a case on the plains where there could be no possible connection with other cases, which reminded him of a case of scarlet fever which was reported a year ago, by a medical gentleman residing in Dakota. The family, living secluded from other people, fell sick with scarlet fever, and the physician reported it as an interesting instance, where the disease had arisen without contact with the outer world. We always hear of such instances as related by Dr. Banta. One of his earliest recollections is of a similar fact occurring in the practice of his own father, and which followed him for nearly a year.

Dr. Wm. B. Hawkins said that it would seem natural for any one, who had seen cases they were sure were due to sepsis, to accept the theory of septic infection for all cases. He had never seen any cases that did not seem explainable on that theory. When we considered the large ex ent of surface exposed in the puerperal state, and the great chances for absorption that exist, it seemed very easy for the disease to arise from anto-infection.

Dr. C. R. Jewett, said it seemed to him that puerperal fever never arises except from a septic source. He further believed that the site of the infection, in ninety cases out of one hundred,

was before it reached the uterus, and resided either in the vagina or vulva. He once saw a mother nursing a child with an erysipelatous inflammation of the neck. This was after delivery, some sixteen or seventeen days, and he observed the case very carefully. The woman developed puerperal fever and died of it. He thought there was a great difference in the degree of the infection. In the convalescent ward of the Maternity Hospital in New York, where patients were taken when the uterus had undergone involution so it could no longer be felt above the pubes, he saw septic troubles occur, and the women were kept in the ward without affecting the other women there; but the nurses were not allowed to have anything to do with the other patients. There seemed to him no longer any doubt, in the minds of the best men, about the septic origin of puerperal fever.

Dr. Hartwig said he was glad to hear most of the gentlemen corroborate his opinion; that there were two distinct diseases that we call puerperal fever; one is carried through the air, and the other is in consequence of putrid matter in the region of the genitals. He believed the day would come when the germs of non-putrid fever will be cultivated. In regard to erysipelas, we know very definitely what causes it. The micrococcæ is already raised and cultivated, and it is an entity of itself. He wished to oppose Dr. Van Peyma. He did not think that leaving a few pieces of placenta behind does any harm if cleanliness is absolute.

Dr. Tremaine, in closing the discussion, said he would like to ask: Is not all fever septic? Is not fever evidence of a septic influence in the system? Is it possible that fever can occur without that? Is not fever always due to some poison, either produced in the system or injected from without? That puerperal fever, as generally understood, is of septic origin, goes without saying. The term puerperal fever is not specific enough. We should say puerperal metritis, peritonitis, lymphangitis, etc.

There was no such thing as disease as an entity of itself. Disease is disturbed normal action, by some disturbing cause,

either intrinsic or extrinsic. If there is a direct relation between erysipelas and puerperal fever, if the germ of one can produce the other, why does not the contrary relation hold good? Has puerperal fever ever been shown to produce erysipelas? Unquestionably there are forms of fever, not recognized as septic from the present standpoint, that occur in the puerperal state. The puerperal state is exceedingly prone to febrile conditions; there is, we say, a great tendency to disturbance of the system, and if it be true, how shall we account for the hundreds and hundreds of thousands of women who have no trouble except a mechanical one? As regards the dissecting-room question, that has been pretty clearly settled. Dr. Sands, of New York, who was a demonstrator of anatomy, attended hundreds of cases and had no puerperal fever resultant. I would myself, however, hesitate to attend a woman in labor if also attending, at the same time, a case of erysipelas or scarlet fever, simply because there is a feeling, more or less widespread, that these diseases may produce puerperal fever. For his own part, he thought the germ theory of these diseases is the most logical one. There must be some cause for this production of zymotic disease, and it seemed plausible that the germ theory is in the right direction, though we are all the time surrounded with difficulty in its elucidation.

Editorial.

THE commencement of the Buffalo Medical College took place Tuesday evening, Feb. 24th, at Concert Hall. The Rev. S. R. Fuller, Rector of St. John's Church, this city, gave the address to the graduating class, and Mr. James Frazer Gluck to the Alumni. The following are the names of the new graduates:

1. Frank Fowler Dow, Peru, Ind.
2. Edward Ledgyard Gager, Buffalo, N. Y.
3. Helen Phelps Morehouse, Buffalo, N. Y.
4. Charles Kennedy, Buffalo, N. Y.

5. Benjamin Willis Cornwell, Alden, N. Y.
6. James F. Sherman, Rush, N. Y.
7. Lewis B. Andrews, Bergen, N. Y.
8. Pine Elijah Bush, Richfield Springs, N. Y.
9. Walden Manley Ward, Perrysburg, N. Y.
10. James W. Chace, Corry, Pa.
11. Frank Theo. Noeson, Sinclairville, N. Y.
12. Daniel H. Brennan, Albion, N. Y.
13. Sarah E. Simonet, Craghan, N. Y.
14. M. Jean Wilson, Wethersfield, N. Y.
15. Wm. Eaton Robbins, N. Evans, N. Y.
16. Thomas Francis Dwyer, Buffalo, N. Y.
17. Asbury H. Baker, Dundee, N. Y.
18. James Christopher Wheeler, Dunkirk, N. Y.
19. Jacob Goldberg, Buffalo, N. Y.
20. Charles S. Logan, Arnot, Pa.
21. Francis Strickland Comfort, Campden, Ont.
22 Melvin Byron Huff, Lyons, N. Y.
23. Sewell A. Brooks, Colden, N. Y.
24. Clarence King, Machias, N. Y.
25. James F. Crowley, Batavia, N. Y.
26. Edmund Townsend, Bergen, N. Y.
27. Edgar J. Foote, Lockport, N. Y.
28. William W. Hall, Morris, N. Y.
29. Wm. J. Coyle, Binghamton, N. Y.
30. Wm. O. A. Langs, Suspension Bridge N. Y.
31. Horace Broson Gee, Newark, N. Y.
32. Geo. Webber Cutter, Buffalo, N. Y.
33. Stephen J. Spencer, Ellicottville, N. Y.
34. Bloom Warren Ganoung, Lincoln, Neb.
35. Wm. Spence Gillmor, N. Hector, N. Y.
36. John Ketchum, Santa Barbara, Cal.,
37. Edward J. Hobday, Buffalo, N. Y.
38. Francis D. Proctor, Portville, N. Y.
39. John Sidney Champlin, Buffalo, N. Y.
40. Ferdinand Fromholzer, Ruhmannsfelden, Germany.
41. C. Dobyn Curry, A. B., M. D., Minden, Ont.
42. Charles James Carrick, Portageville, N. Y.
43. Theo. C. Greene, Hornellsville, N. Y.
44. George E. Alexander.
45. George W. McClellan, Alton, Ont.
46. Charles M. Walrath, Franklinville, N. Y.

NOTE.—The name of Mathias Schmitz is to be added to the above list of graduates. He passed last year, but was under age.

During the previous day the Alumni of the College met. Able papers were read by Dr. W. W. Potter, Dr. E. C. W. O'Brian, Dr. W. D. Granger and Dr. C. S. Van Pelt, and the following officers elected for the ensuing year:

President—Dr. F. E. Dewey, Peterboro, N. Y.

First Vice-President—C. Diehl.

Second Vice-President—D. W. Harrington.

Third Vice-President—Mary Berkes.

Fourth Vice-President—Charles Van Pelt, Detroit, Mich.

Fifth Vice-President—W. J. French, West Valley, N. Y.

Secretary—John J. Walsh, Buffalo.

Trustees—C. C. Wyckoff, W. C. Phelps, P. W. Van Peyma, Henry Lapp, E. C. W. O'Brian.

Executive Committee—Charles A. Ring, Frank H. Potter, James W. Putnam; *ex-officio* members, Charles Cary, F. E. Dewey.

The following names were recommended for honorary membership: James Frazer Gluck, Buffalo; Dr. A. Dagenais, Buffalo; Dr. W. D. Granger, Buffalo; Dr. P. H. Strong, Buffalo; Dr. Henry Carpenter, Oneida; William Taylor, Canastota; C. C. Griffin, Vinton, Ia.; T. M. Culver, Urbana, O.; J. C. Green, Buffalo.

The New Orleans Meeting of the American Medical Association.

The distinguished President, Dr. Henry F. Campbell, of Augusta, Ga., is entitled to the full support of the profession in the way of attendance and papers at the approaching meeting of the National Medical Association, which will be held in the city of New Orleans, commencing Tuesday, April 28, 1885, and continuing four days. Every American physician should take pride in this body, and it is to be hoped that the meeting will be successful, and in every way a credit to us as a progressive profession. In this connection we notice that the Illinois Central Railroad will run a special excusion train of Pullman cars from Chicago to New Orleans, leaving at 9 P. M., April 25th, making the trip in thirty-six hours. The prospects for a pleasant trip are thus very favorable, and members going by this route will be enabled to return via Mobile, Montgomery, Nashville, Mammoth Cave, etc., over the Louisville and Nashville line, or via Meridian, Chattanooga and Cincinnati, over the Cincinnati, New

Orleans and Texas line. Round-trip tickets will be issued and can be purchased in Chicago for any of these routes which may be selected at the time of purchase. The rates will be very low and tickets good for thirty days, with stop-over privileges and a reduction of sleeping-car fare. We hope some arrangement may be made of a similar nature from this city, to enable delegates from this region to enjoy equally fair advantages with the Chicagoians.

One of the most ingenious ventures in professional advertising which we have noticed of late, will be found in a Sunday morning paper of late date. The specialists succeed admirably in evading the Code, new and old, and also have little of that delicate sense of propriety prevailing among members of the profession. They make some excuse to give the dear public full notice of their professional accomplishments, and also of their contributions to the medical literature of the day, and thus "whip the devil around the stump," with the end in view, evidently, of personal popularity. We have witnessed this tendency among specialists frequently, and we are led to congratulate ourselves that the broader specialty of *general practice* antagonizes the egotism engendered by too close attention to a part rather than the whole of the human organism, and thus saves the chagrin which must follow the adoption of such subterfuges for the attainment of fame and reputation. The spirit of the Code of Ethics is opposed to methods such as we criticise. Unless followed, what is the use of it? It is too often a dead-letter on the statute-book.

The following advertisment was placed in the hands of one of the prominent printing houses of this city for publication in the form of a circular, for general distribution. We print it as it was written, without changing its orthography, the construction of its sentences or capitalization of words. May it not in truth be said that there is need of higher education among medical men, or the necessity of a State Board of Examiners for license to prac-

tice? The latter measure would exterminate from the State the army of quacks and mountebanks who prey upon the credulity of the people.

M. Ricord on Cholera.

M. Ricord, at a recent meeting of the Académie de Médecine, made what he described as a confession of faith. He had witnessed all the epidemics of cholera, the first, in 1832, included. At that moment there were six hundred patients at the hospital when he was physician. Not one of these six hundred either before the entry or during the residence of cholera patients, was attacked with cholera. Not one of the nurses, male or female, nor of the medical officers, caught cholera. Dr. Ricord adds that during this epidemic he did not see any facts which would leave him to believe the cholera is contagious. His conviction remains the same after studying the subsequent epidemics, and he is strongly opposed to quarantines, which are irksome and useless.

Buffalo Obstetrical Society.

This society, which has prosperously entered upon the second year of its existence, bids fair to be one of the most useful and important of the various medical organizations for professional improvement in our city. Its membership list includes some of the most prominent and experienced of our physicians, and its Transactions, which we publish in each issue of the Journal, afford much interesting matter, which our readers will find well worthy of careful perusal. At the last annual meeting of the society the following named officers were re-elected for the

ensuing year: President, W. W. Potter, M. D.; Vice-President, R. L. Banta, M. D.; Secretary and Treasurer, William H. Thornton, M. D.

We have noted, for some months, the frequent reports in medical journals of attempts at abortion practiced by women on themselves. In all these cases the instrument has been a hair-pin introduced into the uterus with the points down, thus preventing ready removal in case the instrument should slip from their grasp. It is only in these cases that the physician is called. Besides these there are catheters, knitting needles, wires and various other articles used. It only shows to what an alarming extent women resort to mechanical and dangerous means to prevent maternity.

E. S. Gaillard, A. M., M. D., LL. D., editor of *Gaillard's Medical Journal*, died February 7th, at Ocean Beach, N. J. In 1866 he founded the *Richmond Medical Journal*, which, upon his removal to Louisville in 1868, was continued as the *Richmond and Louisville Medical Journal*. Subsequently he removed to New York where he established *Gaillard's Medical Journal*. This he conducted with great ability to the day of his death. We are informed that this publication will be continued by M. E. and E. W. Gaillard with an able corps of collaborators.

Dr. Percy Kidd recently contributed a notable paper to the Royal Medical and Chirurgical Society on "The Distribution of the Tubercle Bacillus." The paper and the extended discussion of it that followed its reading served to show a remarkable unanimity of opinion among physicians as to the presence of the tubercle bacillus in the products of phthisis, including the sputum, and little doubt was expressed as to its etiological significance. "What shall be done with this organism?" was variously answered.

The London patient on whom Mr. Godlee operated and removed a gliomatous tumor from the brain successfully, pro-

gressed favorably for a few days, but afterwards died of cerebritis. Notwithstanding the fatal termination of the case, it demonstrated a great achievement in diagnosis and cerebral localization on the part of Dr. Hughes Bennett, and foreshadows a future of cerebral surgery with possibilities of great reward in relieving suffering and saving life.

Mr. T. Pridgin Teale, in a clinical lecture "On the Surgery of Scrofulous Glands," expresses the opinion that scrofulous glands, "even when not suppurating, are centres from which health-damaging and death-dealing material may be diffused throughout the human frame," and that these centres should be removed by enucleation and dissection, or by "scraping" by means of Lister's scraper.

Dr. Osler, in the last number of the *Archives of Medicine*, refers, in an article, to the model cattle market and *abattoir* of Berlin. Private slaughtering is strictly forbidden, and the carcass of every animal slaughtered is submitted to the critical eye of one of the inspectors, of whom there are no less than 141, who must be satisfied that the carcass is healthy before it is exposed for sale.

The vacancy in the University of Leipsic, caused by the death of Prof. Cohnheim, in August last, has been filled recently by the appointment of Prof. Birch-Hirschfeld, of Dresden.

Sir Joseph Lister, Bart., has been appointed, by the Emperor of Germany, a Knight of the Order Pour le Merite for Science and Art—an honor very rarely conferred.

The announcement for the Spring Course af Lectures in the Niagara Medical College is at hand. The term will begin April 1, 1885, and continue eight weeks.

The *Archives of Medicine*, hailing from Putman's, New York, has suspended. Such is the fate, also, of the *Index Medicus*.

Reviews.

A Hand-Book of Ophthalmic Science and Practice. By HENRY C. JULER., F. R. C. S., Ophthalmic Surgeon to St. Mary's Hospital and to the Royal Westminster Ophthalmic Hospital. With 125 illustrations. Philadelphia: H. C. Lea's Son & Co. 1884.

We have here a most admirable book. We can heartily commend it as one which will fitly meet the requirements of all those who desire to possess a reliable guide in this branch of the science of medicine. The reader will find not only clear and concise descriptions of all the important affections of the eye, but also colored plates really beautiful in execution, which, to those who have not had the advantage of study in large ophthalmic hospitals will be of the greatest service in the study of diseases of the eye. Ludlow's and Jaeger's test types are introduced at the end of the volume. The general practitioner, particularly, will find in this book the kind of knowledge he most needs in his practice. In every respect the work reflects credit on its author. We have not seen the English edition, but as regards type work and illustrations, we believe that this book could hardly be surpassed in beauty of execution.

A Theoretical and Practical Treatise on the Hemorrhoidal Disease. Giving its History, Causes, Nature, Pathology, Diagnosis and Treatment. By WM. BODENHAMER, A. M., M. D. Illustrated by two chromo-lithographic plates and thirty-one wood-cuts. New York: Wm. Wood & Co , 56 Lafayette Place. 1884.

This work is an encyclopædic treatise on the subject. The disease denominated hemorrhoids is, perhaps, of more frequent occurrence than any other to which the human body is subject, and yet, even at the present day, much error, obscurity and confusion surround it, to the discredit and detriment of medical science, and to the encouragement of charlatanry. The distinguished author has, in this work, done much to establish the treatment of hemorrhoids upon fixed scientific principles. He

gives a summary of the theory and practice of the ancients, as well as that of the modern down to the present time. His own large experience enables him to speak with authority as to the best methods of treatment, and his directions are clear, explicit and practical. It is a book which should be read by every physician.

The Science and Art of Surgery. A Treatise on Surgical Injuries, Diseases and Operations. By JOHN ERIC ERICHSEN, F. R. S., LL. D., F. R. C. S., Professor of Surgery and of Clinical Surgery in University College, etc. Eighth edition. Revised and edited by MARCUS BECK, M. S., F. R. C. S., Surgeon to University College Hospital. Vol. i. Philadelphia: H. C. Lea's Son & Co. 1884.

Erichsen's surgery needs no introduction from us. It has been a standard work in this country, as well as in Great Britain, for more than thirty years, and has steadily grown in favor with both practitioners and students. The last edition is deserving of all praise. In its preparation the distinguished author has called to his aid the services of distinguished specialists. All that was antequated has been dropped from its pages, and the most recent advances in modern surgery have been incorporated in the work. The first volume contains 1124 pages. The illustrations are abundant, and many of them new. The work, as revised, is deserving of the continued confidence of the profession.

Lectures on the Principles of Surgery. By W. H. VAN BUREN, M. D., LL. D., formerly Professor of Principles and Practice of Surgery in the Bellevue Hospital Medical College. Edited by LEWIS A. STIMPSON, M. D., Professor of Physiology and Clinical Surgery, University City of New York. New York: D. Appleton & Co., 1. 3 and 5 Bond street. 1884.

This volume is one which will be gladly welcomed, not only by those who have enjoyed Dr. Van Buren's teaching, but also by the profession, by whom the practical value of the work will be appreciated. It is published from the manuscript which the distinguished professor employed in his lectures, with but few

changes and without additions; while it is not, therefore, a complete treatise on the principles of surgery, it is that presentation of them which he, in his large experience, thought best fitted to be of service and of practical value.

Comparative Physiology and Psychology. A Discussion of the Evolution and Selections of the Mind and Body of Man and Animals. By L. V. CLEVENGER, M. D., Special Pathologist County Insane Asylum, Chicago. Chicago: Jansen McClurg & Co. 1885.

The author states that some of the original ideas contained in this book have appeared in scientific and medical publications during the past five years as the papers were presented to scientific societies. He has condensed these papers and thoroughly revised them, and presents them to the scientists. The work thus offered bears evidences of the closest study and work upon the part of its author, and he has succeeded in presenting a most valuable contribution in comparative physiology and anatomy. We commend the work to physiologists.

Pyuria or Pus in the Urine and its Treatment. Comprising the Diagnosis and Treatment of Acute and Chronic Urethritis, Prostatitis, Cystitis and Pyelitis, with Special Reference to their Local Treatment. By DR. ROBERT ULTZMANN, Professor of Genito-Urinary Diseases in the Vienna Polyclinic. Translated by permission by WALTER B. PLATT, M. D. New York: D. Appleton & Co. 1884.

The title page, as above, sufficiently explains the scope of this work of about one hundred pages. That it is by Ultzmann is evidence that the subject is thoroughly treated. Dr. Platt is to be complimented on the success of his translation.

Surgical Delusions and Follies. By JOHN B. ROBERTS, A. M., M. D., Professor of Anatomy and Surgery Philadelphia Polyclinic. Philadelphia: P. Blakiston, Son & Co.

This little work is a revision of the address on surgery, for 1884, of the Medical Society of the State of Pennsylvania. It is an attempt to uncover and dispel some surgical superstitions.

THE

BUFFALO

Medical and Surgical Journal.

VOL. XXIV. APRIL, 1885. No. 9.

Original Communications.

LISTERISM AND ANOTHER STEP IN ADVANCE.

BY DR. ALFRED C. GIRARD, U. S. ARMY.

Innovations have, at all times, had to contend with the opposition of fanaticism, ignorance, indolence or self-sufficiency. In past centuries reformers were burned at the stake; in the present age the printing press is a patient instrument for the same purpose and has been, and still is, extensively used in the employ of the enemy of progress. Our science has furnished its victims, and advancement has ever found ready opponents.

How many are there not who shrugged their shoulders when Pasteur first demonstrated the action of germs and Lister seized upon the idea to use it practically in the preservation of life? Pasteur has conquered, I believe, at least with those who take the trouble of investigating questions before expressing opinions. Lister, in spite of the marvelous results achieved by his antiseptic precautions, still has adversaries, and many authors in the literature of the day seem to delight in exhibiting cases apparently detrimental to his innovation.

Who are these enemies of Lister's system? First of all, those who are alike ignorant of its principles and of its benefits. Then, some who have pet theories which blind them to everything else; some, perhaps, who are jealous of Lister's fame; others, again (and for the honor of the profession be it said, probably the larger number), do not see any need for all these precautions; they have operated and treated successfully without them and obtained brilliant results.

They are "the Pharisees and Sadducees" of surgery, who thank God for their perfection. It is not to them that Lister has extended a helping hand. They believe they do not need it, and, therefore, despise it. But the "poor sinners," the hospitals which for centuries had harbored the sloughing wounds, the exhalations of fever, in short, everything noxious, abnormal, hurtful, that might be generated in the human organism,—the surgeons who had to operate under the most unfavorable circumstances, in the heat of summer, in crowded tenements, in epidemics, amid filth and poverty;—they welcomed this savior. Let the detractors of Lister and his doctrines go to those places where surgical success seemed to be impossible,—to those devoted German surgeons, who, in old buildings, in poorly supplied hospitals, amid dense populations were battling for their patients' lives against the dread trio, erysipelas, gangrene and pyæmia—and they will hear tales of woe of former times and of a new happy era consequent upon the introduction of Lister's wound treatment with an almost fabulous decrease of mortality rate. I have almost a sentiment of pity for the blindness and ignorance of Lister's adversaries, were it not that I believe that in the face of these overwhelming proofs they assume an awful responsibility in rejecting what, with some increased trouble to themselves, may prove a strong, if not absolute safe-guard for their patients. The day will come, even for the favorable conditions of surgery in this relatively new country, when our excellent sewerage and ventilating systems, our pure air and good water supply (theoretically!) will not be the protection they are now and

when the favorable circumstances which seem to render unnecessary these surgical precautions, will make room to the results of over-crowding and contamination of buildings and then antisepsis will no more be a matter of choice, but a dire necessity, and the victims who have fallen here and there to the dread wound complications will cry to heaven for vengeance on those who have neglected to make their fate almost an impossible one. We cannot know where, in a palace or a hovel, these germs await us to destroy the healing results of our operations or lead injuries to a fatal result, and it is our duty to guard against such possibilities. Wise people, when cholera is known to be on the march, do not wait providing a pure water supply, perfect sewerage and removal of garbage until it has commenced claiming its victims in their town. Why should we surgeons, who are supposed to lead with good example, wait with our surgical precautions until the death list compels us.

The time for discussion of the usefulness of antisepsis is as much past as the question of the possibility of telephones, and the only war upon it worth considering is that made by men who over-estimate the danger of the means used or wish to see them entirely safe. Of course we do not propose to convince those who labor under the fallacy that Listerism means simply application of carbolic acid to wounds. Such ignorance was excusable some years ago. Still, for the benefit of those who have been remote from opportunities of information, I will state, in a few words, that the essence of Listerism is to prevent the entrance into wounds of germs floating in the atmosphere or adhering to dressings, instruments, fingers, etc., which may come in contact with these wounds. It has been shown by Pasteur that these germs bring about changes in animal fluids which eventually lead to putrefaction, and Lister, on the assumption which since has been proven to be correct in numberless instances, that they are responsible for the complications resulting in wounds and injuries, sought to prevent their entrance or

contact with the discharges and to destroy them, if those conditions arise, showing that the precautions were not properly taken or entrance of germs had taken place at the time of injury.

For this purpose Lister used, at first, a carbolic paste, then the spray with carbolized water and hygroscopic gauze impregnated with the acid; but always mindful of the possible ill results of the absorption of the acid, he protected his wounds from direct contact with the germicide wherever possible. Later on, he or his disciples, used other agents, such as boracic and salicylic acid for the same purposes, and for the spray thymol and other ethereal oils inimical to the germs. It is, therefore, evident that Listerism is not necessarily identical with carbolic acid, nor a departure from the acid a departure from Listerism.

That there is a certain danger from the possible absorption of carbolic acid used in the ablution of the wounds is not denied, although such occurrences can still be counted among the hundred thousands of cases treated according to Lister.

As our knowledge of bacteriology advanced, we found and substituted other agents, more destructive to the germs and less dangerous to the human organism, but in whatever form they were used—in solutions, as the bichloride of mercury, or in powders, as the iodoform—they still, here and there, led to unpleasant results, without, however, impeding the accomplishment of the main object, asepsis. The most faithful followers of Lister have not been blind to these disadvantages, and have steadily tried to assist their master in the perfection of the technique; but some of the changes proposed were too complicated, others too expensive, others not effective enough, and the great desideratum has not been attained until very lately, when it appears that a method has been devised uniting all the safeguards of the Lister system with absolute safety to the patient. It is by substituting the oxide of zinc for all the preparations to be brought in contact with the wound, excepting when a septic condition of the wound necessitates the stronger agents originally employed by Lister.

The introduction of this new method is due to Professor A. Socin, of the University of Basle, my former teacher, whose eminent qualities I almost worshipped when a student twenty-five years ago, an appreciation which has not been lessened by the judgment of riper years and comparison with other coryphees of science. I know that implicit reliance can be placed in his logical reasoning and accuracy of statements, and I am, therefore, prepared heartily to endorse, when otherwise I might wait for corroboration.

I proposed at first to submit a condensed description of Socin's method, but I find it so admirably given in his preface to the annual report of the city hospital of Basle, and coupled with such other judicious advice, that in the interest of my readers I prefer giving a translation of the same.

"Since the commencement of 1883," he states, "the method of wound treatment in the surgical section under my charge has been considerably modified, and I propose to make a short report on the subject. Up to the time mentioned, during eleven full years, we had observed, with few exceptions, rigidly, Lister's precepts, and had adopted those changes and simplifications only which had been recommended by Lister himself. At the introduction of the powder dressings, particularly the iodoform, we made experiments with them, and became satisfied not only of the convenience and simplicity of the procedure, but also of its dangers. My friend, Dr. Picard, Professor of Chemistry, with whom I often discussed the question of antiseptis, drew my attention to the oxide of zinc; after a number of experiments in the culture oven, and practical trial, I found this substance as effective as iodoform and bismuth; besides this, however, the oxide of zinc has the very valuable qualities of being absolutely inocuous, entirely odorless and very cheap."

At the meeting of the central society of physicians which took place in Basle on May 25th and 26th, I was already enabled to report on the satisfactory results which we had obtained with the oxide of zinc. Soon after I read (*Deutsche Med.*

Wochenschrift, June, 1883) that Prof. Peterson, in Keil, had obtained very satisfactory results with the same agent. Our mode of application differing in many respects from that of Prof. Peterson, it will not be undesirable if I describe our method. The main idea guiding us is that no other antiseptic shall come in contact with the wound. We use, therefore, carbolized solutions only for the disinfection of the operating room before operation, to wash the hands, instruments and the field of operation. The sponges, after being washed clean in water, have to remain four weeks in a five per cent. solution of carbolic acid before being used again, and then washed out and laid into the weak zinc milk (see below). We use the oxide of zinc in four different forms :

(*a*) A mixture of one part oxide of zinc and one hundred parts distilled water (thin zinc milk) is employed for irrigation of fresh wounds, immersion of sponges which come in contact with the same, and for the purpose of washing out cavities of the body and joints, which have been opened.

(*b*) A mixture of ten parts zinc with one hundred parts distilled water (thick zinc milk) is used to irrigate all those wounds which are to remain open (wounds of cavities, wounds of operation in mouth, rectum, etc.) before dressing, until the whole surface is covered with a white film.

(*c*) In form of dry powder it is applied with the sprinkling box in ulcers, burns, scratches, etc., and in these it has had very favorable results.

(*d*) For the covering of wounds closed by suture we employ the so-called zinc paste, consisting of fifty parts zinc oxide, fifty parts water, and five to six parts chloride of zinc. This paste has the peculiarity of rapidly drying on exposure to the air and forming a solid scab, which is the more adherent and hard the greater the proportion of the chloride in the mixture. Both substances combine chemically to an oxychlorine, which is frequently used in dentistry as a cement. In the proportions mentioned above, containing the oxide largely in excess, it forms an

air-tight, sufficiently adherent, wound covering, especially when a thin layer of cotton wadding is used as a support to the paste in its application with the brush. When wounds are drained it is self-evident that the opening of the drain must not be covered. Wounds which are not drained, but placed in exact coaptation by suture, do not require any further dressing after the application of the paste. This is particularly convenient in wounds of the hairy part of the scalp, wounds of the face, or in the neighborhood of orifices (harelip and other plastic operations). After eight to ten days this scab commences breaking off and finally falls of with the remainder of the unabsorbed catgut threads. The scars remaining are usually more delicate and perfect than any I have witnessed with any other wound treatment.

We use hygroscopic gauze for the purpose of covering and absorbing drained and open wounds, as it offers the best absorbing power of any dressing recommended. It is folded and well impregnated with the thin zinc milk, which is wrung out before applying the dressing. In this slightly humid condition its absorbing power is at its maximum, as evidenced by numerous experiments. It is then fastened with dry strips of the same material, which also serve the purpose of compression. A second layer of dressing is then added, composed of several sheets of wadding, or a peat cushion expressly prepared for each case. I believe the report herewith submitted offers evident proof that even large fresh wounds may be kept aseptic under the zinc dressing, and that one application may be sufficient. The method has, however, its drawbacks. The constant shaking of the mixture used for irrigation is especially inconvenient, and we are using, therefore, for that purpose, of late solutions of bichloride of mercury, although when largely applied they may easily cause stomatitis. The zinc oxide is as useless as the other insoluble antiseptics where the wounds are already septic. Here we use, as heretofore, solutions of corrosive sublimate, carbolic acid or chloride of zinc. I consider it self-evident that in anti-

septic wound treatment the choice of the particular antiseptic or dressing material is of less consequence than a careful adaptation to each particular case, of the principles of the method. The most important among the few comparatively simple measures needed to carry out the same is that exact coaptation of the tissues be achieved when union per primam is attempted. It is clear that it is not sufficient to sew up the skin, however carefully it may be done, in a wound embracing several layers of structures. I believe, therefore, that any adherent of antiseptic surgery, will, of himself, adopt the deep sutures (*versenkte Nähte*) which have, of late, been recommended as a great novelty. We have been using them a long while already, under the name of *Etagennath.* An amputation wound, *e. g.*, will never heal fully, per primam, if we are satisfied with covering it with a flap of skin united by sutures at its edges. We have, therefore, entirely abandoned this formerly favorite mode of amputating and have returned to the old circular operation in two stages, or when the circumstances permit it, to the muscular flap. In the circular operation we first coaptate the deep muscles on either side of the sawed off bone with sutures to a linear union. This is followed by suture of the superficial muscles, then the fascia, and finally the skin. In the muscular flap the cut is so calculated as to allow a careful union of muscles from the deeper parts outwards. In this manner we not only avoid formation of a "dead space" in the wound, but may reduce drainage, this necessary evil, considerably. If in addition to this we follow the rule of the old French surgeons, of removing all the larger nerve trunks by resection from the wound, we shall see the stumps heal without suppuration or pain, and what is of greater importance yet to the patient, they will be more useful. The very inconvenient union of the bone and skin by the cicatrix is thus avoided, and artificial limbs can be easily adapted. The muscles united by suture have no tendency to retraction, and form an excellent permanent bolster, movable over the bone. I have satisfied myself that in stumps after exarticulation, the soft parts

preserved as thick as possible and united per primam, do not adhere to the joint covered by them, but form an actual articulation, thus markedly increasing the usefulness of the stump. The wounds resulting from the removal of deeply seated tumors, operations on bones and opening of abscesses, should be closed on the same principle. In this manner the painful, deforming, adherent cicatrices may be avoided, in many cases."

Thus far the report of Prof. Socin, although, as mentioned above, the latter part of this report does not bear any direct relation to the question of antiseptic dressings, it contains such useful hints that I feel justified in digressing thus far.

The number of operations reported treated on antiseptic principles, and wherever suitable, with zinc, is 353, with fourteen deaths. These latter were the final termination of three cancerous tumors, five tracheotomies (four for diphtheria and one performed by the patient with suicidal intent), two incarcerated herniæ (in one from degeneration of liver and kidneys, the other gangrene of intestine), one resection of the hip (death from miliary tuberculosis of the lungs, kidneys and spleen), the remainder fatal lesions, *per se*, surely favorable results, as far as the wound treatment could bring them about. Of wound complications, which are supposed to be prevented by careful antisepsis, he reports two cases, both erysipelas, one following the scraping out of the knee-joint several months after resection (dressing of salicylated cotton), the other nineteen days after a severe railroad injury brought in already septic with a complicated fracture of the humerus. Origin from a counter-incision in axilla (open wound treatment) compresses of five per cent. carbolized solution. Both cases recovered in less than two weeks.

This oxide of zinc dressing is very easily applicable in private practice. No particular caution need be taken with the proportions; the zinc milk can be prepared at the bed side; the number of dressings necessary are few, as a rule one is sufficient. When the powder form is used it can safely be entrusted to the patient or family, and does not betray itself by any odor. With

some hydrophile gauze, a box of oxide, a little chloride, a bottle with cat gut and his pocket case the surgeon may feel equal to the requirements of most cases of wounds or operations performed in private practice, and these substances are surely a small price paid for the safety of the patient and the honor of a good result.

Fort Porter, Buffalo, N. Y.

Energy of Nerve and Brain.*

By W. H. Pitt, A. M., M. D.

In selecting nervous energy as the subject for a short paper, which I have the honor to present this evening, I did so because there is probably less known of the action of the nervous system than of any other organs of animal life; and what positive knowledge is possessed, we owe chiefly to the present generation, which has been so prolific in new discoveries in every department of science. Histology has grown with the microscope; embryology, with evolution; and physiology, with every advance in physics and chemistry. A degree of stability is now being realized in every branch of science which relates to the living, because the speculations concerning Nature in Aristotelian philosophy, have passed away.

And so, now, we have many of the phenomena relating to organic or inorganic matter accounted for and satisfactorily explained, since the general acceptance of the correlation of force and the conservation of energy.

It is understood that force or energy is something in motion or position in reference to some other thing. Conformable to this view, it should be borne in mind that the energies of the living being form no exceptions to the general rule or law. We speak of the radiant energy of the sun, and call it light and heat; of magnetic energy, of electric energy, of nervous energy, of

* Read before Alumni of Buffalo Medical University, February, 1884.

muscular energy; also, not least, of physical and chemical energy. We used to be told also of "vital energy"—a term which, however, lacks definition, and is becoming obsolete.

It is pleasant to find out, although somewhat late in the history of man, that all of the above energies are correlated, and that they are one and the same thing. I say thing, as they are merely matter in motion or position. Nervous energy is, therefore matter in motion, or in position to produce motion. All living beings have motion, and most of them nerves and nervous ganglia. Now there was a time when no life existed upon the earth; its temperature was too high to sustain life. When, however, its temperature fell to the proper point, and all other conditions were favorable, in the appointed time and manner, life began. According to the accepted idea which so generally obtains, that beginning was very low in the scale of being; so low, indeed, that the organism was apparently of the same material throughout, albuminous, and commonly of a viscid fluid state. That this early form of life started from the hot rocks, there is every reason to believe. In North New Zealand, on the shores of Retnea, situated amidst boiling springs, a greenish, gelatinous, or slimy vegetable substance grows in the crevices of the rocks where the boiling spray constantly falls. In the Geyser regions of North America the protoplasmic vegetable matter grows on the hot rocks. But in the animal form, or among the rhizopods of primeval times, this semi-fluid state of existence must have been very unstable. If an individual happened to run against his neighbor, neither one was left to tell the story, as they coalesced like two drops of water. But in union there is strength, so this dual compound broke up into numerous particles, each one of which became a living creature. Such organisms are all stomach, as particles of food sink into them anywhere, and so they have no need of a mouth. They are likewise, all lung, respiratory at every point breathing in oxygen, and if put into a vacuum will soon die. These living albuminous particles, were first observed

under the microscope and noticed to possess mobility, and also that the movements did not obey the law of common fluid matter of that consistency. That there was some force or energy existing in the substance, was quite apparent, as it moved in directions contrary to gravity, and was both contractile and expansive at the same temperature. It was first discovered by Dujardine, a French naturalist about forty-six years ago, and called by him sarcode, in animal organisms of a very low order. Hugo Von Mohl found a similar substance in the cells of plants and named it *protoplasm.* Max Schultze perpetuated his name forever by demonstrating that the sarcode of the animal and the protoplasm of the plant were identical, and biological science took a long step forward. It now claims that this substance underlies all life, whether animal or vegetable, and has been appropriately called, by that great naturalist, Huxley, "the physical basis of life." You watch it under the microscope for hours, as it throws out its little arms (pseudopodia) and withdraws them, undulations pass over and through it, and it moves with considerable force. It is certainly the lowest form of life studied, as it is apparently of the same nature throughout as a living being, undifferentiated, "an organism without organs." Somewhat higher in the scale of beings is that little creature called *amœba*, which may be found in fresh water ponds, or in the gutters on the roofs of our houses. It is a marvelous point of living matter, a thousandth of an inch, or so, in diameter, and which, for a hundred years or more, has attracted the attention of microscopists and naturalists who are now only just beginning to comprehend its importance and its meaning. It moves over the field of view like the other protoplasm by improvising pseudopodia, but differs from its ancestors in having a nucleus, and within this nucleus a little point called the "contractile vacuole," which dilates and contracts incessantly. This throbbing point, embedded in the soft protoplasmic body is the first intimation of an organ supplying energy by its motion to the living creature.

In the transparent cells of the plant characæ, which grow in clear water streams, the protoplasm may be seen in motion, even with a low power microscope; and also in many other plants, particularly in the leaf cells of valimeria spiralis.

Here are some photographs of microscopic objects, greatly enlarged, taken by the Surgeon-General of the army, Washington, D. C., in which you see the corpuscles of the blood of the animals named on the plate are said to have amœba-like motion. Indeed, it is frequently noticed that the white corpuscles of human blood move across the glass under the microscope like an amœba, and some observers declare that they have been seen to devour their smaller companions, the red ones, which are supposed to supply them with oxygen. And so it appears that whether we examine plant or animal cell, which is common to both, we shall find it in some stage or other of life, furnished with living protoplasm.

All the phenomena of animal or vegetable life become better understood and more easily accounted for, by admitting the demonstrable fact that the cells are protoplasmic, having the property of contraction and expansion, and consequently power of receiving and imparting energy.

But the unit-like cell, amœba, dies as we have seen in a vacuum, mostly, from the exclusion of oxygen, but atmospheric pressure may have something to do with it. All things living, so far as known, labor under this pressure, and cannot thrive without its influence. It is about fifteen tons on a common-sized man. It must be very little on the amœba, still it is something, about twenty-four hundred thousandths of an ounce. So far as pressure, there is scarcely a limit to the amount which can be endured, providing that it pervades the whole organism, and is equal in all directions. And so considered in this sense the pressure by the amœba substance outward is just balanced by the surrounding pressure, leaving a free and easy movement to its projections, and the rythmic pulsation of its vacuole. A dis-

turbance of the atmosphere, as waves passing through it, will produce undulations on the surface of the amœba, which proves that even this point of microscopic, living matter, receives and quickly transmits the energy imparted to it by the oscillating air. Vibrations passing through the medium in which the animal is bathed give up motion or energy, which may be retained for a time by the living thing or rapidly lost. If I jar a glass of water, undulations pass through it on account of its high elasticity, which, upon its surface, are called wavelets, and which you may also see pictured upon the ceiling if a light be held under the transparent glass. Now, anything alive in the water, a fish, for instance, would receive a part of this motion, and, if it has an inelastic apparatus, such as the brain and ganglia, for example, specially designed to stop this force, or energy, it might be stored up for future use, and expended in the performance of its own work and motions. If the water be illuminated or warmed it appears undisturbed so far as the human eye can detect; but there are, nevertheless, wonderfully small vibrations passing into it, which the fish may likewise, converting into its own variety, receive and appropriate.

What is true, in this respect, of the million-celled vertebrate fish, with its highly organized functions, in a quantity of water, is also true of the unicellular monera, or amœba, in a drop of water under the microscope.

As the physicist recognizes the same law governing the molecule and the planet, so the biologist accepts the microscopic, living protoplasm as the morphological unit, the primordial cell with which nature has built up, through wonderful modifications, all the myriads of complex and differentiated forms in the whole domain of life.

In this connection it should be borne in mind that all processes of Nature, whether taking place in animate or inanimate matter, depend upon that medium from which there is no escape and to which, probably, all phenomena of organisms should be referred.

Its vibrations are known to us as light, heat, electricity, magnetism, etc. As we know about the distance of the sun, the velocity of light has been determined.

There is a method, also, of arriving at the comparative pressure of two media, when the velocity of the vibrations through them is known, simply by a comparison of the square roots of their elasticities.

The velocity of sound in the air, deducting for the heat of progression, is 916.3 feet per second, while that of light through the ether is (using the greater number) 192,000 miles per second. The ratio is about 1,106,360 to 1. The pressure of the ether, therefore, is the square of this number times the atmospheric pressure, or eighteen and one-third billions of pounds per square inch, more than nine millions of tons. Enormous as this pressure appears, which is about the weight of a square mile of granite, still, as already shown, a living organism would be balanced in it, and so delicate a structure as our plastic amœba, which, according to these calculations, bears a weight of 2,750 pounds, would be able to move in any direction with the utmost ease. An absolutely elastic ether of this nature pervading all space, and filled with radiant force, would give up energy to all ponderable matter, whether living or dead. The *vis viva* of inert and the potential energy of animate matter, reappear as modified ethereal force. The earth receives its astounding share and transmits it in turn to all that move or exist upon its surface. The steel magnet draws its electricity from the magnetic earth, and keeps always full or saturated; notwithstanding, it may part with any quantity of magnetic energy to other steel bars, which, like itself, can impart to others without loss. Are all things alive bathed in the same ether and in contact with the same earth an exception? Do they, too, with specialized functions, derive energy from the same source and through the same media? Or, shall we say, because alive, they only accumulate energy from the food digested and the oxygen of

the air? Let us look at our amœba once more. Its little arms are thrust out and withdrawn, its vacuole knows no rest. Can this bit of restless albumen get all its motion from molecular changes within itself in which we have discovered oxygen takes so prominent a part? Or, is the radiant energy of the sun a never-ending source of supply? Let us look for an answer to some of the lowest forms of life having anything like a nervous system. In the sea anemones there is no very definite nervous system. In the skin, however, and in the digestive tract, there are, according to the Hertwigs, modified epithelium cells with fine, hair-like threads, which perform the function of nerves. They also describe cells similar to the multipolar ganglion cells of the vertebrate which are sense cells in a transition state. The conclusion is that the nervous system has been derived from the superficial epithelium layer of the body. The special organs of sense or nerves, according to Balfour, are developed from the epi-blast of the ovum, and even the brain itself, as so graphically described by Huxley, is an infolding of the skin. And so it appears that the whole nervous system, brain and all, were developed from the general sense of feeling in the skin. Hearing, seeing, tasting, smelling, are modified senses derived from that of touch or feeling, and all of them supplied with nerves which act as conductors of force, as we shall see, to and from the ganglia and brain.

Before the remarkable researches of George J. Romanes, which were published in the *Fortnightly Review*, five or six years ago, it was a vexed question among biologists whether or not the *Medusa*, jelly-fish, had a definite nervous system, so difficult had the problem proved on account of the deliquescence of its tissues in the hands of the histologists. Romanes took hold of the subject physiologically and settled the question forever. As some of his rich discoveries bear directly upon the particular function of the nervous system which I wish to emphasize, your attention is directed to two or three views of the Medusæ on

the chart before you, which were enlarged from his paper. Here is a variety called *aurelia aurita*, with its large swimming-bell, and pendent stomach and mouth, called the *polypite* (fig. 1). The

FIGURE 1.

ventral surface of the dome is concave, and consists, as also the surface of the polypite, of a neuro-muscular coat about the thickness of common paper. The dorsal integument is likewise very thin, and between the two is nothing but a mass of jelly. The jelly fish swims by contracting and expanding the lower coat. As the swimming-bell contracts, the water is forced out from the concavity behind, and by its reaction the animal is propelled. This expansion and contraction is constant and rythmical as the beating of the heart in a vertebrate animal. You will observe that the border of the bell is fringed with hair-like tentacles, and eight little spots, marginal bodies or ganglia. Romanes found that by cutting off this fringe all the way around the creature was paralyzed forever and sank helpless to the bottom; but that the fringe kept on pulsating for hours or even days. The swimming-bell, thus mutilated and apparently lifeless, was found, however, not to be dead, as it readily responded to artificial stimuli, contracting and expanding as before, but had no power of itself to move. He then varied the experiment by cutting out first one and then another of the marginal bodies or

ganglia; but not till the last was removed did total paralysis ensue. It was, therefore, evident that these parts presided over muscular action. The next plate (fig. 2) is a view of the Medusa cut

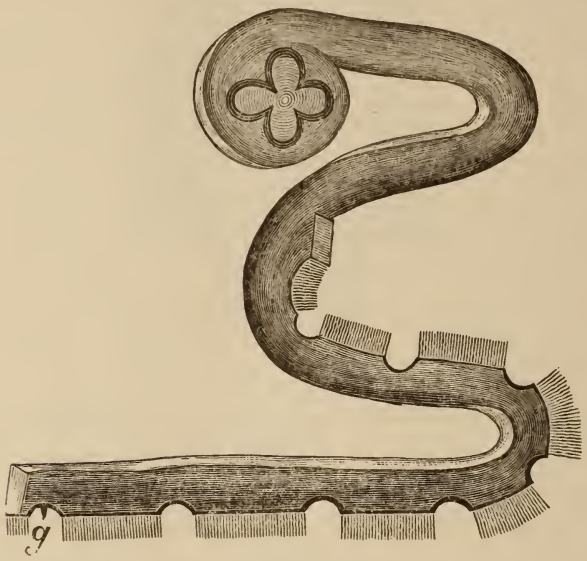


FIGURE 2.

into a parallelogram, with the polypite section at one end and a single ganglion (*g*) at the other end, while the tentacles extend the length of one border of the ribbon-like strip. Now, if the opposite end be gently irritated with a camel's hair brush, a wave will pass to the polypite end and the ganglion will discharge reflexively, sending a pulse in a contrary direction. The tentacles being even more sensitive to stimulus than either the muscles or nerves, contract as the wave progresses in either direction, so that the velocity of the movement can be seen with the eye and its time noted. But it was with another species of Medusa which he experimented upon with light that he got the most marvelous effect. By subjecting it to a flood of intense light he discovered that the ganglia had the property of accumulating this energy, and then discharging it into the muscles of the swimming-bell,

which produced mechanical motions as above described. Flashes of sunlight had the same effect, but the sumation or accumulation of the energy in the latter case took about one second of time before the reaction occurred. Curious to learn, poisons on the muscles and nerves of this low order of life, as his experiments directly prove, have the same effect, producing spasms, paroxysms, paralysis and death, as in the higher animals. As the jelly-fish is the lowest organism discovered, or perhaps that ever will be discovered, in which nerves or muscles make their first appearance, these brilliant discoveries, especially the one demonstrating that the ganglia store up energy for future use, make an important advance in knowledge, as relating to the physiology of the nervous system. But important as they are, particularly the one which alludes to the sumation of energy, the distinguished investigator seems not to have entertained the idea which naturally grows out of it, in its application to the nervous ganglia and brain of higher animal life.

I conclude, therefore, that the motion of man, that all the muscular energy he puts forth, in the shape of work performed, or lying potential, stored up in brain, gangalia, nerve and muscle, does not necessarily come from the chemical or mechanical change taking place in the food digested and assimilated; but that much of it does come from his environment, unbidden, the same way precisely, as we have seen, it may be accumulated by the Medusæ. According to the best authorities the average human adult develops, in twenty-four hours, and loses by radiation and otherwise, about 8,700 units of heat, equivalent to 3,000 foot-tons. The consumption of oxygen is one and one-fourth pounds; the water nine ounces as a product of burnt hydrogen, and the carbonic dioxide gas nearly two pounds. The left ventrical does a work equal to ninety foot-tons, and the whole heart, about one hundred and twenty foot-tons. The urea eliminated is not far from 400 grams. The oxidation of the protein bodies .as measured by the amount of urea is about

the same every day with very little increase by fatiguing labor. The expenditure of the food force and the inhaled oxygen in supplying the natural waste, keeping up motion, and the extravagant demands of radiation, would leave but a small fraction of energy to be expended by the common laborer in foot pounds as work. Indeed, careful estimates made on the quantity of albuminoids oxidized to water, carbonic dioxide and urea, in a man ascending a mountain, do not furnish half the energy necessary to lift his body that vertical hight. This was shown by Fick and Wislicenus in their ascent of the Faulhorn in the Alps, and they made no allowance for the force expended in radiation, or that exerted in muscular work voluntary or involuntary, (lungs, stomach, heart, etc). The fuel of muscular force is therefore not in the albuminous or nitrogenous portion, but must be found, if at all, to account for the work done in the non-nitrogenous compounds, such as the fats, sugars, glicogen, etc. But careful estimates of these. making full allowance for the force wasted in so many ways carrying on the functions of life, leave a large amount of energy still lacking to equal the work a strong healthy man is capable of performing in ten hours. The natural recourse left, from which this extra supply may be derived would seem to indicate a source external to the muscular animal. As the sun is the origin of all energy derived directly or indirectly from the earth and its atmosphere, some of its undulations, under whatever name, would keep the inelastic nerve centers saturated with force, which in turn would supply the protoplasmic muscular cells, producing tension, contractility and all the phenomena attendant upon mechanical motion. It is only upon some such view as this, I think, that physiological science can reach a satisfactory explanation of this intricate problem.

Society Reports.

Buffalo Medical and Surgical Association.

Meeting of February 3, 1885.

The President, Dr. F. W. Bartlett, in the Chair; Dr. Frank H. Potter, Secretary.

Practice by Midwives—The committee appointed to consider the advisability of regulating the practice of midwives for the city of Buffalo reported in favor of such regulation. This committee (consisting of Dr. Hartwig as chairman, Dr. H. R. Hopkins, Dr. William Ring, Dr. P. W. Van Peyma, and Dr. John H. Pryor) recommended that, in view of the serious evils connected with the practice of ignorant midwives, the legislature be requested to pass a bill compelling the examination and licensing of midwives in and for the county of Erie. A rough draft of a bill was then presented providing for a Board of Examiners, and for the examination and registration of all persons other than physicians now practicing, or who shall hereafter be desirous of practicing, midwifery in this county. It was the opinion of the meeting that the recommendations should be acted upon, and the bill was then referred back to the same committee, with instructions to arrange the matter in proper shape to be presented to the legislature, to obtain legal advice if necessary, and to report at a subsequent meeting.

In the discussion following the committee's report, Dr. Moody protested against any attempt to regulate the practice of midwives in the way proposed. The fault was in the medical colleges in graduating incompetent men and allowing them to begin practice without practical experience in obstetrics.

Dr. Granger could see no relation between the failings of the medical colleges and the proposal to regulate the practice of midwives. It is a question to be decided by itself. A certain

amount of skill and knowledge was required in the practice of midwifery, and it was proper for the profession to see that each person, before beginning this practice, possessed at least a minimum amount of experience. This bill does not abolish the midwife; it merely regulates their practice.

Drs. Putnam, Grosvenor, Hartwig, Coakley, Van Peyma, Mann, Strong and Bartlett also spoke in favor of some regulation of the practice of midwives, and the bill was then referred to the committee, with the instructions already mentioned.

Persons Discharged from Asylums as not Insane—Dr. William D. Granger read a paper upon this subject, the interest of which turned upon the relation of the profession to patients before their admission to an asylum. Before a patient could be admitted it was necessary that two physicians should be convinced that insanity existed, that they should make a sworn statement to this effect, and that this statement should be approved by a judge of a court of records. Every certificate must contain the words, "*Is Insane*," or the commitment would not be legal. Upon the patient and the certificate being presented at an asylum, the superintendent was obliged to receive him. There was no discretionary power in the matter. All the authorities agreed upon this point, and it was a just provision, both to the court, to the physicians, and to the patient. The patient having been admitted, it became the duty of the asylum physicians to make a full diagnosis and refer him to the proper ward for treatment. If full evidence of insanity was not present at the time of the first examination, it was the duty of the superintendent to keep the patient under close observation until a definite conclusion could be formed. This was necessary because the patient might have "concealed delusions, hallucinations, and illusions," and the first examination not suffice for their discovery. Then, again, the case might be of a paroxysmal character, and the patient be admitted during the intermission, when further observation would, of course, be necessary. Under this strict plan, no person was retained in an asylum who was not insane. In Utica, during the

past forty years, 268 patients had been discharged as not insane, an average of 6.5 per annum. In Buffalo, during four years, 23 had been discharged, an average of 5.8 per annum. During the past year, eleven have been discharged from Utica; from Buffalo, ten; and it would be observed that this was considerably above the average. Now, the discharge of these persons did not reflect any discredit upon the physicians who had made the certificates of insanity. The patients were generally found to be suffering from one of the following diseases: delirium tremens, dipsomania, meningitis, cerebro-spinal meningitis, hysterical mania, hysterical epilepsy, or active delirium from other causes which were obscure; and it might be questioned whether an asylum was not a proper place for them. Again, in the cases of persons coming from the poorer classes, the physicians had often to decide between the jail, where they found the patient confined, and an asylum, and wisely preferred the latter. This was certainly humane, and deserved commendation.

The term insanity, as interpreted by the law, might easily be made to include the diseases above mentioned. The last enactment upon this subject read as follows: "The terms 'lunacy,' 'lunatic' and 'insane,' as used in this act, shall include every species of insanity, and extend to every deranged person and to all of unsound mind, other than idiots." From this it appeared that the discharge of patients, suffering from the above-mentioned diseases, as not insane, did not reflect upon the skill of the physicians who had made the certificates.

The author then proceeded to consider how much truth there was in the sensational accounts of the attempted incarceration of sane persons in the asylums. He had recently noticed in a reputable newspaper of Cleveland, Ohio, a statement to the effect that half of the persons detained as patients in the lunatic asylums of that State were sane, and unlawfully kept in those institutions. Charges against the asylums, in this respect, had been made by newspapers in this State. It was hardly necessary to say to the members of this association that they were entirely

unwarranted. In order to make it possible to incarcerate a sane person in an asylum, it was necessary to assume that the friends of the patients were designing, the physician who signed the certificate corrupt, the judge willing to be bribed, and the superintendent unscrupulous and dishonest. The conspiracy, as it was frequently called, involved too many absurd suppositions. As a matter of fact, an attempt of this kind was exceedingly rare, and was always discovered. During thirty years but three attempts had been made at Utica, and they had failed in the end. No attempt of this kind had been made at the Buffalo asylum.

The author also wished to compliment the profession on the character of the certificates presented at the asylum. They showed an amount of care and professional skill that was highly commendable. Only in a few instances was there anything wrong or objectionable found in them.

Dr. Van Peyma merely wished to ask where the line was that divided sanity from insanity. He had heard it said that all people were insane, that it was merely a question of degree, which, if true, would often make a decision very difficult.

Dr. Chas. A. King considered it impracticable to decide upon the sanity, or insanity, of a person, upon one examination. Two, or even more, examinations should be required before a physician is allowed to write a certificate. By this means, many mistakes could be avoided, as, for instance, mistaking hysteria and dipsomania for insanity. He did not think it possible to incarcerate a sane person in an asylum under the present laws. This idea is a myth, intended to frighten weak-minded people, and it is kept alive by evil-disposed persons for their own ends.

Dr. Putnam, after complimenting the author of the paper, wished he had extended his remarks so as to include eccentrics and epileptics. Were persons properly placed in these two classes often sent to the asylum as insane? He believed the mistakes made were generally to be attributed to the difference in definitions. Each teacher defined insanity to fit his own theories,

and the general practitioner was often at a loss as to what to believe. For instance, in France, attempted suicide was a proof of insanity, but in this country it was not so, the person making the attempt being punished as a criminal.

Dr. Coakley had observed the ordinary practice in committing the insane to the asylums, in a distant State, and was much pleased with the care required by the authorities in this State. He thought that in some respects improvement could take place, but, on the whole, the practice was quite satisfactory.

Dr. Mann said the tables were sometimes turned, the asylum authorities making the mistakes, not the physicians who write the certificates. He reported a case which the asylum physician discharged as sane, the patient being able to cover up his delusions, and which caused a great deal of trouble. All parties concerned in the care of the insane should be particularly careful and painstaking in their observations, to avoid all possibility of blundering.

Dr. Hartwig reported a case of mania lasting three days. In this case a mistake would have been made had the patient been committed to an asylum.

Dr. Bartlett thought the danger was in too much delay in the commitment. But it was for the interest of the patient that he should be placed, early in the disease, in a place to be properly treated.

In closing the discussion, and replying to Dr. Van Peyma, who asked where the line was drawn that divided sanity from insanity, Dr. Granger said that insanity was a *disease.* It was as absurd to say that every one was more or less insane as it would be to say that everybody had typhoid fever, or phthisis, or any other disease. Its diagnosis was to be determined by a knowledge of the physiology of the nervous system, and of the derangements produced in it by disease. That it was sometimes difficult to recognize this disease in its early stages or in its obscure forms was no more to be wondered at than the difficulty in recognizing incipient phthisis or any other disease that was

subtle in its approach. It was often difficult to decide as to the sanity or insanity of a person, but the physician must be convinced of the presence of disease before he wrote the certificate.

Dr. Frank W. Hinkel was then proposed for membership in the association, and he was duly elected.

Diseases reported as prevailing since the last meeting were scarlet fever, diphtheria, dysentery, measles, and cerebro-spinal meningitis.

Dr. Hartwig presented an ovarian cyst, with the history of its removal.

The society then adjourned.

FRANK H. POTTER, *Secretary.*

ERIE COUNTY MEDICAL SOCIETY.

Special Meeting, March 7, 1885.

A special meeting of the Medical Society of the County of Erie was held in accordance with the following request:

BUFFALO, N. Y., March 4, 1885.

Dr. J. B. Andrews, President of the Medical Society of the County of Erie:

DEAR SIR—In accordance with a resolution adopted by the Buffalo Medical and Surgical Association, at its meeting on March 3, 1885, and in compliance with the by-laws of the Medical Society of the County of Erie, we the undersigned do respectfully request you to call a special meeting of the Medical Society of the County of Erie at as early a date as possible for the purpose of considering and approving a draft of a law regulating and restricting the practice of midwifery in Erie county by others than legally authorized physicians. The shortness of the legislative session makes it imperatively desirable to meet this week in order to present the draft to the Erie county mem-

bers of the Senate and Assembly on Saturday or Sunday, and to finish, thus, the first steps taken by the Buffalo Medical and Surgical Association.

(Signed) M. Hartwig,
E. E. Storck,
F. W. Bartlett,
John Hauenstein,
William Meisburger.

The meeting was called to order by the President of the society, Dr. J. B. Andrews, and the following members were in attendance: Drs. Hopkins, Dorland, W. W. Potter, Diehl, Hartwig, Gumaer, Porter, Pryor, Hebenstreit, Mann, Thornton, Walsh, E. H. Long, B. G. Long, Marcley, Granger, Meisburger, Haberstro, Dambach, Wilson and Clark.

Dr. Hartwig presented and read a revised version of a bill to be presented to the legislature, entitled, "An act regulating and restricting the practice of midwifery in Erie county by others than legally authorized physicians."

After the reading of the document, Dr. Hopkins moved that the bill be taken up and considered, section by section, either for adoption or amendment, which was carried.

Dr. Hartwig read Sections I. and II. of the bill, both of which were adopted as read.

Section III. was read, and Dr. Hopkins said that he thought the place and time of meeting of the Examining Board should be stated, and moved to amend said section by inserting the place of meeting, which shall be the city of Buffalo, and that due notice of such meetings shall be publicly given. Dr. Hopkins' amendment was accepted by Dr. Hartwig.

Dr. Pryor moved to further amend said section by inserting the clause, "The fee for such examination be $10.00, and that the fees collected by said Examining Board be expended in defraying the expenses incurred by the Board."

Dr. Haberstro moved to further amend Section III. by making the examination fee $25.00, instead of $10.00, as recommended in the bill. Dr. Walsh endorsed Dr. Haberstro's proposed amendment, as did also Dr. Dambach.

A vote being taken on Dr. Haberstro's motion, it was lost.

Section III., as amended by Dr. Pryor, was then adopted.

Sections IV., V., VI. and VII. were then read and adopted.

Dr. Hartwig moved that the bill, as amended, which is as follows, be now adopted as a whole, which was carried:

"AN ACT REGULATING AND RESTRICTING THE PRACTICE OF MIDWIFERY IN ERIE COUNTY BY OTHERS THAN LEGALLY AUTHORIZED PHYSICIANS.

"*The People of the State of New York, represented in Senate and Assembly, do enact as follows:*

"SECTION I. On or before the first day of July, 1885, the County Judge of Erie county shall, by an order to be filed in the Erie county Clerk's office, appoint a Board of Examiners in Midwifery, to consist of five members, who shall have been licensed to practice physic and surgery in this State, and thereafter as often as any vacancy shall occur in said Board, said County Judge shall, by a like order, fill such vacancy.

"SEC. II. Immediately after the filing of said order, said Board shall organize, by the selection of one of its members as President, and of another as Secretary, and Treasurer, who shall hold their office for one year and be thereafter annually elected, and shall adopt, and have power to adopt and enforce such rules and regulations as are necessary to carry out the purposes and provisions of this act.

"SEC. III. Such Examiners shall meet in the city of Buffalo, on the first Tuesday of October and April of each year, and such other days as such Board may appoint, due notice of such meetings to be publicly given, and shall then examine all candidates of the age of 21 years and upwards, and possessed of a good moral character, who shall present themselves to be examined

for license to practice midwifery in the county of Erie, and shall on receipt of $10, issue their certificate to any person so examined who shall be found by them to be qualified, which certificate shall set forth that said Board has found the person to whom it is issued qualified to practice midwifery, and shall be recorded by the Clerk of the county of Erie, in a book, to be kept by him for that purpose. All moneys coming into the treasury of this Board shall be used to defray the expenses of the Board.

"SEC. IV. Any person who has received and recorded such certificate, shall, thereupon, be designated a midwife, and authorized and entitled, within the county of Erie, to practice midwifery in cases of normal labor and in no others; but such persons shall not in any case of labor use instruments of any kind, nor assist labor by any artificial, forcible, or mechanical means, nor perform any version, nor attempt to remove adherent placenta, nor administer, prescribe, advise, or employ, any poisonous or dangerous drug, herb or medicine; nor attempt the treatment of disease, except when the attendance of a physician cannot be speedily procured; and in such case, such person shall at once, and in the most speedy way, procure the attendance of a physician.

"SEC. V. Said Board of Examiners shall have power, on proper cause shown, and after hearing the person holding their certificate, to recommend to the County Judge of Erie county the revocation of the same, and said Judge shall have power so to do.

"SEC. VI. Any person who shall practice, or without the attendance of a physician, where one can be procured, attend a case of midwifery, or obstetrics, within the county of Erie, after the 31st day of December, 1885, without being duly authorized so to do, under existing laws of the State, or without having received and recorded the certificate for by this act; and any person who shall violate any of the provisions of this act, shall be guilty of a misdemeanor, and, on conviction thereof, shall be fined not less than $50.00, nor more than $100, and shall forfeit any certificate theretofore granted under the provisions of this act.

"SEC. VII. This act shall take effect immediately."

Dr. Hopkins moved that the bill be presented to the Committee on Legislation, for their consideration, and by them be forwarded to the members of the legislature for this county, which was carried.

Dr. Hartwig offered the following resolution, and moved its adoption, which was carried unanimously:

WHEREAS, The Medical Society of the County of Erie, in consideration of the growing evil of self-constituted midwives in this county, which evil has caused unnecessary losses of mothers and children to the community, and,

WHEREAS, This society desires to provide the necessary help for the poorer classes, who are unable to employ a legally authorized physician, therefore,

Resolved, That a copy of the foregoing draft of a law, together with this resolution, be transmitted to the members of the legislature representing this county, with the request that they use all laudable means to secure the passage of the foregoing act.

Dr. Potter moved that a vote of thanks be tendered the committee having in charge the consideration of a bill providing for the licensing of midwives, and that, as their duties are completed, the committee be now discharged. Carried.

There being no other business before the meeting, the society adjourned.

EDWARD CLARK, *Secretary.*

TRANSACTIONS OF THE BUFFALO OBSTETRICAL SOCIETY.

Stated Meeting, Feb. 23, 1885.

The Vice-President, Dr. R. L. Banta, in the Chair; Dr. William H. Thornton, Secretary.

Dr. W. W. Potter read a paper on "Pessaries; their Use and Misuse."

This subject, he said, always brought forth a diversity of opinion as to the real therapeutic value of pessaries, ranging all the way from cordial approval of their use to hostile criticism thereof. The reasons therefor seemed to be—

1. In the wide difference in the degree of displacements; in the multiform reflex disturbances which they provoke; in adjacent surrounding and modifying conditions; in sensitiveness of the pelvic tissues; and in a variety of peculiarities associated with, and underlying, the mere uterine abnormalities.

2. In the different views held by physicians as to the mechanics of the treatment.

3. In the inability of anatomists to fix the precise normal position of the womb. The province of the gynecologist was, he thought, fulfilled if he succeeded in restoring the uterus to that approximate degree of normality which relieved the symptoms caused by the mal-position of the organ.

He considered it essential to replace the dislocated organ, or organs, before any attempt was made to insert a pessary. If it appeared, in any case, impossible to do this by reason of the stability, impaction or fixation of the uterus, or its appendages, then it was not a proper one for a pessary; not, certainly, until these contra-indicating factors were removed by a carefully systematized preparatory treatment. If the broad ligaments were tender, if the ovaries were enlarged or swollen, or tender, if the tubes were inflamed or diseased in any way, or if the womb itself were hypersensitive, enlarged, hyperplastic or impacted, it were better, before attempting the employment of a pessary, to begin the treatment with the application, to the vagina and pelvic organs, of cotton pledgets soaked in alum-glycerine or other tonic-astringent medicine. Iodoform, iodine, tannin, carbolic acid, sedative mixtures, eucalyptus, and even vasaline might also be employed with benefit in preparing cases for the use of pessaries. This method of vaginal packing served a three-fold purpose—

1. It soothed and kept asunder the irritated and hypersensitive tissues, acted something like a poultice to the parts, and set up capillary drainage by osmosis, thereby relieving congestion, hyperæmia and pelvic blood-stasis.

2. It made equable elastic pressure upon the enlarged, indurated, or swollen structures with which it came in contact, thus promoting absorption and resolution.

3. It furnished a comfortable and much needed support to the sagging and descending pelvic organs, removed the tension from the uterine ligaments and prevented their further stretching and elongation. Furthermore, if there were adhering bands of plastic lymph, or other products of cellulitis, which moored the uterus in the sacral excavation, these usually stretched out, absorbed, or gave way under this plan, so that the organs could be made to float in the pelvic cavity.

The reposition of the womb could now be undertaken, and he usually employed the knee-chest posture for this purpose, thereby dispensing with the sound or other repositor. In this position the abdominal and pelvic organs gravitated towards the epigastrium, the air filled the vagina with a *vis a tergo* pressure of fifteen pounds to the square inch, and the uterus, its appendages, and other pelvic organs, were carried to their proper level. The application of a pessary could now be made in full view of the parts, and with less danger of failure than the adjustment made in the dorsal position.

He then gave explicit directions as to the application of the instrument and its future care while in use, laying much stress upon the importance of the frequent employment of hot vaginal lavements by the patient during the progress of the treatment, and insisted upon the paramount necessity of her reporting herself to her physician at such intervals as he should direct, that he might not only satisfy himself that the pessary was doing no harm, but that he might also remove it sufficiently often to ensure its cleanliness and general efficiency, as well as discontinue its use when its purpose had been served. A patient must

be instructed in such a way that she will understand she is regarded as under treatment just so long as she wears a pessary. The ill-repute of treatment by pessaries originated, not so much from the improper or faulty adjustment in the first instance, as from imprudence or neglect in their care afterwards. It was not uncommon for women to wear pessaries for months, and even years, without having them removed or otherwise cared for by their medical advisers. They seemed to have the impression that, with the first successful reposition of the womb and adjustment of a pessary, all medical care or treatment for the difficulty in question was at an end. No more dangerous impression could obtain, so far as the successful employment of pessaries was concerned. It was their misuse or abuse which brought discredit to the treatment. If neglected, they dig sulci in the soft parts, become imbedded in the tissues, or incarcerated by adventitious bands, so that surgical means were often required for their liberation. He related a case which he had lately seen, where a Babcock's uterine supporter had cut a fistulous opening into the bladder at the cervico-vaginal junction, an inch in length, from which there was a constant dribbling of urine. He considered Babcock's supporter a most unscientific appliance, an abomination of gynecological art; it was not, after all, a matter of such great surprise that women should become prejudiced against the art when such abominations were practiced upon them in its name.

He next referred to the condition of the perineum, which exerted a marked influence over the conduct of a pessary. If there was a considerable rent thereof, it must be repaired before much good could be obtained from a pessary. All such makeshifts as globe, ring, or disk pessaries, in these cases, would not avail; perineorrhaphy must be made. He pointed out the benefit to be obtained from a pessary in the retroverted or flexed gravid womb; uncontrollable pregnancy vomiting might be relieved, and threatened abortion averted, by the timely reposition of the organ and the judicious use of mechanical support.

He regarded the treatment of every variety of uterine displacement as a problem in mechanics, and no one should undertake it unless he had a thorough conception of the mechanical questions involved, in both diagnosis and treatment. Here the principles of orthopedic surgery were to be applied, and when we could bring ourselves to regard a pessary as a crutch or splint, for a weakened, heavy, or distorted womb, with a relaxed state of its ligaments and other supporting tissues, we would be traveling far in the right direction. It would be more satisfactory if the pessary were removed at night and replaced in the morning; only in exceptional cases, however, could patients do this. Nevertheless, we could do something akin to it, which answered nearly as well, by instructing patients who have worn pessaries during the day to loosen them up at night by getting on their knees and breast and admitting the air into the vagina by separation of the labia. This would practically unship the instrument from its bearings, take off the weight of the superincumbent viscera, and rest the parts amazingly. With the resumption of the erect posture in the morning the crutch-like action of the pessary was also restored, and it was worn all day without unduly chafing the tissues, for they came to their work restored and with renewed vigor.

Discussion—Dr. W. S. Tremaine said that, from his point of view, a pessary is always to be regarded as a necessary evil. It was well compared to a splint in case of a fracture, should only be used in the same sense, and never used when it could be avoided. He would like to know whether any better pessary than the Hodge, with its various modifications, has ever been devised? It seemed to him that it had never been, as a principle, much improved upon. In regard to the rectification of malpositions of the uterus, he had given some attention to Alexander's operation, for the relief of prolapsus, by shortening the round ligaments. Though he had never made the operation on a living woman, he had done it several times upon the

cadaver. He thought the operation worthy of attention, and believed it had a future. In regard to rectifying displacements, he thought the treatment by tamponade, as advocated, a useful method, and spoke of a way of using lamp wicking for this purpose, which Dr. Foster, of New York, taught him some years ago; by smearing it with iodoform ointment it could be made antiseptic, and it could be easily removed by the patient.

Dr. Thomas Lothrop wished to speak in special commendation of that portion of the paper which dealt with the employment of the knee-chest posture, in rectifying mal-positions of the uterus and other organs. He believed it possessed special value in these cases, and had seen great good result from the use of the method. He thought the problems involved in the subject of uterine displacements, and their treatment by pessaries, very difficult ones to grapple with, in many instances, and coincided with the principles advocated in the paper in their management.

Dr. W. D. Greene, referring to what had been said in regard to the length of time pessaries may remain in *situ*, recalled a case which came to his notice about six years ago, where he removed a pessary that had been worn twelve years without removal. It was covered with the salts of the discharges, which had crystalized on the pessary, yet he was surprised to find that it had caused no very extensive abrasions. It was a gutta-percha pessary.

Dr. S. Y. Howell thought that the use of the ring pessary, in view of its simplicity, ought to be more generally resorted to. He advocated its use for ante-, retro- and lateral displacements of the uterus, stating that he found it extremely practical, and easily adaptable to individual cases. He was cognizant of cases where they had been worn for months without attention, and apparently without causing any ill effects.

Dr. M. Hartwig related an interesting case of total prolapsus uteri, which he replaced and held in position with a Meyer's ring, which is a very thick hard rubber instrument. The consequence

was, violent fever of an intermittent type. They (another physician consulting with him) gave quinine, thinking it a mere coincidence. It did no good. The woman went to bed and they removed the pessary, whereupon the fever subsided. After awhile he introduced the pessary, and the fever started again. He thought the malaria had not died out and gave more quinine. She had to lie in bed, and, for convenience, he took out the pessary while she was in bed. The fever at once subsided and he introduced the pessary again with the same results as on the previous trials. He then thought it must be due to the absorption of putrescent material, and took extreme precautions against such a possibility at the next application of the pessary; but the fever appeared the fourth time. He, thereupon, abandoned the use of the pessary altogether, and the fever then abandoned the patient. In cases of total prolapsus he thought a simple round pessary served the purpose better than any other, and spoke of the especial merits of the Meyer's ring in this class of cases.

Dr. H. D. Ingraham was a firm believer in the usefulness of pessaries, and thought, in safe hands, they could be made to do a vast amount of good. It seemed to require an especial tact, however, to succeed with them in many cases, for a considerable proportion of disorders were of a nature to tax the patience, skill and ingenuity of the gynecologist to the uttermost. He was more successful with the Hodge pessary, including its modifications, than any other.

Dr. R. L. Banta had listened to the paper with the greatest interest, for he had witnessed many of the manipulations and methods described in the paper, having seen Dr. Potter successfully apply the principles which he advocated, in both dispensary and private practice. In retroversion, where a pessary can be borne at all, he thought almost any modification of the Hodge pessary would yield good results, but he particularly favored the Albert Smith form. He had seen remarkable results from the

tamponades, where the womb was bound down, and where there was great danger to the patient in putting it back. He remembered that some years ago a lady came to him with a retroverted womb bound down by adhesions. He was not able to do anything with the case, and took her to another physician in this city, who also thought that nothing could be done for her. He had seen just such cases successfully treated by the essayist, according to the methods which he had set forth in the paper.

Dr. Potter, in closing the discussion, remarked that he had sought to elaborate principles only in his paper, as its title would indicate, rather than to discuss the special application of pessaries to particular displacements. Failures in the use of pessaries, he thought, resulted principally from the fact that their employment was begun before cases were properly prepared for them, hence they were not tolerated. The Hodge pessary, no doubt, represented the ideal principle nearer than any other, and he especially commended the Albert Smith and Thomas modifications. With regard to the ring pessary, he had, in former years, used them quite extensively, but he regarded them as unsurgical devices, for they distended the vagina too much. They were, however, possessed of a limited adaptability, notably for such cases as described by Dr. Hartwig. He, however, used the copper wire ring covered with soft rubber, as a model in some cases where special shapes were required, fashioning such a design as would suit the case, and then would have a hard rubber pessary constructed according to the model.

Concluding, he grouped certain principles which were involved in the use of pessaries as follows:

1. A patient should be properly prepared for the wearing of a pessary before its adjustment was attempted. Vaginal irritation, hyperæsthesia, fixation of the uterus, ovarian prolapse, salpingitis, and other contra-indicating conditions may generally be removed by a systematic medicated tamponade of the vagina, continued for a longer or shorter period.

2. It was essential to replace the womb before attempting to adjust a pessary. To neglect this was as unscientific as it was unsurgical to dress a fracture before reducing it. We could not know how to adjust the mechanical support required, until after full replacement of the womb.

3. The fullest replacement of the womb could only be made in the knee-chest posture.

4. A pessary was always to be adjusted with due and ample regard for the safety of the soft parts. Should it fit too tightly, or fill the vagina so closely that there was no play between its bearings and the vaginal wall, erosion or ulceration would quickly result. Neither should it be large enough to cause uterine fixation—the normal mobility of the organ and its respiratory oscillation should not be abridged. On the other hand, a pessary should not be small enough to cause erosions, nor to get out of place easily. Great practice was required for the acquisition of a skilled touch in the matter of a safe and proper fitting of the instrument.

5. A pessary should be adjusted with regard to the functions of the organs, vessels, and nerves of the pelvis, that they may not be interfered with nor impaired in any way.

6. In a well-adjusted instrument, the patient would not be aware of its presence from any sensations which it produced; if she were so reminded of it, the almost certain inference would be that it was illy adapted to her case.

7. Finally, every woman who wore a pessary should be instructed to return, at appropriate intervals, for its inspection, and made to understand that she is a patient under observation as long as she requires the support afforded by the instrument. Furthermore, she should be instructed to assume the genu-pectoral posture nightly on retiring, and admit air into the vagina, so as to unship or loosen up the bearings of the pessary, to thereby rest the parts, and the better prepare them for the continued tolerance of the instrument.

Editorial.

Shall Midwives be Licensed?

The action of the Buffalo Medical and Surgical Association in appointing a committee to draft a bill for presentation to the legislature, providing for the licensing of midwives, after due examination by a Board of legally qualified physicians, has been supplemented by that of the Medical Society of the County of Erie, which latter has endorsed the action of the former, adopted the draft of the bill as presented by the committee, and referred it to the legislature with the recommendation that it be passed. The provisions of the bill are, in our view, so entirely just to the midwife, so conservative of her best interests, and so far from containing onerous requirements, that we cannot believe it will receive any well-considered, or formidable opposition.

The following is a synopsis of the bill as adopted: Sec. 1 provides that on or after July 1, 1885, the County Judge of Erie county shall appoint an Examining Board of five physicians, and also provides for the filling of any vacancy. Sec. 2 designates the officers of the Board as a President, Secretary and Treasurer, and requires the adoption of rules for the conduct of the examinations. Sec. 3 requires the Board to meet on the first Tuesdays in April and October in each year, for the examination of all candidates who present themselves, who are of lawful age and of good moral character; provides, also, that ten dollars shall be the fee for the examination, which shall be applied towards defraying the expenses of the Board. Sec. 4 designates any successful candidate as a "midwife," and that she shall receive a certificate which shall entitle her to attend any case of normal labor, but provides that she shall not use instruments, attempt version, nor administer any dangerous drug, except when the attendance of a physician cannot be procured. Sec. 5 provides for the revocation of the certificate for cause. Sec. 6 prohibits

the practicing of midwives after December 31, 1885, except under provisions of this bill, under a penalty of not less than fifty, nor more than one hundred dollars.

The passage of this, or some similar bill, would prove of benefit to the midwives themselves, as well as afford protection to the community against the exercise of that function by incompetent persons. While many of these women are very well-disposed persons, kind and efficient nurses, and perform their work conscientiously, yet, on the other hand, some of them are incompetent, ignorant, and unscrupulous individuals, who offer their services to whomsoever may stand in need. The former class deserve the considerate protection of the law; while the latter should be prohibited, under penalty, from the assumption of duties for which they are unfitted.

It seems almost incredible that the care of the parturient woman should be committed, in this enlightened age, to the care of persons who have not shown their competency for the trust, either by clinical experience, or preparation in the schools; and it is high time for intelligent communities to move in this matter, to the end that one of the most important services which one human being can perform for another—a service which always involves the safety of two lives—shall not be entrusted to unsafe hands. How much of woe, and suffering, and invalidism, reaching through all the after-coming years, is involved in unskillful management in the lying-in chamber, no one can compute; but it is highly probable, and this statement is made upon high authority, that the gynecologist derives the largest proportion of his patients from this source.

That a very considerable number of lacerations of the cervix, of the perinæum, and rents of the genital tract, result from the improper or indifferent care of midwives, no physician, who is at all familiar with the facts, will pretend to dispute. Cases of puerperal septicæmia from imperfect delivery of the secundines, post partum hemorrhage from the same and other causes, and a vast number of still-born children, attest the incompetency,

ignorance, and wanton neglect of midwives in every large city. May other evils, due to their utter lack of proper regard for the responsibility of their position, might be cited, but enough have already been mentioned to show the importance of making some attempt to protect the lying-in chamber, be it ever so humble, from such dangers in the future.

Some very intelligent people, not a few in number, are of the opinion that the medical colleges should demand a higher standard for the doctorate degree than has heretofore been the case; others, again, assert with a cogency of force that is well-nigh convincing to even the colleges themselves, that the right to confer a license to practice medicine should be vested in a Board created by the State, wholly independent of the teaching power; while, yet again, it has lately been asserted that a diploma from a recognized university or scientific school will be required, within the next decade or two, as the *sine qua non* for entrance into a medical college. If all this preparation is demanded of the physician, before the sanctity of the lying-in room can be committed to his keeping, it certainly is not too much to ask that the untutored and non-scientific midwife shall submit herself to some scrutiny in regard to her moral character, and as to her familiarity with the simplest duties which pertain to her great responsibilities. The welfare of the community, the safety of the citizen, and the best interests of the midwife, alike appeal to the State for protection in a way which should command the thoughtful attention of the law-making power, involving as it does the tenderest and choicest solicitude of every father and mother in the commonwealth.

The Legal Control of Medical Practice by a State Examination.

There is, on all sides, a growing sentiment in favor of divorcing the teaching and licensing power, in reference to fixing the legal status of the physician; or, in other words, the

public mind is becoming more and more convinced that the diplomas granted by the medical colleges should not, likewise, confer the legal right to practice medicine.

At first glance it would seem almost strange that the State has not assumed control of this matter before, involving, as it does, questions relating to the life, health and longevity of its citizens. It already prescribes special examinations for persons entering the public service in a medical capacity, showing a jealous care in that respect in its administration of public trusts. Why should it longer neglect the private citizen by refusing to protect him from incompetent, ignorant, sordid and criminally indifferent medical service? The prosperity of the State means the prosperity of the individual, his protection in life, liberty and the peaceful pursuit of his avocation. He should be instructed, through an intelligent medical source, in the laws of hygiene, sanitation, and the general methods and habits of life, which apply to the prevention of disease. It is safe to say that none of the great powers of the world pay so little attention to the protection of health and life as does our own loved and cherished republic. In other countries the university degree does not confer the right to practice, but its holder must also pass a government examination before he is admitted to the exercise of duties, which involve the guardianship of the health of the citizens of the empire.

In most European countries, though the universities are under the supervision of the State; their degrees are not considered as sufficient evidence that the holders thereof are qualified to practice medicine, but they must invariably submit to the further examination by a Board of Examiners appointed by the State, who are in every way separate and distinct from the teaching power.

Here, in this country, the medical schools are dependent for prosperity upon the amount paid in fees by the pupils who attend, and just so long as examination by faculties, who receive

these fees, are accepted as the sole evidence of qualification to practice, their diplomas will possess little value as an index of true professional skill or learning. What is required is a uniform standard for the establishment of the right to practice medicine, and it seems impossible to obtain this, except by the intervention of the State through an Examining Board of its own creation. As it now is, each medical college fixes its own standard as to curriculum and requirements for its degree; with some this may be high, with others low, yet all be within the technical requirements of the law. There are a few medical schools, one notable exception being in our own city, which, appreciating the trend of public sentiment in favor of a more complete preparation for the medical calling, have advanced their standard in compliance with this demand. Let the State once create an Examining Board, and all will move up to the front line.

The great hospitals in New York, and other cities, long ago adopted a similar plan of examining candidates for appointments as resident physicians, the governing boards not being willing to accept the diplomas of the schools, as evidence of the possession of sufficient skill or learning on the part of the applicants to entrust to their care the unfortunate inmates of their wards. What better evidence could any one ask for the necessity of a State Licensing Board?

The chief difficulties in the way of the accomplishment of the desired end, seem at present to reside in the want of harmony between the different so-called sects or systems of medicine, on this subject. The average legislator appears to fear to touch the question on this account. But this whole matter should be considered quite secondary to the important object to be attained. Moreover, this obstacle can readily be surmounted by committing to the Board power to examine in anatomy, physiology, chemistry, pathology, surgery, obstetrics, materia medica, and hygiene only, leaving therapeutics and all theories

of medical practice entirely out of the field. To this, not even the most ardent advocate of special systems or codes could object, for the law would remain silent on these vexed questions, permitting the candidate to receive his education in any school, and come before a Board which had nothing to do with teaching him, and could, therefore, have no bias in reference to passing him.

To the Meeting of the American Medical Association.

The next annual meeting of this body, as has been before announced in the Journal, will be held in the city of New Orleans, commencing Tuesday, April 28, 1885, at 10 o'clock, A. M., and continuing four days.

A special train of Pullman cars will leave Boston on Friday, April 24th, at 3 o'clock P. M., reaching Buffalo sometime Saturday morning, April 25th. This train will be under the control of Dr. W. E. Anthony, of Providence, R. I., who is sparing no pains in his efforts to make every provision for a safe, speedy and comfortable transit for physicians and their families to the Crescent City. Meals will be furnished at appropriate points along the route, at the uniform rate of sixty cents per meal, coupons for which will be supplied on board the train. The rate of fare from Buffalo has not yet been fixed, but it will be, of course, but little under the Rochester rate, $31.65.

For further particulars regarding the matter, our readers are referred to Dr. W. W. Potter, 306 Franklin street, who is in correspondence with Dr. Anthony, and will gladly furnish any information, from time to time, which he may obtain, concerning the details of the tour.

Later—Dr. Anthony desires the insertion of the following:

"Delegates to the American Medical Association, and others along the line of the N. Y. C. R. R. who wish to avail themselves of the privilege of the special train to New Orleans, can do so by

making application to Dr. W. E. Anthony, of Providence, R. I., and remitting $11.00, the price of double berth to New Orleans, or $22.00 for the round trip, before April 15th instant. This train will run through without change. Fare for round trip (tickets good until May 31st): From Albany, $36.40; Syracuse, $33.25; Rochester, $31.65."

The *Niagara Index* has reached us, giving the official correspondence between Prof. C. C. F. Gay and the Trustees of Niagara University. Dr. Gay, on account of failing health, has resigned the chair of operative and clinical surgery, and has been tendered, as a graceful acknowledgment of his ability and high standing in the profession, the position of Emeritus Professor. We regret the necessity which compelled our colleague to relinquish the active work of teaching, for which he is so well qualified by long experience and study. The action of the Trustees, however, retain him in the faculty, without the labor which an active professorship imposes.

The Spring Course in the Niagara Medical College opened April 1st, to continue eight weeks, which, with the regular course, makes eight months of continuous medical instruction. The attendance of students is very good, and the advantages offered excellent. The course is largely recitative and clinical. The close of the Session of 1884–5 took place Tuesday, March 24th, all the faculty being present, and appropriate remarks were made. The graded examinations demonstrated that excellent work has been done by both teachers and pupils in this institution.

In Memoriam.

Dugald Macniel, M. D.

Died March 21, 1885, Aged 42 Years.

The medical profession of this city have sustained a very severe loss in the death, at a comparatively early age, of Dr. Dugald Macniel. In paying the tribute of respect to his personal and professional worth, we are prompted not only by a deep appreciation of his attainments, but by a friendship, which, from long and intimate association, had ripened into filial love.

The life history of Dr. Macniel affords an instance of success from steadfast devotion to correct principles, and from earnest effort for the attainment of cherished results. He was born in Scotland in 1843, and at an early age emigrated to Canada. On the passage, his father and only brother died and were buried at sea. On her arrival in a strange land, the widowed mother, deprived of her natural protector, was thrown on her own resources for the support and education of her only son. Thus, early, the subject of this sketch was instructed in habits of industry and economy. With his limited advantages he struggled on, and by close application and great industry he secured a fair academic education, after which he entered upon the study of medicine, entering, in 1869, the medical class at the Buffalo Medical College, from which he graduated in 1871. He at once connected himself with the Buffalo Free Dispensing Association, at first as interne, and subsequently as a member of the attending staff, in every position showing the same industry and attention to duty, and as a reward of earnest labor reaping merited success. In 1883 he was elected Lecturer of Clinical Dermatology in the Medical Department of Niagara University. With a view to prepare himself for the position, he went abroad and passed several months in Vienna under the best teachers in that great medical centre. Returning to Buffalo in the autumn of 1884, he at once resumed the practice of his profession, and

with the improved advantages and study of his sojourn abroad, he was prepared to reap the reward of years of patient toil and unremitting industry.

Dr. Macniel was a very successful practitioner. He possessed rare judgment, fine professional attainments, tireless energy and industry, a sympathetic nature which won for him the confidence and affection of his patients. The future was peculiarly promising to him. Possessed of ample pecuniary resources, he was prepared to enter upon a career of prosperity, which was to him the reward of labors begun in his early youth and continued without cessation until success had been attained.

We give the action of the Medical Societies of which Dr. Macniel was a member and of the medical faculty to which he belonged.

The following resolutions were passed by the meeting of the Erie County Medical Society, held March 23, 1885:

"WHEREAS, It has pleased God to remove from among us Dr. Dugald Macniel.

"*Resolved*, That we deeply lament the loss of our worthy professional associate and friend.

"*Resolved*, That we desire to record the high appreciation and esteem we feel for the great worth of his public and private character. His was a quiet, unostentatious, busy life. His high moral character and universal goodness of heart procured for him the respect and esteem of his professional friends, his numerous patients and the general community.

"*Resolved*, That we extend our heartfelt sympathy to his bereaved family.

"*Resolved*, That we attend the funeral in a body.

"*Resolved*, That a copy of these resolutions be transmitted to the family and furnished to the medical and daily press for publication."

At a meeting of the faculty of the medical department of Niagara University, held at the college building, Saturday evening, March 21, 1885, the following memorial was adopted:

"Death has entered our midst and claimed one of our number, Dr. Dugald Macniel, lecturer on clinical dermatology. For the first time since our organization we are called upon to mourn the loss of an associate. Our personal attachment for our professional brother makes sorrow doubly sad. One of the secrets of his success in life was the ease with which he made friends. He was a genial and cheerful companion, a physician in the true sense, kind, considerate, faithful and attentive to the sick and to his trust.

"We, the members of the medical faculty, deeply mourn his loss and tender our sympathy and condolence to the bereaved family. We feel that they in their sorrow as well as we in ours should bow to the Divine will."

At a meeting of the Buffalo Obstetrical Society, held March 24, 1885, the President, Dr. W. W. Potter, in announcing the death of Dr. Macniel, made the following remarks, which were ordered spread upon the minutes and made the expression of the society, in commemoration of the event to which they referred:

"This society is, quite early in its history, called upon to mourn the death of one of its members. Though but recently elected to membership, it is more than probable that Dr. Macniel would have proved a valuable addition to our number, his entire professional career having afforded evidence in justification of this prediction. There are others present who can speak of him from the standpoint of intimate acquaintanceship, extending through a long period of years, while my own is comparatively recent; yet my knowledge of his character is sufficient for me to affirm that he was a man who commanded the respect of all who knew him; a physician who performed his duties conscientiously, faithfully and skillfully; a citizen of more than ordinary worth, whose loss will be felt by the community in many ways; a husband and father who has left loving hearts desolate, and which refuse to be comforted."

"The various medical societies, as well as other bodies of which he was a useful member, will suffer great loss in being deprived of his presence, advice and valuable services in their meetings and deliberations; and especially will the young and growing medical college, in which he was a teacher, sustain the loss of a scholarly associate and well-equipped tutor.

"It is not often that the medical profession in this city has been called upon to mourn the death of so young a member, and this seems to add much to the solemnity of the event which we all so deeply deplore. When the old man dies, after having rounded the farthermost goal of life's wearisome race, though grieved we may be when the final summons comes, yet in it we recognize the fulfillment of that inevitable and irrevocable law, which limits and bounds the duration of human affairs and all things earthly. But when a man, and especially a physician and a co-worker in the cause of humanity and science, is cut off in the fullness of his years and the plenitude of his powers, it is an event of more than ordinary significance, and the shock is truly appalling. A few weeks ago Dr. Macniel seemed in the full vigor of health, in the enjoyment of a useful and happy life, and faithfully attentive to the duties of his chosen profession. Now his lifeless body rests within the walls of yonder charnel-house, while his spirit has passed within the portals of that other and better mansion—'that house not made with hands, eternal in the heavens'—to meet, let us hope, the rewards belonging to a life-work nobly and manfully accomplished.

"In his sad demise we are again painfully admonished that—

> * * * * 'Life is but a shadow,
> Its date the intermediate breath we draw;
> Ten thousand accidents in ambush lie,
> To crush the frail and fickle tenement,
> Which, like the brittle hour-glass measuring time,
> Is often broke ere half its sands are run.'

"Let me add my own personal sense of sorrow which this sad event engenders, and let me mingle my tears with yours in extending to the bereaved widow and bereft children, that sympathy and condolence which is as spontaneous as it is heartfelt."

THE

BUFFALO

Medical and Surgical Journal.

VOL. XXIV. MAY, 1885. NO. 10.

Original Communications.

HOARSENESS AND LOSS OF VOICE AS SYMPTOMS.*

BY F. W. HINKEL, M. D.

It is easy to fall into a routine method of treating symptoms or groups of symptoms, especially in chronic disease. It often helps out of a dilemma, and gives an air of facility and readiness to treatment that is very effective. Particularly is this prone to occur where the causation of symptoms is obscure or difficult to analyze. Nowhere is this habit of treatment more frequent, nowhere more dangerous or disappointing, than in affections of the larynx.

The general lack of familiarity with the mechanism of this organ, and still more with the simple apparatus necessary to examine its conditions, perhaps accounts for this, as well as for a lack of interest in this class of cases. And yet they are not without interest and importance, both on account of their frequency, and the dire results which not infrequently follow in their train.

* Read before the Buffalo Medical and Surgical Association, April 7, 1885.

I have chosen for my topic this evening the only symptoms which almost invariably are present in laryngeal affections; the only symptoms which invariably point to some involvement of the larynx—hoarseness and loss of voice. These symptoms, whatever their cause, differ little in character in different cases—only in degree. By their aid alone we are left almost entirely in the dark as to the nature of the given case presenting them, and as to the method of treatment best adapted to restore the parts to normal condition and function.

By a brief consideration of the principal diseased conditions which may produce the above symptoms, I hope to awaken more interest in the laryngoscope as a means of accurate diagnosis and treatment, and thus indirectly to renew interest in these diseases themselves.

Hoarseness and loss of voice are frequent occurrences in this climate. They deserve careful attention in almost every case. They are danger signals, which, though often raised for slight cause, yet at times give warning of approaching suffering and death, which may be avoided or averted, if heed be given in time. Of course to produce hoarseness and loss of voice there must be direct or indirect impairment of the functional integrity of the vocal bands. Anything which causes inability of the bands to vibrate with sufficient rapidity to produce sonorous vibrations of the air will cause aphonia. If the vocal bands do not vibrate in harmony with each other, and with regularity, hoarseness is produced. The causes of voice impairment vary from slight and temporary congestion to tubercular or malignant ulceration, with all their attendant horrors.

A frequent and the simplest cause of hoarseness is sub-acute congestion of the laryngeal mucous membrane. This produces slight unevenness of the edges of the bands and some infiltration of their substance. This impedes the delicate co-ordinated actions of the intra-laryngeal muscles. As a result the adduction and tension of the vocal bands are imperfect, and huskiness of tone occurs.

This same pathological condition in greater degree produces acute laryngitis. The congestion and infiltration may go on to engorgement of the tissues. The vocal bands, swollen, red and irregular are stiff with exuded serum and cell-infiltration. The muscular fibres, sodden and distended, contract with difficulty. The tumefied interarytenoid space offers a mechanical obstacle to adduction of the vocal processes. The inflamed and thickened ventricular bands encroach upon the vocal bands and impede what little vibratory power remains. The voice is reduced to a whisper and even that is produced with difficulty. Fever and general constitutional disturbance add to the discomfort of the patient. In children this is a serious condition. The small respiratory space they normally possess is greatly encroached upon. Dyspnœa and carbonic acid poisoning impend at any moment. To this mechanical obstruction in children is often added a spasmodic element, especially at night.

In debilitated subjects, or those suffering from blood poisoning in some shape, œdema of the larynx may be added to the inflammatory condition, and is frequently fatal. I but mention, in passing, as possible acute causes of aphonia or dysphonia, foreign bodies in the larynx and abscess of the larynx.

Acute and grave conditions like the above will never fail to receive your prompt attention, so I need not dwell upon them, but pass on to other forms of laryngeal disorder accompanied by impairment of voice, which, in the press of many duties, may be passed over without the investigation that their possible gravity may demand.

The most common form of laryngeal disease producing hoarseness in our climate is chronic laryngitis. It is often the result of repeated attacks of sub-acute congestion, though frequently it appears to bear its sluggish type from the first. As a corollary to this proposition let me add that it is important to give attention to the "dregs" of acute attacks and to assist the tissues to regain their lost tone, lest the seeds of this disease be left.

Chronic laryngitis is marked by the same congestion and infiltration as in acute cases, but the color is not so deep and more irregularly marked, and the infiltration tends more to the formation of connective tissue elements. The voice impairment is due to mechanical causes, as in acute cases, but the relations are different. The vocal bands are not stiffened with exudate, but relaxed and slightly thickened rather than swollen; and the innervation so affected as to produce more or less paralysis of their muscles. The interarytenoid space may, in cases marked by acute exacerbations, be the seat of shallow ulcerations or erosions whose swollen edges prevent exact approximation of the vocal processes. I have lately seen a case, with marked impairment of voice, where this tumefaction was so pronounced that on first examination I feared I had to deal with a new growth. In some cases occurs an irregularly granular condition of the vocal bands, but I am inclined to regard this form as associated with some general dyscrasia. An excess of glairy secretion is at times a cause of hoarseness in these cases, especially where the voice "breaks" and clears repeatedly during the day.

The tendency of chronic laryngitis is not toward spontaneous recovery, and the longer it exists the more difficult are its lesions to remove. Besides, it undoubtedly may lay the foundation for inflammatory involvement of the adjacent tracheal and bronchial mucous membrane, and through this for graver lesions, as catarrhal pneumonia, phthisis, pulmonary and laryngeal. With it are usually found further involvement of the pharynx and nose, which, by the way, often stand in a causal relation.

Another and grave form of disease, of which impairment of voice is a symptom, is laryngeal phthisis. I will not enter into the discussion as to whether this is always a manifestation of a local deposit of tubercle, or is of simple inflammatory origin. In pursuance of my purpose in reviewing the lesions, that may be the cause of hoarseness and loss of voice, we need not con-

sider their pathology further than to appreciate the macroscopic appearances in a general way, and the causes of functional perversion. In this disease the first stage is indistinguishable from simple catarrhal laryngitis; or, to express it otherwise, and according to my belief, a primary simple laryngitis may, under certain local and constitutional conditions, terminate in phthisis of the larynx. The next stage of this disease is marked usually by an ashy pallor of the mucous membrane of the pharynx and larynx, and by a peculiar form of thickening and œdema that affects the aryepiglottic folds, especially about the arytænoids. This swelling is distinctly pyriform in well-marked cases, the greatest thickening being over the arytænoids. It extends into the interarytenoid space, and offers a marked mechanical obstruction to adduction of the vocal processes. This appearance of the aryepiglottic folds, when well-developed, is pathognomonic of laryngeal phthisis. It may be unilateral, or so imperfectly developed that the diagnosis must be made from the sum of the bodily conditions, or left in doubt. It is in this stage that this disease is often curable by proper local and general treatment. Hence the importance of an early recognition of this condition. Slight hoarseness may be its only marked symptom at first. Especially is this so when the lesion, at least so far as signs show it, begins in the larynx. Without a laryngoscopic examination it is impossible, under such circumstances, to differentiate this from simple laryngitis, new growth or slight paresis of the vocal muscles. Yet its gravity, and above all the urgent need of early treatment, are infinitely greater. The final stage of ulceration, with its attendant dysphagia, and often dyspnœa, are not so likely to pass without attention. Yet, I have seen cases far on in the ulcerative stage, and beyond all therapeutics except palliation, whose medical advisers seem to have been unaware that any serious disease of the larynx was in progress, no laryngoscopic examination having been made or advised. The ulcerated surfaces have a peculiar worm-eaten appearance. The ulcers are shallow, without

areola and covered with a pultaceous muco-pus. If the epiglottis is involved, dysphagia is marked. The history of a case at this time is one of cruel, hopeless suffering. Anodyne and anæsthetic applications, nicely localized with the aid of the mirror, do much toward producing comparative comfort and enthanasia, and may prolong life for a considerable time.

I turn with pleasure to a not infrequent, and, since the discovery of the laryngoscope, by no means helpless class of cases producing vocal disability. I refer to new growths in the larynx. In no field has the laryngoscope greater triumphs to boast than in this. From an obscure and often fatal class of diseases they have become one of the best known, and the percentage of cures under proper surgical treatment rivals that of similar surgery of any other organ. New growths in the larynx, as elsewhere, may be divided into benign and malignant. The benign growths, fortunately, are most frequent. They are usually a result of previous inflammatory action. Their most common cause is catarrhal inflammation. I have seen cases where I believe I witnessed the inception of benign new growths which were aborted by astringent and alterative applications. Aphonia and dysphonia are the most frequent symptoms. Dysphagia may occur if growth is on epiglottis. Cough, expectoration and pain seldom occur. In benign growths there are no constitutional symptoms. Except voice disability there are often no symptoms, in early stage of development, at least. The symptoms are identical with those of chronic laryngitis. The laryngoscope alone decides the diagnosis. The most frequent form of new growths are papillomata. They are usually sessile, often multiple, of pink or grayish, irregular appearance. They may occur upon any part of the larynx, but are most frequent upon the vocal and ventricular bands. Other forms of benign growths are fibromata, usually pedunculated, and of bright red color, angiomata and myxomata. The last two are of rare occurrence. The malignant growths are often, with

difficulty, differentiated from benign growths in their early stages. There are peculiar conditions as to appearance, hardness, etc., that assist in the diagnosis, which, sooner or later, is unmistakable.

Epithelioma is the most common form of cancer. Sarcoma also occurs. Extirpation offers little or no hope, and the prognosis is a lingering and horrible death.

Another laryngeal lesion, productive of the symptoms under consideration, is paralysis of one or more of the muscles which produce the various movements of the lanynx essential to the production of tones. Laryngeal, like general paralysis, may be of central or peripheral origin. Central paralysis is rare and usually accompanied by paralysis of other muscles, and general symptoms of a character to attract attention to the nature of the disease.

Peripheral paralysis may be due to pressure or to inflammatory action. The first form is rare, except that due to pressure upon recurrent laryngeal. This is caused occasionally by aneurism, enlarged cervical glands, or even induration of apex of lung, and is almost always unilateral.

The appearances produced by complete paralysis of this nerve are diagnostic and striking. It supplies both abductor and adductor muscles, and as a result of its loss of power the affected vocal band hangs immovable midway between abduction and adduction, in the so-called cadaveric position. Its fellow approaches and passes the middle line in the effort to phonate. It remains immovable. Inspiration abducts the normal band. The position of the affected one is unchanged. Of course power of phonation is lost, and coughing, sneezing, and clearing of the throat are altered in character. A partial affection of the nerve will give paralysis either of abduction or adduction, according to filaments affected. Paralysis of the abductors, though of the greatest gravity and interest, does not immediately affect phonation, so need not fall under our consideration.

Bilateral paralysis of the adductors is a frequent form of laryngeal paralysis. On laryngoscopic inspection the glottis is seen wide open, and an effort to phonate produces only a quiv-

ering effort toward adduction. The vocal bands are abducted to their full extent, only the edges appearing under the margins of the ventricular bands. It is frequently hysteric in origin, though previous nasal catarrh, chronic laryngitis, lead poisoning, and the later stage of pulmonary phthisis, are amongst its causes. The voice is, of course, entirely lost, and during whispered speech there is shortness of breath due to the waste of expired air escaping through the wide open glottis. Unilateral paralysis of the adductors is usually the result of inflammation, either simple or specific. The laryngoscope shows one vocal band in extreme abduction. There is generally congestion of the larynx. The voice is hoarse, husky, or entirely lost.

Another adductor paralysis is that affecting the arytenoideus. As a result of this there remains, upon attempted phonation, a triangular opening between the arytenoids, the apex being anterior. The vocal processes are approximated by the other adductors, and the ligamentous portions of the vocal bands are adjusted for phonation, but the bodies of the arytenoids are not drawn together, and through the opening thus left the air escapes, preventing sufficient vibration of the ligamentous portion to produce sound.

Lastly, the tensor muscles—the thyro-cricoid, and thyro-arytenoid—may be paralyzed. Both the bilateral and unilateral forms of thyro-cricoid paralysis are rare. As a result, tension of the vocal bands is relaxed or abolished. The voice is gruff, monotonous, or suppressed. The other tensor, the thyro-arytenoid, is often affected by inflammation of the mucous membrane of the larynx—probably on account of its superficial situation. There is, in consequence, a lack of tone about the vocal bands, and their approximation is imperfect. There is left a more or less marked space between their edges. If both muscles are affected, an elliptical space remains. If but one, the appellation "Indian-bow paralysis" expresses its appearance. These appearances above described, of course, are varied in partial or complicated paralytic conditions.

We have now briefly reviewed the principal conditions which may produce hoarseness or loss of voice. They are all a source of discomfort and uneasiness to their victims. Some of them are painful and deadly. In all of them the only positive, ever present symptom is impairment of the voice. The quality of this impairment does not differ markedly, even to a trained ear, in the different classes of causative conditions. The accompanying general bodily conditions usually give us no hint as to the true state of affairs. The cause of hoarseness may be a trifling congestion or relaxation. It may be a new growth threatening aspleyxia; or a beginning laryngeal phthisis. A diagnosis or prognosis from symptoms alone is groping in the dark. Knowledge of the exact cause and condition can be obtained by the laryngoscope alone. It turns a flood of light upon the question, and points the way to correct therapeutics.

In view of these facts it needs no long argument to demonstrate the advantage of the use of the laryngoscope in all cases when voice impairment exists. Unfortunately it is not used by the profession at large to the extent that it should be in view of the simplicity of its mechanism, and the comparative ease with which it can be employed. No complicated apparatus is essential. Bright day-light, gas, or an ordinary lamp, as a source of light, a head-reflector, and a throat mirror are sufficient. With bright day-light even a head-reflector is not a necessity. In an average case the obstacles to a laryngoscopic examination are slight. A little practice will give the co-ordination of movements requisite to steady the throat-mirror at the proper angle, and to focus upon it the reflected light. While it would be manifestly unjust to expect the general practitioner, with his multiplicity of duties and cares often of a graver sort, to be an expert in the use of this little instrument; yet, I think none will disagree that every graduate and every practitioner should have some familiarity with the methods of laryngoscopic examination. Especially is this true of those who are called upon to treat the various affections of the vocal organs which abound in this climate.

The treatment of hoarseness and loss of voice is, of course, the treatment of the causative disease. The general principles of treatment of inflammations of mucous membranes are the same here as in other parts of the body. Their application varies with the conditions and the conveniences at hand. In acute inflammations, heat, moisture and sedation, in the form of steam inhalations, external compresses, etc., are off service. As the acute stage passes off, astringent stimulants, in the form of sprays, lozenges, and occasionally powders, do good in assisting the relaxed tissues to the normal tone.

Chronic inflammations demand stimulation from the first. The brush for local applications is occasionally of service. Stimulant sprays give the best results. Perverted conditions of nose and pharynx imperatively demand attention, as there usually lie the primary cause and irritant in chronic conditions. Galvanism, externally over thyroid, is of benefit. Accurate localization of remedies and patience are two prime requisites of success.

New growths when non-malignant almost invariably demand removal. This is best done by forceps, snare or cautery applied intra-laryngeally. When malignant, extirpation of larynx is to be thought of, but palliation is usually all that remains to be done.

In paralytic conditions, applications of faradic current, one pole over thyroid and the other upon or near the affected muscles, give good results usually, if paralysis is not of such long standing that wasting of muscular fibres has supervened. Inflammatory conditions should first be removed by topical medication to obtain best results from electricity.

Whatever be the remedies chosen, or the method of application adopted in a given case, the result will depend largely upon the accuracy of the preceding diagnosis, and the care with which the remedy is applied to the exact seat of disease.

421 Pearl street.

Clinical Studies of the Early Stages of Inebriety.

By T. D. Crothers, M. D.

Superintendent Walnut Lodge, Hartford, Conn

In examining any phase of inebriety it should be remembered that we are dealing with an exceedingly complex and variable neurosis, less marked to ordinary observation than almost any other form of insanity, except in the later stages. The early symptoms are prominently masked, and seldom recognized unless the patient is under frequent observation. When the disorder has existed for years and becomes chronic, the presence of the disease is not disputed, but of the early stages, the crudest theories of science and theology are advanced in explanation. We present the following as an answer to many inquiries in relation to a premonitory stage or period preceding inebriety. Is there a continuous chain of symptoms or pathological connection, from the time of the first alcoholic poisoning to the advent of marked inebriety, that may be grouped and studied?

In examining the early causes of inebriety, we are often surprised to find how vividly the first intoxication, or conditions of alcoholic poisoning, is impressed on the memory of the patient. When every other occurrence is vague or confused, the impressions received at this time are clear. This is a significant hint of a pathological condition or change in the system at this time, influencing all the future. Our inquiries, based on a number of cases, seem to indicate three groups, which are more or less distinct in the early periods. The first one is marked by a long premonitory stage, in which, comparatively harmless drinks are used, such as sodas, cider, small beer, etc., either preceding the first intoxication or following for months or years before inebriety comes on. The second group have no special preliminary symptoms, either after the shock of intoxication or before it. Frequently they are rigid abstainers, and almost fanatical temperance men, but when they begin to drink go down precipitately.

A third group seem always on the verge of inebriety, using beer and alcohol constantly. In their conversation and manner they usually indicate a disturbed mental and physical condition.

Generally the progress of the case is very slow, and always attended with doubtful and uncertain symptoms.

The first narcotism, coma, or intoxication following the use of alcohol, seems to be the starting point for various lesions, and undoubtedly acts as a shock, profoundly impressing the organism. In some cases the march of the disorder from this period is without interruption, and readily traced, in others it is obscure, with long intervals and diversions, and in a certain number of cases the first complete intoxication is followed by a condition of repulsion, both physical and mental, and total abstinence ever after.

The term inebriety is usually applied when alcohol is used to excess continuously, or in paroxysms, without the control of the patient, or apparently so.

The following cases are presented as illustrating some of these groups:

Case 1.—*Inebriety from Nutrient Excess in Childhood.* A. B., a lawyer, born of healthy and very wealthy parents; through childhood he was indulged in every luxury of the table that money could furnish. At sixteen he suffered from acute dyspepsia, from which recovery was very slow. During college life he was under constant medical treatment for this affection. At twenty-four he was junior partner in a large law firm, and worked very hard.

He ate carefully, used cider and various stomach remedies at this time, was ambitious and lived temperately. Two years later he married and began to drink wine at dinner. The dyspepsia passed off, and he commenced to live luxuriously; wine, beer and various bitters were used regularly, and only one hearty meal a day was taken; all other times of eating were irregular.

During the next two years he grew stout and became more fond of good dinners, and was called an epicure. On one occasion of great excitement he drank to intoxication and helplessness at the house of a friend; a low, nervous fever followed for several days, depending in part on grief at his situation, and the shock to his system. The next six months he drank nothing but cold water, and manifested great disgust for alcohol. During this time his disposition suddenly began to change; he would become abstracted in his manner in the midst of company, change the subject abruptly, manifest rudeness and neglect, or go away by himself and give no explanation. Then he began to drink tea and coffee, especially after any exertion or fatigue. A year later he entertained a delusion of some stomach disorder that no physician could understand, and sought strange remedies from strange sources, patronizing quacks and consulting fortune-tellers, etc.

The changes of disposition were more pronounced, and his manner became impulsive and jerking. He began to drink wine at dinner, and occasionally very hard at night. His temper varied often from one extreme to the other. He advocated beer selling, and made strong speeches advocating its use; at this time he professed to be a temperance man, denouncing all drinking other than ale or wine. At times he was excessively emotional, especially at home with his family. Being elected judge, he seemed to improve and have more control over his temper and emotions. A few months later, after much excitement, he drank to intoxication in his room, giving no explanation or reason, and never referring to it afterward. Often he would come home nervous and excitable, and impulsively drink tea, coffee, etc., and sometimes wine, walking the room for hours before retiring. The next day he would appear on the bench, and be perfectly self-possessed; occasionally he would answer a lawyer sharply; or in charging the jury, after defining the law with great clearness, give way to a burst of sympathy that was noticeable.

Usually he drank nothing until evening, sometimes eating very little for a day or more, then indulging in a sumptuous dinner with wines, etc. He complained of wandering pains and exhaustion at times and took much medicine, usually strong tonics. All unexpectedly he manifested a great ambition to become a member of the legislature, and resigned his judgeship and went over the district electioneering. Failing, he drank to excess for a week or more, then signed the pledge and began to lecture on temperance. From this time all his habits became more irregular, and weeks were spent in hunting and fishing; wine and whisky were used regularly, but rarely to intoxication. His mind and memory failed, and he became unreliable in social and business relations. Six years from the time of his first intoxication he was a periodical inebriate.

Note.—The rich diet of early life produced a train of disorders, first manifest in dyspepsia, then in perverted nutrient desires. From the time of the first intoxication there was a continuous chain of symptoms indicating progressive degeneration of both the mind and body.

Case 2.—Inebriety from excesses following sudden wealth and changed circumstances. C. D. No history of parents, a hard-working manufacturer, in good health, living temperately. By a fortunate patent he soon amassed a large property. The excitement and irregularities of his new situation developed a taste for wine and porter. He became profoundly intoxicated, then signed the pledge, but drank soda, lager beer and cider. All at once his character and manner changed; up to this time he was a credulous, generous man, of mild, easy disposition, and careful of his reputation, then he became suspicious and exacting, sometimes very generous, then extremely parsimonious, also impulsive, unreasonable, and involved in business quarrels with all his associates. He drank whisky at meals regularly, was reckless of his reputation, bought and drove fast horses, and frequented the society of fast men, and was an inebriate apparently without any control of himself. His wife was injured

and died. On her death bed he promised to stop drinking. For one year he has continued sober, although his manner and character remain the same. This case is noted for the prominence of its symptoms, and the sudden cessation from drinking caused by the presence of profound grief. In all probability they will appear again. This patient attributes all his drinking to the adulterated wine that produced the first intoxication.

The following are examples of the second group:

Case 3.—*Inebriety from some obscure cause, beginning with mental shock and grief, etc.* E. F. A literary man and author, no clear history of parents, probably healthy, was a temperate man, living frugally and working hard. Having written a popular book, which made him famous, he occupied a very enviable position in the world. In the height of his prosperity his wife and child died. After the funeral he retired to his room, and for weeks refused to be seen by any one, then suddenly he drank to intoxication. From this time he began to write short stories on insanity, painting the most harrowing pictures of persons who were conscious of darkened reason, etc. Then, after drinking very hard for a time, he became a temperance man. Later he wrote another book which attracted no attention, and for two years afterward found employment gathering items for a daily paper. Nothing prominent was noticed except an occasional outburst of temperance enthusiasm or paroxysm of drinking, which ended only when his money was gone, followed by another period of sobriety, and so for two years, when he died from pneumonia. In this case many of the symptoms were obscure and unnoticed. In some of his writings there are traces of morbid impulses and delusions.

Case 4.—*Inebriety from Inheritance.* G. H., a commercial traveler in good health, and temperate. His father was a moderate drinker, and his mother was hysterical; he was advised by a physician to take brandy for some obscure trouble. Six months after, he became intoxicated, and so violent as to be locked up. After this he became a strong temperance man, and

leader in different lodges. Nothing was noticed about him unusual except a morbid desire to indulge in all games of chance, playing cards and buying lottery tickets, being prominent at raffles, etc. Three years later he began to drink to excess, and suddenly became a furious inebriate, drinking at all times and places. In this case all the symptoms were not prominent until at last they burst out in uncontrollable drunkenness.

In the third group inebriety seems present at all times, yet there is an absence of many symptoms, and a general uncertainty of progress.

Case 5.—*Inebriety from bad surroundings.* F. J., a farmer, of healthy parents, a vigorous, temperate man. Went into the hotel business, sold liquor, and was avaricious to make money. After a time he became very much intoxicated, then drank daily for years, always exhaling a strong odor of alcohol, with face and eyes congested, and step unsteady; at night his voice was hoarse. His mind was clear and capable of conducting business, and his health remained about the same. He claimed to be an example of a moderate drinker who could stop at a certain limit, or having his body well under subjection, etc., attending church, and appearing to be a good citizen and Christian man. He was an ardent admirer of horse races, and spent much money and time supporting them. A few years later he became reckless of his reputation and manners, and exhibited the presence of many delusions, then drank very hard for months before death.

Case 6.—*Inebriety from exposure and overwork.* H. L., a physician, with insanity on his mother's side; healthy, well educated, and a strong temperate man, settled in a rough country district, and boarded at a country hotel. Was very ambitious and worked hard, driving night and day, neglecting all healthy habits of living. Began to use alcohol to keep up when business was pressing, and during a season of much excitement became helplessly intoxicated. On recovering he signed the pledge and continued sober for months, then began

to drink again, but this time with great regularity, carrying a bottle in his pocket and using it at intervals, reasoning that it supplied him with lost energy, which his system demanded. He became careless in his appearance, and excessively jealous of his neighbors in the profession. His mind lost its former poise, and he either was strangely dogmatic or childishly credulous. His manners were impulsive and his disposition irritable, and the delusion of being able to stop at any time filled his mind. Four years later he became paralyzed and died.

In both of these cases the patients seemed conscious of their condition, but always asserted they were able to stop, and were never intoxicated after the first attack. They were regular drinkers and were not called inebriates in the meaning of that term. They both possessed delusions and exhibited early changes, of character and habits. To the superficial observer, their drinking had no elements of disease in it, but was more the result of vicious habits under control. Such patients always encourage this delusion of self-control, and are free to give reasons explaining their condition. Often there is a strange indifference to their condition, which is significant of profound disorders. All these cases were under the care of various physicians at different times, and were treated for rheumatism, dyspepsia, diseases of the heart, etc. All reference to the real cause, alcohol, was dismissed with the simple advice to abstain. In this way such cases are not observed until they have passed into a chronic form. The changes of the faculties are also not noticed, because the intellect seems to be as acute as ever. Only a close observation reveals the blunting of the moral nature of the man, his truthfulness particularly being changed to unblushing prevarication, and often his modesty turns into great presumption. An inclination to lead a fast life, to indulge in games of chance, a credulity that is unusual before, are important hints that cannot be mistaken. The friends and physicians who have charge of such cases should not be deceived, but act promptly, with a full understanding that the case is one of great uncertainty,

and always more or less masked. In all these cases the memory of the first intoxication was clear, but of events after more or less obscurity prevailed. In Case 1, the first complete intoxication exploded, as it were, a long train of events, and fixed the form of future manifestation; the progress of the case from this time on was steady and marked. In Case 2, the changes following the first intoxication were sudden and marked. Also the equally abrupt termination, from some powerful impression on the nervous system. This was a check on the march of the disease, from which it will break out again with renewed energy. In Cases 3 and 4 the symptoms were more or less masked, but the progress of the disorder continued as before, ending at last abruptly. Such cases are quite common.

The other two cases represent a large class of very respectable men who seem to possess a repelling element, keeping the symptoms in abeyance. They are examples of a dangerous class who frequently betray all confidence of friends, and all unexpectedly break down in some condition of great weakness and depravity. The practical facts which these cases seem to indicate are that in all cases of inebriety a premonitory stage has existed, usually dating very prominently from the first attack, or condition of intoxication. Sometimes it precedes this event with great significance. The wise physician should always study such cases pathologically, and treat them with promptness and energy.

Society Reports.

Buffalo Medical and Surgical Association.

Meeting of March 3, 1885.

The President, Dr. F. W. Bartlett, in the Chair; Dr. Frank H. Potter, Secretary.

Dr. Gager, being present, was, on motion, invited to take part in the proceedings of the meeting as the guest of the association.

Extra-uterine Pregnancy.—Dr. Matthew D. Mann read a paper on this subject, reporting four cases, with the treatment and results. He prefaced these cases with a brief *résumé* of the symptoms leading to the diagnosis of this condition. These were, of course, the symptoms of an ordinary pregnancy, including the mammary and gastric signs. Particular importance must be given to the changes in the mammæ, as in the majority of cases they were among the most reliable symptoms, if the pregnancy had advanced far enough. Besides these, as was mentioned by other writers, there were irregular gushes of blood, accompanied by portions of membranes, or, as he himself had seen, a complete uterine decidua, much hypertrophied and thickened. With the microscope we could distinguish this from the menstrual decidua. Then there was pain, either fixed and grinding in the iliac fossæ, or of a sudden, paroxysmal character, of the severest kind and accompanied by symptoms of shock. Quite rarely there were symptoms of abortion without the expulsion of a fœtus. Again, in a small proportion of cases, there were no premonitory symptoms, the first indication of anything wrong being shock, collapse, and sudden death. The physical signs were, commonly: 1. Increased size of the uterus, but not in proportion to the supposed stage of the pregnancy. This increase in size was thought by some to be proportionate to the nearness of the sac to the uterus, the increase being greater in the tubal than in the abdominal variety. 2. Evidence of the emptiness of the uterus by the passage of the sound or a finger. 3. The presence on one side of or behind the uterus of a cystic tumor, generally smooth in outline, somewhat tender, and obscurely fluctuating. With these signs and symptoms clearly in mind, a diagnosis, in the majority of cases, could be made with certainty. And moreover, when the diagnosis could be made early, treatment could be applied with a reasonable assurance of success. He then reported in detail three cases of extra-uterine pregnancy which had been successfully treated by the application of the electric current. The

diagnosis in each case was made early, in accordance with the above-mentioned principles. The Faradaic current was used. This was passed through the tumor daily, and was continued for a week or more, according to indications. Each patient made a satisfactory and complete recovery.

The fourth case, not having had so favorable a termination, was reported more at length. It occurred in the practice of Dr. Diehl, of Buffalo. The patient was forty-two years of age. She had had one child eighteen years before, but no miscarriages. Dr. Diehl first saw her on October 7, 1883, on account of excessive bleeding from the uterus. This was controlled after a time with ergot. On January 4, 1884, he was compelled to use a catheter on account of retention of urine. In the meantime she had menstruated, but at irregular intervals, and had occasionally complained of severe pain in the lower extremities and in the bowels. On April 1st a tumor was discovered in the left lower portion ot the abdomen. Dr. Mann saw her on the 10th, when the tumor was found extending nearly to the umbilicus and situated entirely to the left of the median line. Fœtal life was easily detected. Extra-uterine pregnancy was considered probable, but, as she insisted that she had carried her first child in the same situation, it was doubtful whether it might not be a pregnancy in the left horn of a uterus unicornis or bicornis. For this reason the uterine cavity was not explored. From this time until the 1st of August she continued to do well, only suffering occasional pain, not severe. On the latter date, as the end of pregnancy was so near, and as but little harm would result from a premature labor, it was determined to examine the uterine cavity. This was found to be enlarged but empty. Pregnancy was now so far advanced that it seemed best to await the false labor, which usually occurs in these cases, and the death of the child, before operating. Fœtal life ceased to manifest itself about the latter part of August, the cessation being preceded by pains simulating those of labor. She continued to do very well, however, no urgency occurring in the

symptoms until the night of the 24th of September, when, as she was straining at stool, she was taken with severe pain, accompanied with the sensation of something giving way. When Dr. Diehl saw her, early in the morning, she was in a state of collapse. Dr. Mann was hastily summoned and operated at 10 A. M., assisted by Dr. Diehl, Dr. Rochester, Dr. Phelps, and Dr. Bartow. Before the operation the patient was conscious and hopeful. The peritoneal cavity was found filled with a thin purulent fluid, which was first removed. The fœtus was then removed, the cavity washed out thoroughly with antiseptic solutions, and the wound closed. The patient failed rapidly during the operation, and died soon after it was completed. The autopsy revealed a large sac external to the uterus and attached to it and to the rectum. The appearances indicated that the sac was the enlarged and hypertrophied oviduct of the left side. The uterus contained a decidua somewhat thicker than normal. From the study of these cases and those reported by other writers, Dr. Mann then formulated the following considerations for the treatment of extra-uterine pregnancy:

1. If the case was not seen until the alarming symptoms attending rupture of the sac have been developed, laparotomy must be performed without delay. Mr. Lawson Tait's four successes out of five cases must encourage us to follow his example.

2. If the pregnancy was discovered before the fourth month, the indication was to destroy the fœtus and trust to nature for its absorption. All other plans for accomplishing this purpose must be laid aside in view of the safe and easy method offered in the application of the electric current. This might be in the form of the interrupted Galvanic or the Faradaic current, the latter being considered the most reliable. It should be used daily, as strong as could be borne, and continued until there was evidence of the death of the fœtus.

3. Opinions differed as to the proper plan to pursue after the fourth month. If the fœtus was alive, it should be destroyed by electricity, no matter at what stage the pregnancy might be. If

it was dead and in the earlier months, nothing should be done until some clear indication for operating occurred. In the latter months, after its death, it was better to wait a few weeks before operating. By this plan the danger from hemorrhage would be lessened, as well as all the difficulties surrounding the removal of the placenta. On the other hand, if the fœtus was left to be absorbed by nature, there was great danger of suppuration and septicæmia.

In the discussion, Dr. Wetmore called attention to the fact that we hear of more cases of extra-uterine pregnancy to-day than formerly, probably because of our more accurate diagnosis. He had had one case out of 1,400 deliveries. In that case he used the Galvanic current of the strength of twenty cells with success. He was of the opinion that the constant current was the best.

Dr. Cronyn reported a case of double uterus, which, at first, he thought to be an extra-uterine pregnancy, but in a normal labor the woman was delivered of a living child. While electricity was the proper treatment in some selected cases, in others it would be better to perform laparotomy, and in still others nature would succeed in bringing about a successful termination without the interference of the physician.

Dr. Hartwig thought more cases of extra-uterine pregnancy occurred than were reported, perhaps because they were not recognized. He called attention to the fact that hæmatocele sometimes resulted from these cases. He had once performed laparotomy for suspected extra-uterine pregnancy, but had failed to find the fœtus.

Dr. Stockton reported a case of suspected abortion which the autopsy revealed to have been an extra-uterine pregnancy. Death resulted from hemorrhage one and a half hours from the first symptom. Even if there had been no suspicion of abortion, death followed so soon after the first symptom that it is difficult to see how any interference on the part of the physician could have been successful.

Dr. Moody inquired as to the effect of abortifacients—as ergot—upon extra-uterine pregnancy.

Dr. W. W. Potter said that danger existed from the outset of an extra-uterine pregnancy, and was immediate and remote, and therefore the treatment could be considered under two heads, remedial and operative. If the case was under observation early, the operation should be deferred until there was some plain indication for its performance. He considered it was now settled that the proper time to interfere by laparotomy in these cases was immediately upon the death of the fœtus, whether caused by electricity or by nature.

He also mentioned the possibility of a normal pregnancy existing at the same time, and wished to impress the necessity of having this occurrence always in mind.

Dr. Mann, in closing the discussion and replying to Dr. Moody, said that abortifacients could have no effect upon an extra-uterine fœtus, for those remedies acted by stimulating the muscular fibres of the uterus to contract, not by any direct action upon the contents of the womb. In extra-uterine pregnancy motion was observed earlier than in normal pregnancy, and this was a valuable aid in diagnosis. It was his opinion that these cases occurred more frequently than was generally expected. Hæmatocele could result from an extra-uterine pregnancy.

The prevailing diseases reported were diphtheria, croup, scarlet fever, measles and pneumonia.

Dr. Brecht presented a specimen of lithic acid from a child two weeks old. The child had had convulsions continually since its birth.

The committee upon midwifery reported a corrected bill regulating that practice by other than regular physicians in Erie county.

After some discussion the President was instructed by motion to ask the President of the Erie County Medical Society to call a special meeting for the consideration of this bill.

The association then adjourned.

Transactions of the Buffalo Obstetrical Society.

Stated Meeting, March 24, 1885.

The President, Dr. W. W. Potter, in the Chair; Dr. William H. Thornton, Secretary.

Dr. J. W. Keene read a paper on "The Use and Abuse of the Tampon in Abortion."

He took the ground that the tampon was often injudiciously employed in threatened abortions, and thus frequently precipitated the catastrophe it was intended to avert.

Various authors were quoted, all agreeing that the tampon was not only capable of exciting uterine contractions, but that it invariably did so, and was, moreover, employed by abortionists for the purpose of inducing miscarriage.

The indications for the tampon unanimously agreed upon by many of the authors cited were two: First, when the abortion was inevitable; and second, when the hemorrhage imperiled the woman's life or endangered her health.

We should not, he said, be too ready to regard the abortion as inevitable; although many practitioners, and some of the authors, appear to consider every abortion that threatens as inevitable. Playfair states that abortion is inevitable, when the os is found beginning to open so that the finger can pass through it and touch the ovum, "especially if pains also exist." Other authorities were cited far more cautious in pronouncing an abortion inevitable.

The essayist then cited some of the instances recorded, where, in cases apparently past all hope, the abortion had not occurred and the woman had gone to term. Hence he thought that all doubtful cases should be treated as hopeful rather than as inevitable. If the fœtus was known to be dead its speedy expulsion was, of course, to be desired; and the tampon was a safe and ready means with which to excite the necessary uterine action. But the diagnosis of death, prior to the fifth month, could be made with certainty in but few, very few, cases. The

actual expulsion of the fœtus was about the only positive proof of its death, and, so long as its death was problematical, we should proceed as though it were known to be living. The reader thought Schroeder's view the safest one, viz.: "The hope of preventing the abortion should not be abandoned unless a part of the ovum has already passed out of the external os."

The second indication for the application of the tampon, viz., hemorrhage compromising the safety of the woman, the essayist thought, had quite as wide a range of latitude in its interpretation as the first. A hemorrhage which one physician would deem alarming, might be, in the opinion of another, a matter of small moment. It was here that the judgment of the physician must be his guide. Experience, idiosyncrasy, and the personal equation inevitably affect his judgment. The authorities differ, as was shown by citations from several works on obstetrics. Schroeder holds that bleeding may go on in these cases "to the highest degree of anæmia, syncope, and pulselessness, but is very seldom followed by death," nor is the woman's health permanently impaired thereby. Others would plug for a very slight hemorrhage. The proper course was, no doubt, the middle one between these extremes.

The reader deprecated the routine practice of plugging, merely as a preliminary measure, in threatened abortion with comparatively insignificent bleeding, and concluded his paper by saying: "Let it be laid down as an axiom, that the tampon is legitimately employed only when, for good and sufficient reasons, it is necessary to terminate gestation."

Discussion—Dr. R. L. Banta said that he had not observed such great danger of producing abortion with the tampon as the author of the paper would have us believe. He was formerly in the habit of using the tampon whenever he found a woman losing a thimbleful of blood, but of late he had not as great fear of this sort of hemorrhage. In one of his recent cases he found the woman flowing profusely, and presumed the abortion inevitable. After watching the case awhile he went

away for an hour, and upon his return found the flow steadily going on. He then gave a full dose of morphine and went home. The next morning the hemorrhage had ceased, and he now thought gestation would continue to term.

Dr. C. C. Frederick, in reviewing the various methods of tamponing the vagina for hemorrhage, advocated the employment of the colpeurynter of Braun as an efficient, as well as an easy and cleanly way of performing this operation. One of these rubber bags could easily be introduced into the vagina and inflated so as to completely dam up the flow; it could also be readily withdrawn, with little disturbance to the patient, when necessary to make an examination. He much preferred this method to any other, since he had become familiar with it, as neater, prompter, and more convenient.

Dr. Charles G. Stockton had been rather frequently called upon to consider whether or not he should use a tampon. The question of using the tampon arises at other times than that mentioned in the paper; for instance, when there is, after the escape of the fœtus, retention of the secundines. Many practitioners, he observed, were accustomed to use the tampon then, and he thought the dangers which were supposed to follow the retention of the secundines involved questions worthy of discussion in this connection. He was surprised the other day when a young physician said to him that he never removed the secundines, unless late in pregnancy; that they always came away spontaneously, and that his patients never had septicæmia or other untoward conditions, mentioning something like one hundred or more cases that he had attended within a comparatively short time. This seemed surprising to him, and he would like to ask the members what their habit was in regard to the removal of the secundines in abortion cases.

Dr. M. Hartwig thought that if the tampon were used at all the indications for its employment were correctly given in the paper. He was of the opinion that tampons should be given up almost entirely. Although he used them in some cases he fully

believed, as Schroeder states, that a woman will not bleed to death from abortion before the end of the fourth month. It was important to distinguish between the use of the tampon during pregnancy or after confinement, and in cases which have nothing to do with pregnancy—uterine bleedings from other causes. He should say that the latter cases were the only ones where he might use the tampon. The old-fashioned kite-tail tampon would certainly cause contraction of the womb. So, too, would the colpeurynter, if it was blown up sufficiently to check the bleeding. There were other ways of tamponing, as with compressed sponge; another method was to tampon the mouth of the womb through the speculum. This was the method he preferred if he used any. But, all told, in cases of bleeding during pregnancy or after the expulsion of the fœtus, he had decidedly come to the conviction that the tampon was unneccessary; because, if the hemorrhage was insignificant the woman could stand it; small doses of ergot, or even large doses—which never produce abortion of themselves—would usually check the flow. As a scientific ruling, he would put forth the idea that the tampon should not be used at all in these cases. The question of the viability of the fœtus ought to be decided with a good deal of probability. If the woman had bled considerably, and the os was patulous, it was safe to conclude that the fœtus was dead.

Dr. W. S. Tremaine was very glad to hear the foregoing views expressed. Of late he had given up the practice of obstetrics except in consultation, though some years ago he did a good deal in this way. He never used a tampon but once, and never would again if he could avoid it. He deemed it one of the most barbarious, unsurgical, and nonsensical things that was ever invented. Dr. Hartwig had expressed about his ideas in regard to it. He used to see a good deal of hemorrhage, and he generally succeeded in controlling it with alum-water, which was thrown up into the uterus. He had never seen a death from post partum hemorrhage. When the bleeding was at all copious, abortion was inevitable; but about the surest way to bring it on was to give opium.

Dr. Thomas Lothrop could not understand how gentlemen who practice obstetrics, and have aborting women to care for, could get on well in their management of these cases, especially in the second and third months of pregnancy, without the employment of the tampon. He looked upon its use as an absolute necessity in many instances, and he criticised any method of practice which permitted women to lose large quantities of blood, when it could be controlled with a simple plug. It was seldom necessary to use the tampon until after embryonic life was either extinct, or certain to become so, whatever was done. When he had felt compelled to use the tampon, it had almost always been in retention of the secundines after expulsion of the fœtus. His method of using it was to place the patient in the Sims' position, and, with the aid of the Sims' speculum, to pack the vagina tightly with cotton pledgets. As for septic infection, he had never had any such trouble following the tampon in his practice. There are two symptoms in abortion which he considered important to combat, viz., pain, and hemorrhage, and the two agents which he recommended for this purpose, above and beyond all others, were opium, and the tampon.

Dr. Alfred C. Girard (present by invitation) said that he was willing to give his opinion, since he had been so kindly asked to join in the discussion, for simply what it was worth when thrown into the scale. He had seen and treated a good many cases of hemorrhage of the character in question, and had tried many means to check it. When called to such a case, if he found the os partially dilated and the cervical portion softened, he was satisfied that the fœtus was dead, and he felt, under such circumstances, that the best mode of procedure was to bring on rapid uterine contraction, expecting thereby to prevent further hemorrhage. In following this rule he always felt that he had done the best he could for the patient. He believed that the tampon would, in nearly every case, bring on an abortion, so he would not advise its use when there was any reasonable hope

of conducting the case to term. When, however, the physician was satisfied that the fœtus was dead, he conld not see how he could do better than to employ the tampon, if the hemorrhage was persistent.

The President inferred that the general import of the paper was against the use of the tampon. He wished to take exception to that teaching. He had, during twenty-six years of practice, used the tampon constantly when needed, and had never yet had occasion to regret it. He employed the tampon for two purposes: First, in extreme cases, to save life when hemorrhage was alarming; second, to avoid the loss of blood in a class of cases where the flow, though not copious, could not be well borne for constitutional reasons. In short, he considered it the physician's duty to economize the loss of blood—to reduce it to the very minimum—in these days of anæmia, neurasthenia, and mal-nutrition. He was sorry to hear gentlemen speak so slightingly of what they were pleased to term the "loss of a little blood." They asserted, with a grandiose air, that they were not afraid to see their patients bleed, that women could stand the loss of great quantities of blood, and yet recover. Did they recover? Was it not true that many such cases make sad work in getting up? Between anæmia, neurasthenia, and ill-nourished tissues on the one hand, and subinvolution, cellulitis, and displacements on the other, they presented a pitiable picture of invalidism, which a little more care and thoroughness in early management might sometimes have averted.

He thought that failures in the employment of the tampon were due to its imperfect adjustment. In case of violent hemorrhage it could certainly be controlled by placing the woman in the Sims' position, and packing the vagina tightly, so tight, indeed, that there could be no bleeding. In case of hemorrhage, after the escape of the fœtus, the secundines, or a portion thereof, being undelivered, he would make the attempt to remove them if the bleeding was not violent. If, however, it was copious, he would tampon in the manner just mentioned. He

would not hazard the further loss of blood, when he had such an efficient agent at hand to control it. He believed in the curette, and would employ it to remove any tags or shreds of the placenta yet hanging to the uterine walls, after which it would be good practice to brush over the cavity with Churchill's tincture of iodine.

Correspondence.

Editors Buffalo Medical and Surgical Journal:

In his comments on Dr. Charles G. Stockton's recent paper on "Some Untoward Effects of Opium," read before the Buffalo Medical and Surgical Association,* my friend, Dr. H. R. Hopkins,† referred to two cases of his own, in which "a peculiar condition followed immediately upon a hypodermic injection of morphia, a red glow coming upon every portion of the exposed skin, and in which the pulse became very greatly accelerated. The doctor believed the action was upon the nervous system, because these symptoms appeared before it was possible for the solution to have become absorbed, and almost before the needle had been withdrawn."

Your correspondent regrets that he was not able to have been present at the reading and discussion of this paper, because he also has had some interestingly peculiar effects produced in several patients by the hypodermatic administration of this priceless remedy, and for this reason he takes this method of recording, in as brief a manner as possible, what he would have said had he been able to attend this meeting.

Among these effects were precisely such as friend Hopkins described. The body, as far as seen, becomes red from the determination of blood to the surface, and some of the patients straightway began to scratch themselves at various parts, com-

* Thursday evening, January 6, 1885.

† *Vide* report of the proceedings as published in this Journal, current issue, p. 365.

plaining of itching, particularly marked on the face and palms of both hands. In some of these cases there was a pronounced itching of the lining membrane of the nose also, as evinced by an effort of the patients to get at it to scratch, and by the sneezing it produced even before they got to scratch themselves. The pulse became almost uncountable, and in some instances quite so; the respiration also, for a few seconds, seemed to be much embarrassed, but within a few minutes all these unpleasant and more or less alarming symptoms passed off, including likewise the buzzing in the ears and the throbbing in the head, which some complained of, in addition in three or four cases.

These effects, be it remembered, were produced, as in Dr. Hopkins' cases, before the withdrawal of the needle, indeed, twice before the syringe had been emptied, the injection having been slowly, but steadily, made, *i. e.*, without interruption, by continuous action.

Now, and this is the point it is desired to bring out, these symptoms occurred only when a vein was struck. When they were first observed the writer could not account for their appearance; but when one day a vein was entered for the purpose of producing as quick an action of the drug as possible, because the patient was suffering most excruciatingly and outrageously, and when these effects thereupon made their appearance, to make sure that the explanation, which then suggested itself, was correct, the needle was designedly inserted in veins in some of the cases in which it had been necessary to resort to morphia hypodermically, always with the phenomena described produced almost instantaneously. The writer now regrets also that he did not make memoranda of the names, dates, etc., as further evidence of the facts here stated. But these demonstrations have been done in a sufficient number of instances to warrant these simple statements, and the immediate cause of the phenomena observed. In no case, in which a blood vessel was struck or entered, were any of those symptoms produced, where, as whenever a blood vessel had been entered and the

solution injected into it, they never failed to appear, either wholly or in part, and mo re or less pronounced, according to the strength of the solution or the idiosyncracy of the patient, as a matter of course. And as an evidence, in not a few cases at any rate, that a vein had been entered, several drops of venous blood would follow the withdrawal of the needle, or if the piston was drawn up while the needle was still *in situ*, blood was drawn up into the syringe. I am well aware of the importance of avoiding a vein, *because of the sudden, overwhelming effect*, and would not recommend its adoption. In the cases in which veins were not avoided, the greatest care was exercised to inject slowly, though steadily.

The explanation of Dr. Hopkins that it is through the nervous system that these symptoms are produced, is concurred in in so far as we can call them the remote effects of the drug. We all know that nitro-glycerine and amyl-nitrate produce similar symptoms through their action on the vaso-motors, and it is in this way, doubtless, that morphia acts.

But in so far as the doctor meant that the morphia acted on the nervous system instanter, "before it was possible for the solution to have become absorbed;" in so far as he means by this that these symptoms were the result of the immediate action of the morphia on the nervous system without having been carried to the nervous system by absorption into and then by the blood, or by the blood right off, because thrown into it—from that opinion I would most respectfully dissent. No remedy can produce a systemic or constitutional effect without having entered, through the process of absorption, the blood, and without its presence in the blood, a few drugs excepted, of which, however, morphia is not one. (*Vide* for example, Headland, "Art of Med.," Props. I. and V. especially.

Therefore, these peculiar symptoms were produced by the action of the morphia on the vaso-motors, by or through its instantaneous carriage to this system of nerves by the blood. Absorption was, as a matter of course, not necessary, there

having been done artificially what absorption does naturally—carry the drug to the blood for circulation in it. And reference has already been made to the fact that when thrown directly in the blood, the effect of the morphine is sudden and overwhelming, for which very reason, as already stated, this should not be done. The cases cited here, and this fact explains, I believe, the rationale of these symptoms. If thrown into the subcutaneous cellular tissue, it is slowly absorbed and slowly carried to the blood; and hence there is no overwhelming effect as is produced by its direct injection into the blood, which manifests itself in the symptoms described by the doctor and myself.

It is proper to add, in conclusion, that what is here expressed is simply and solely my own deductions, and my experimentations, if so we wish to call my desire to find out whether my first impression was right, ought to be worth something, inasmuch as I have demonstrated this question in no less than at least ten or eleven instances. But what is here written was not prompted by any wish to be critical, but simply by a desire to throw light, if possible, upon this point, since no one seems to have taken any exceptions to the explanation of Dr. Hopkins, while the matter is certainly of sufficient importance to merit considerable attention.

CHARLES WEIL, M. D.

BUFFALO, March, 1885.

Selections.

RAPID DILATATION OF THE UTERINE CANAL FOR DYSMENORRHŒA AND STERILITY.

At a recent meeting of the Philadelphia Obstetrical Society, Dr. Wm. Goodell brought forward his experience in rapid dilatation, and its advantages, as compared with the use of tents and Sims' cutting operation, both, formerly, his favorite modes of treatment.

He uses two sizes of Ellinger's dilators. He considers them best because their blades separate parallel to each other. The smaller is used to pilot the way for the more powerful one. The patient is fully anæsthetized and given a rectal suppository of the aqueous extract of opium. Dr. Goodell operates through his bivalve speculum, the patient on the back. The cervix is steadied by a strong tenaculum and the smaller dilator passed up as far as it will go. Upon gently stretching open that portion of the canal which it occupies, the stricture above so yields that when the instrument is closed it can be made to pass up higher. Thus by repetitions of this maneuvre, little by little, in a few minutes' time, a cervical canal is tunneled out which could not before admit the finest probe. Should the os externum be a mere pin-hole, or be too small to admit the beak of the dilator, it is enlarged by the closed blades of a straight pair of scissors, which are introduced with a turning motion. As soon as the cavity of the womb is gained, the handles are brought together, the smaller dilator being now withdrawn. The larger one is introduced, and the handles are then slowly screwed together. If the flexion be very marked, this instrument, after being withdrawn, should be retroduced with its curve reversed to that of the flexion, and the final dilation then made. The ether is now withheld, and the dilator kept in site until the patient begins to flinch." The best time for dilatation is midway between two monthly periods.

The patient is kept in bed till all pain and tenderness have passed away, rarely more than two or three suppositories are needed.

In his own words: "In the great majority of cases I dilate the canal, not to the fullest capacity of the instrument, but to one and a quarter inches. Sometimes an infantile cervix which does not readily yield and might give way, the handles are not screwed down more than three-quarters of an inch or an inch.

The cervical canal seldom returns to its contracted or angular condition. The cervix becomes shortened, widened, strengthened and straightened. He therefore uses rapid dilatation to

straighten out anteflexed or retroflexed wombs, and to dilate and shorten the canal in cases of dysmenorrhœa or sterility from stenosis or from a cervical cervix. He also uses this means of dilatation to introduce tents, medicaments, the curette, to digitally explore the uterine cavity, and to irrigate the uterine cavity.

He has not a record of all cases so treated, but thinks they will number over three hundred. Out of these he has not had one case of severe inflammation, and the results have proved most satisfactory.

The following are the statistics for dysmenorrhœa:

Unmarried,	80
Married,	88
Total,	168

Of the unmarried eighteen were unheard from after the operation, leaving sixty-two from which any data could be obtained. Of these, thirty-eight were cured, seventeen more or less improved, and seven not improved at all. Of these seven, five subsequently had their ovaries removed. In each the ovaries had been so altered by cystic or by interstitial degeneration as to make the dysmenorrhœa otherwise incurable.

Of the married, fifty-three were heard from. Of these, thirty-nine were cured, ten improved, and four unimproved. And of these fifty-three, nine were not in condition to conceive, three of them from fibroid tumors, two from destructive applications of nitrate of silver to a lacerated cervix, three from being over forty-one years of age, and one a widow.

This leaves but forty-four capable of conception, and of these, eight, or a little over eighteen per cent., became pregnant. But the ratio is in fact larger, for several, fearing pregnancy, employed preventive measures after the operation. There have been many pregnancies occurring later, of which he has accidentally heard and which have not been reported to him by the patients. The dangers of the operation are of lighting up a former cellulitis or ovaritis. Dr. Goodell has not hesitated to operate, but

always uses opium first, and by the time the operation is over, the patient is under its influence.—*American Journal of Obstetrics.*

The Pathology and Treatment of Extra-Uterine Pregnancy.

At the meeting of the British Medical Association, Sir Lawson Tait read a paper on this subject, of which the following is an abstract:

He does not believe that ovarian pregnancy ever exists. He believes that all extra-uterine pregnancies are internal. In none of my own dissections or operations on the earlier cases was there the slightest doubt, nor could there be, that the site of pregnancy was the Fallopian tube. Nor, in any record of these cases, is there any doubt about it. In fact, no early extra-uterine pregnancy having any other site than the Fallopian tube has ever been seen, or if so, it has escaped my research.

Under normal circumstances impregnation takes place in the uterus rather than in the tubes, is his teaching, founded upon the facts: (1) that spermatozoa have never been found in the Fallopian tubes or abdominal cavity of the human female; (2) the ciliated epithelium of the Fallopian tubes seem to be an arrangement to prevent the passage of spermatozoa into the Fallopian tubes, thus preventing the occurrences of tubal pregnancy.

As soon as impregnation of the ovum occurs in mammals, the ovule adheres to the mucous surface with which it is in contact. To have a tubal pregnancy, therefore, the ovum must be there when impregnated, and the cause, unquestionably, is due to a desquamative salpingitis. "If we imagine a Fallopian tube to be wholly, or in part, deprived of its vibratile ciliæ, it is not difficult to see how an ovum may become impregnated and rest there, becoming attached and developing into a tubal pregnancy."

Salpingitis is a very common disease, and generally results in occlusion of the tube, thus serving to prevent tubal pregnancy. It is not difficult to believe that the cases in which the attack is limited to the mere destruction of the epithelium must be very rare, and, therefore, we have in this the prime factor in the rarity of tubal pregnancies. The great majority of tubal pregnancies occur in women who have either never had normal pregnancies, or who have not been pregnant for a number of years, so that it is certain that in them the reproductive machinery is out of gear."

Extra-uterine pregnancy, clinically, attracts attention in two phases: (1) By the large number of cases of death from rupture of the tube, resulting in hemorrhage which is fatal; (2) By these few cases in which, after rupture, the fœtus either goes to or approaches the full term of gestation.

The reasons for the removal of the small proportion of patients following rupture are cogent. The site of inplantation of the placenta in the tube is a matter of chance. The tube, necessarily, will be weakened at this point of placental attachment, hence the liability of rupture at this point. Three-fourths of the circumference of the tube is covered by the folds of the broad ligament and the remaining one-fourth on the lower side of the tube looks toward the space between these folds. When the placenta is attached so that rupture occurs toward this three-fourths surface of broad ligaments, the fœtus and blood must, necessarily, escape into the peritoneal cavity and death ensue. Should the placenta be attached so that rupture occurs between the folds of the broad ligament, then the space between would serve to hold the fœtus and extruded blood, and prevent fatal hemorrhage because of the confined space.

Mr. Tait says: "It seems to me that when a pregnancy has developed in the tube so far as the twelfth or thirteenth week, the tube can be distended no more, and its walls give way. This rupture, however, may occur as early as the eighth week, though usually it occurs at the tenth or twelfth."

The ovum may perish with the rupture. Then only a small hematocele remains to be absorbed or treated surgically. The ovum may live and develop. "The fœtus often dies about the fifth month, and the cyst suppurates." It then either ruptures into the rectum or cœcum, generally. If the child goes on to maturity, it ordinarily dies after a spurious labor. Operation at the time of rupture has been followed by a successful issue in 80 per cent. of the cases treated by Mr. Tait. If extra-uterine pregnancy advances to nearly full term and the diagnosis is made, operation is demanded. If the child is dead, operation is still necessary, the cardinal features of which are: "(1) To stitch the opening of the sac carefully to the wound in the abdomen so as to close the peritoneal cavity accurately; (2) To leave the placenta entirely alone, and allow it to be thrown off by nature's own processes." The latter operation has been uniformly successful in Mr. Tait's hands.

Longevity in the Different States.

A student of the reports of the tenth census has compiled a table for the Boston *Commonwealth* for the purpose of showing in what State or States one has the best chance for a long life. New Hampshire seems to him to be the favorite refuge of green old age, for he finds that one seventy-fourth of the inhabitants are at least eighty years old. The proportion among native white males is 1 to 80, but the environment in New Hampshire seems to have been even more favorable to the preservation of life in the other sex, for the proportion among native white males is 1 to 58. Other New England States do not contain quite so many old persons, the average proportion for the six being 1 in 134. Coming to New York, he finds that for one person who has reached the age of eighty there are 161 who have not been so fortunate, and in the three Middle States the average proportion is one in 182. As he goes southward he discovers a greater preponderance of young blood, for in six South Atlantic States the average proportion is 1 in 203. The Gulf States afford a less attractive shelter for the aged, for the average

is 1 in 300. In Texas, where so many worthy persons die with their boots on in the prime of life, only one octogenarian can be found in a group of 497 citizens. The average rises again in the interior States east of the Mississippi, but in the Great Lake States it falls to 1 in 263, a good old age being attained with the greatest difficulty in the wealthy and prosperous State of Illinois. In seven States west of the Mississippi River the aged rarely appear, for the average proportion is 1 in 453. In Iowa a crop of 334 person yields only one who has reached the age of four score. In Minnesota, Nebraska, and Kansas only one of these aged citizens can be found in a group that would yield two in Iowa, and in Colorado 1,150 inhabitants must pass in review before an octogenarian comes in sight. The old are even more rare in Nevada, but in California and Oregon the proportion is nearly 1 in 500. If the inhabitants of the whole country could be assembled in two hundred and twenty-seven groups, it would be possible to place at the head of each group one patriarch of eighty or more years. So our student, assuming that long life is the inalienable right of those who reside in New Hampshire, Vermont and Maine, cries: "Flee to the mountains of New England for health and longevity!"—*Scientific American.*

Editorial.

Weight as an Indication of the Character of the Risk for Life Insurance.

Dr. Joel Seavems, of Roxbury, in the *Boston Medical and Surgical Journal*, reports his observations upon the influence of weight as an indication of the character of risks for life insurance. The doctor is the medical examiner-in-chief of the Royal Arcanum, a beneficiary organization which has upwards of 50,000 members, and has paid out since January, 1868, over $3,000,000 in life insurance to the families of its deceased members. Any conclusions, therefore, he could present upon the subject of the character of risks would be very instructive

A careful analysis was made of those who, at the time of their admission, were fifteen per cent. or more below the standard weight and then of those who were fifteen per cent. or more *above* that weight. These analyses are presented in tables that are very complete and show, at a glance, the age, height, weight, number of months lived after admission to the order, and the cause of death in each case. Space will not permit us to reproduce these tables, but the doctor's conclusions, briefly stated, are as follows: "For life insurance purposes, men whose weight is above that laid down in the usual tables are better risks than those whose weight is less; that among the latter (light weights) the usual variation of twenty per cent., which is assumed to be within safe limits is not safe, and that if we accept men, especially young men, whose weight is fifteen per cent. below the standard, we are approaching dangerous standing ground, and inviting, as it were, deaths from phthisis and wasting diseases; and when we reflect how great is the mortality from phthisis in all insurance organizations, we cannot too strongly emphasize the necessity of constant vigilance in this direction, and of not only exploring most carefully the chest of such men, but also of taking into account all those other features which I think often precede the changes in lung tissue discernible by the ear, and may be observed at what may be called the pretuberculous stage.

With the heavy weights the case is different. Free from danger of phthisis we must, to be sure, take the greatest care to see that the heart and kidneys are healthy, and that the family history does not point to cerebral disease. With these points well guarded I am satisfied that an excess of twenty-five per cent. in weight is not dangerous in men who have not injured or are not injuring themselves by alcohol."

We have received, through the courtesy of Dr. Andrews, the Superintendent, the Fourteenth Annual Report of the Buffalo State Asylum for the Insane, for the year 1884. The Report includes the reports of the Board of Managers, of the

Treasurer, of the Steward, of the Matron, and also of the Superintendent, supplemented with statistical tables showing the admissions, dismissions and the effects of treatment. The pamphlet is unusually full of interesting matter. It shows the excellent system and management of this important institution, which, thus early in its history, has become a pride to the city and to the State.

Messrs. Lea Brothers & Co. have issued a handsomely printed octavo volume, which, under the title "One Hundred Years of publishing 1785–1885," gives an interesting history of the great house which, a century ago, was founded in Philadelphia by Matthew Curey. The Lea's came into the firm in 1821. The record of the house has been one of honorable dealing, unflagging industry and excellent judgment in so much that their imprint is in some sort an indication of the worthiness of the volume in which it appears.

It is with great pleasure that we learn that the *Index Medicus* is to be continued, the enterprising house of George I. Davis, of Detroit, having assumed the responsibility of its publication. Although, in the past, financially unprofitable, it is of genuine value to the profession, giving, as it does, complete reference to what is published in all parts of the world. It should be found in every public library and should number among its subscribers every medical society, if not every progressive practitioner.

Several of the State Boards now refuse to recognize the diplomas of medical colleges which require no matriculation examination. The adoption, by the American Medical Association, of the resolution "that no person who shall hereafter graduate from a medical school where literary education is *not* a prerequisite to such graduation shall be eligible to be a delegate," will be another step in the right direction.

Dr. Davidson has opened, near the corner of Genesee, Huron and Main streets, a "Hospital for Diseases of the Skin." This is intended for the convenience of out-patients. The poor are treated free upon the recommendation of any physician. Those whose condition requires continuous observations are admitted to the Buffalo Hospital of the Sisters of Charity.

Dr. Cust. H. Lovelace, of Cashon, Tenn., says: "I have used Papine in my practice for some time and am thoroughly satisfied it is the most desirable preparation of opium I have ever used, and more reliable than any other form of opium. I believe it will speedily displace every other member of the opiate family."

Mr. A. L. Arey's lectures upon "Electricity," at the Niagara Medical College, have proved highly interesting and instructive. The experimental illustrations have been very attractive. We understand that the lectures are to be continued every Thursday evening through this month.

We would call attention to John Wyeth & Bro.'s advertisement in this number of a Portable Antiseptic Dressing. The tablets make a solution which is exactly correct as to strength, and we find them a great convenience.

Reviews.

A System of Practical Medicine by American Authors. Edited by Wm. Pepper, M. D., LL. D., Provost and Professor of Theory and Practice of Medicine and of Clinical Medicine in the University of Pennsylvania. Vol. i. Pathology and General Diseases. Philadelphia: Lea Brothers & Co. 1885.

On the reception of the announcement of this work we predicted, from our knowledge of the editor and the distinguished men associated with him in its production, that it would, upon its completion, be a worthy presentation of the whole field of

medicine as it is actually taught and practiced by its best representatives in America. Both editors and publishers are to be congratulated upon the appearance of the first volume. If the succeeding volumes are up to the standard which is reached by the present one, the complete work will be the most valuable and important American medical publication ever issued. As such there is a fitness that it should appear during the centennial year of the existence of the great publishing house, whose imprint it bears. Twenty-one authors contribute to the present volume. The first 227 pages are devoted to general pathology and sanitary science, the remainder of the volume is devoted to the "General Diseases—from special morbid agents operating from without." Dr. Hutchinson, of Philadelphia, writes upon continued fever, typhoid and typhus; Prof. Pepper gives an excellent article upon relapsing fever; Prof. Hyde, of Chicago, contributes articles upon variola varicella and erysipelas, and Prof. White, of Boston, treats of leprosy. Dr. Jacobi's article upon diphtheria, and Dr. I. Lewis Smith's upon scarlet fever, are both able and exhaustive. Prof. Stille's articles upon cholera will be read with interest at the present time. Other subjects treated upon are rubeola and rotheln, malarial fevers, parotitis, yellow fever, plague epidemic, cerebro-spinal meningitis, pertussis, influenza, rabies and hydrophobia, glanders and farcy anthrax, pyæmia and septicæmia, puerperal fever and beriberi. Though all of the articles are not of equal value, all are good. We would most heartily advise all our readers to become subscribers to the work, which we are confident will be one of practical utility.

The Principles and Practice of Gynæcology. By THOMAS ADDIS EMMET, M. D., LL. D. Third edition, thoroughly revised, with one hundred and fifty illustrations. Philadelphia: Henry C. Lea's Son & Co. 1884.

The accomplished author states, in his preface to the third edition, that "so great is the advance and change of views during the past four years in gynæcology, that the preparation of

this edition has necessitated almost as much labor as rewriting the volume. Every portion has been thoroughly revised, a great deal left out, and much new matter added." The first edition, which was published in 1879, has given a demand for the third edition, issued in the present volume. The work needs no recommendation to the profession from our pen. It has gained for its author and for the American profession more of well-merited praise and reputation than any other work. Indeed, it may be regarded as belonging to the classical medical literature of the present century. The present edition contains the views and experience of the author, in a form that has not been presented to the profession before, on prolapse of the vaginal walls; on lacerations at the vaginal outlet and through the sphincter ani and perinæum; on the methods of partial and complete removal of the uterus for malignant disease; on the surgical treatment of fibrous tumors; on diseases of the Fallopian tubes, and on diseases of the urethra. The chapters on these subjects contain about one hundred and seventy-five pages of new material. The work, therefore, is fully abreast the advances that have been made in this very important department of medical science at the present day. It contains the recorded experience of one of the most accomplished specialists in the world, and at once commands the favor of the profession, both in this country and abroad. We commend the work to our readers who are interested in the special subject of which it treats.

Myths in Medicine and Old-Time Doctors. By ALFRED C. GARRATT, M. D., Fellow of the Massachusetts Medical Society. New York and London: G. P. Putnam's Sons. The Knickerbocker Press. 1884.

This work is addressed to the profession, especially the younger portion of it, and aims to record medical history and the successive schools and sects. The author divides the work into seven chapters, of which the first treats of eminent physicians

in ancient times from Hippocrates to Galen; the second, the dark ages, Mohammedanism in Europe, medicine, Christianity, and law-blighted; the third, the medical profession about two hundred years ago; the fourth, old-time theory of the nature and cause of nervous maladies; the fifth, the treatment of nervous distempers, as then practiced; the sixth, what was alchemy in the seventeenth century? the seventh, analysis of homœopathy. An appendix finishes the volume, containing references and corroborating testimony on the question of homœopathy. Under these various heads, the author furnishes a variety of interesting material, presented in a very pleasant and easy style. The book will subserve a useful purpose to the general reader as well as to medical men. We have been much interested in its perusal and commend it to those who have leisure to scan its pages.

Anatomy, Physiology and Hygiene. A Manual for the use of Schools, Colleges and the General Readers. By JEROME WALKER, M. D., Lecturer on Anatomy, Physiology and Hygiene in the Central School, Brooklyn, and on Diseases of Children in the Long Island College Hospital; Senior Physician to the Seaside Home for Children, Coney Island, etc. New York: A. Lorill & Co., No. 16 Astor Place. 1884.

We have of late received many books on this subject, and while they have all contained much to commend, all have been more or less faulty. The work before us is a decided improvement upon any of its predecessors. This is not a book which teaches a little smattering of anatomy and physiology and leaves the scholar ignorant of the application of that knowledge to the preservation of health. Dr. Walker teaches the essential facts of anatomy and physiology and makes a constant application of physiological principles to hygienic ends. The *Journal of Education* says of it that in clearness of statement, exactness of description, fullness of illustration, and in its practical application to daily life, it has not been excelled if equaled by any other American author. This is not exaggerated praise. Medical men can recommend the book with confidence.

The Physician Himself: What he should add to his Scientific Acquirements in Order to Secure Success. By D. W. CATHELL, M. D., late Professor of Pathology in the College of Physicians and Surgeons, of Baltimore. Fourth edition. Enlarged by the addition of nearly three hundred new suggestions. Baltimore: Cushings & Bailey, 226 W. Baltimore street 1885.

We have favorably noticed the previous editions of this valuable work of Dr. Cathell. It is really an essay on "Personal Questions in Medical Practice," and contains more sound, practical sense and advice for medical men than any work we have ever read. The work is especially useful to young men just entering upon their professional life, and if some of the older members would read its pages and take some of the advice and suggestions they contain, we think they would be benefited. The work is an excellent one, and the author has performed the task well and ably. We advise our readers to obtain a copy and read it. We are sure they would gather from its contents more useful and practical hints in regard to their duties and relations to the community, and also of the measures necessary for professional success, than any work we have ever read.

A Handbook of Pathological Anatomy and Histology. With an Introductory Section on Post Mortem Examinations and the Method of Preserving and Examining Diseased Tissues. By FRANCIS DELAFIELD, M. D., Professor of Pathology and Practical Medicine College of Physicians an Surgeons, New York, and T. MITCHELL PRUDDEN, M. D, Lecturer on Normal Histology, Director of the Pathological Laboratory. New York: Wm. Wood & Co., 56 Lafayette Place. 1885.

This admirable book supplies all the needs of students and practitioners who wish to add a knowledge of the lesions of disease to that of its clinical symptoms. The work comprises instructions in the methods of making post mortem examinations, of the preservation and preparation of diseased tissues for microscopical examination, of the lesions of all the different parts of the body, of the general diseases, of violent deaths, and of deaths from poisoning. The description of tumors and the account of such general processes as inflammation and degeneration are most excellent. The illustrations are abundant and unusually good. Indeed, the whole work deserves the most unqualified commendation.

Cocaine and its use in Ophthalmic and General Surgery. By H. KNAPP, M. D., Professor of Ophthalmology in the Medical Department of the City of New York. Reprinted from the "Archives of Ophthalmology," December, 1884, with Supplementary Contributions by Drs. F. H. BOSWORTH, R. J. HALL, E. L. KEYES, H. KNAPP and W. H. POLK. New York and London: G. P. Putnam's Sons, The Knickerbocker Press. 1885.

This monograph on cocaine contains the latest opinion and experiences concerning this most useful remedy. The author's well-known ability and wide reputation in ophthalmology is an ample guarantee that he presents the latest experience of accurate observers as to the application of this remedy in ophthalmic and surgical practice. He has called to his aid several able collaborators, who furnish valuable articles on its application to other departments of medicine. Dr. Bosworth gives a chapter on cocaine in the upper air passages; Dr. Hill on general surgery; Dr. Keyes on genito-urinary and minor surgery, and Dr. Polk on gynæcology and obstetrics. It will be seen that the accomplished author has succeeded in presenting a work of rare value to the profession.

The Basic Pathology and Specific Treatment of Diphtheria, Typhoid, Zymotic, Septic Scorbutic and Putrescent Diseases Generally. By GEO. J. ZIEGLES, M. D. Philadelphia: Geo. J. Ziegles, M. D. 1884. Price, $2.00.

What the author aims to present in this work, under the term "Basic Pathology and Specific Treatment," we give in his words, taken from the preface: "I have herein tried to show that all the varied and complex diseases are dependent upon or complicated with one common basic alkaline pathogenic factor, mostly the volatile organic alkali, ammonia, incidental to all forms of life, etc., for the successful treatment of which this primal morbific factor must be decomposed, neutralized or removed by acidulous, autalkaline, resolving and counteracting agents, etc." We have little to say in regard to this theory, for such it is. The author presents it in a very plausible form, and readers can only judge of its merits by perusing the book.

Lectures on Diseases of the Nervous System, Especially in Women. By S. Weir Mitchell, M. D. Second edition. Revised and enlarged, with five plates. Philadelphia: Lea Brothers & Co. 1885.

This work from the pen of Dr. Weir Mitchell needs no words of commendation from us to the profession. In large and varied experience in this special class of diseases, and in accurate observation and analysis of nervous disorders, the author stands without an equal in this country, and whatever emanates from him claims the attention and confidence of the profession. This work is a valuable addition to the literature of the subject. Our American women furnish a fertile field of observation and study. The author has brought both ability and aptitude to his task, and presents a work which in its value is without a rival.

A Manual of Dermatology. By A. R. Robinson, M. B., L. R. C. P., Professor of Dermatology New York Polyclinic, etc. New York: Bermingham & Co., 28 Union Square.

Of the making of books upon diseases of the skin, there would appear to be no end. Their number, however, is an index of the especial study which the cutaneous diseases have, of late years, received. The present book is by a distinguished author, but is intended to be the basis of a larger and more original work. It is a concise and fairly complete description of the different diseases, comprised in a handsome volume of nearly 700 pages. The publishers have issued it in handsome form.

The Treatment of Uterine Displacements, Including Prolapsus, Anteversion, Retroversion, Anteflexion and Retroflexion. By W. Eggert, M. D. Second edition. Illustrated. Chicago: Duncan Brothers. 1884.

The author presents in this work the homœopathic therapeutics for the uterine diseases and displacements. He says in the preface to the first edition that "all the remedies have been given in the 200th potency and upwards," of which one dose has been given per day." Whether a work is worthy of perusal, which recommends for prolapsus and other displacements, as curative agents, such infinitesimal doses, we leave our readers to learn, if they desire to do so, by sending for a copy.

THE

BUFFALO

Medical and Surgical Journal.

VOL. XXIV. JUNE, 1885. No. 11.

Original Communications.

CHEMICAL VERSUS GERM THEORIES OF DISEASE.

BY F. R. CAMPBELL, A. M., M. D.

In all fields of speculative thought, where demonstration has hitherto been impossible, we observe that hypotheses directly opposite in their tendencies have prevailed among scientists and philosophers. In mental science, idealism and materialism have alternately held sway. In medicine, the same phenomenon may be traced out. There was humoral pathology of the Ancients, essentially a chemical theory of disease, replaced by the vegetable parasitic hypothesis of Vallisneri, Hauptmann, and Linnæus. Then Stahl proposed a purely chemical theory of disease, but this has been followed by the germ theory, suggested by the revelations of the microscope, and brought to its present stage of development by such men as Virchow, Pasteur, Tyndall, and Koch. At present the germ theory has the strongest hold upon both the professional and popular mind. The discovery of each new so-called pathogenic micro-organism is hailed by the profession as a great addition to our knowledge of disease, while the people look upon a specimen of "comma

bacillus" with as much interest as they would upon a *cobra de capello.* When Pasteur brought forth the results of his experiments on anthrax, pathologists were immediately converted into germ hunters, until now we have a microbe for nearly all febrile and contagious diseases; while specific germs of epidemic delusions and "bacillo-mania" will undoubtedly soon be imprisoned beneath the objectives of our microscopes. When the germ theory becomes an established fact, the true physician will become a mere manipulator of germicides, and the pathologist a student of microscopic botany.

But there are many honest scientific men who are unwilling to accept, in their present state, the views of the "bacteriologists," based almost entirely upon analogical and *post hoc ergo propter hoc* arguments. The powers of the microscope have almost reached their limit, but organic chemistry is as yet in its infancy, and it is the test tube and crucible, not the microscope, which will, in the future, make the greatest revelations in medical science. The recent investigations of chemical ferments and ptomaines have done much to turn again the tide of medical thought, and *contagia chemica* now rival the *contagia viva.*

It is the object of this paper to present, briefly, some of the objections to the germ theory of disease, and to bring forward a few arguments in favor of the chemical theory, neither approving the statement of the old physician who thought the world would be better off if Koch would turn his attention from the culture of germs to the cultivation of cabbages, nor agreeing with those wild theorists who would discover a germ as the source of every human ailment.

The germ theory, as adopted by most of its advocates, assumes that there is a specific micro-organism for each zymotic disease; that this micro-organism is capable of reproduction, and always produces similar chemical and anatomical changes in the body attacked. It is assumed that the organisms discovered are morphologically distinct, though it is, in many cases, impossible to differentiate them with our present means of investigation.

It is claimed that the existence of microbes as a cause of anthrax, tuberculosis, and, probably, cholera Asiatica, has been demonstrated, and by a perfectly logical deduction we may assume that germs are the cause of all infectious diseases. It is claimed that if a recognized variety of micro-organism is invariably found in the blood or tissues in connection with special disease; if these microbes are capable of cultivation outside of the body; if the products of these successive cultures, on inoculation, produce the original disease, and if, in the body thus inoculated, similar germs are found, it is demonstrated that these germs are the cause of the disease.

Many and able have been the arguments and experiments to prove this hypothesis, but it will not be necessary to present this side of the question, as all are familiar with the arguments in its favor. In spite of the attractiveness and plausibility of this theory, there are many objections in the way of its acceptance, which, to me, at least, are insuperable. Indeed, it is feared that the most earnest advocates of the germ theory cannot overcome these objections, unless, like the old Scotch professor of theology, "They look the difficulties square in the face and pass on."

1. These organisms are so minute that in the majority of cases it is impossible to differentiate microbes, which, if we accept the germ theory, produce very different results. No one can distinguish the micrococcus diphtheriticus from the micrococcus vacciniæ, nor can the gonococcus be differentiated from the micrococcus ureæ, though the former is supposed to produce urethral inflammation, while the latter confines its energies to the manufacture of carbonate of ammonia from urea.

2. It is very questionable if the micrococci of vaccine virus have anything to do with its action. Even filtered vaccine lymph has been known to be efficacious, though this has been denied by some authorities. Dr. Hartshorne claims that filtration may produce a chemical change in unstable compounds, so that it is possible that, even when we have well-marked micro-

organisms in a fluid which loses its specific character after their removal, the neutralization may be due to a chemical change. On the other hand, Hallier has shown that even pathogenic micro-organisms, when thoroughly washed, may be introduced into the system without producing disease, showing that there must be a chemical substance in connection with the bacteria which produces the pathological changes.

3. Bacteria and micrococci are always found on the surface of mucous membranes, and these organisms differ in no respect from those found in disease. According to some authorities, micrococci are always present in the blood of healthy persons. Koloczek, Richardson, Emmerich, Sternberg, and Lauder Brunton claim that even the dreaded "comma bacillus" is normally present in the intestines, Brunton proving that they greatly increase in numbers when the nerve supply of the intestine is cut off. Lewis, of this country, claims that it is normally present in the mouth.

4. It has been proved by Burdon-Sanderson and Cohen that bacteria derive their nitrogen, not from the living tissues of the body, but from ammonia, a product of decomposition, hence we must admit that the decomposition precedes the development of the bacteria. Unless we accept the views of the chemist of Laputa, who believed that excrement could be converted into food, we cannot understand how bacteria can live upon their own excretions. Moreover, bacteria are vegetables, and there are many reasons for believing that, like other vegetables, they destroy substances injurious to animal life. The river Seine, contaminated by the sewage of Paris, is purified by the numerous plants which flourish in the stream. Dr. Waring gives the results of experiments made by the French Horticultural Society, showing how plants will purify contaminated water. Now, since bacteria are vegetable organisms, is it not reasonable to suppose that they are curative and not causative elements of disease? "Where the carrion is, there do the young eagles gather," said the prophet. Where there has been decomposition, there will

you find bacteria. As an argument in favor of this view of the function of micro-organisms, we may mention the fact that in cases of septicæmia and in dead bodies the poison is most active and virulent in the earlier stages of disease or decomposition, before the bacteria are most numerous. It is upon this fact that Prof. Owen bases his theory that micro-organisms are the scavengers of the human body.

5. Suppuration will occur when there are no micro-organisms present (Orthmann). On the other hand, bacteria have been found under Lister's dressings when there was no suppuration. Paul Bert and Rosenberger have destroyed all the bacteria in a septic fluid without diminishing its septic character. Griffini has found that saliva and urine, when deprived of their micro-organisms, will produce septicæmia in rabbits, all of which facts go to prove that bacteria are not the cause of septicæmia.

6. It is claimed by some of the most eminent observers, Buchner, Nägeli, Bastian, Billroth, and Sanderson, that the species of bacteria are convertible, one into another having entirely different properties. Sanderson says that "the influence of environment upon organisms such as bacteria is so great that it appears as if it were almost paramount." May it not be true, then, that the form of many of these organisms depends largely upon the surrounding medium? To quote from Ziegler: "The researches of Koch and his pupils do not prove that the qualities of the bacteria examined by them are perfectly constant. They only show that the morphological and physiological qualities possessed by a bacterium are retained with some tenacity. On the other hand, the researches of Nägeli, Buchner and Wernich seem to afford evidence that this constancy is not shown under all conditions. Changes of nutrient medium may have some effect on the form and size of the cells, on their mode of multiplication, and on their fermentative and physiological properties." If we admit that the morphology of bacteria depends partly upon the surrounding

medium, we cannot possibly deny the validity of Buchner's experiments showing how the hay bacillus could be converted into the bacillus anthracis, and conversely.

7. If we cannot accept the theory of the mutability of bacteria, it is quite reasonable to suppose that special micro-organisms select special pathological lesions as a favorable culture ground. Just as particular trees select a soil adapted to their wants, so may the specific organisms locate in special diseased tissues, the bacillus tuberculosis flourishes in tubercle, the comma bacillus in the intestine, and micrococci in a diseased throat. If this is true, specific micro-organisms will have only a diagnostic significance.

8. These micro-organisms are not uniformly present. Klein states that bacteria are sometimes absent in typhoid fever. The bacillus tuberculosis may be accidental only, for—

(*a*) The contagiousness of tuberculosis is extremely doubtful.

(*b*) Tuberculosis has been induced by the inoculation of irritating substances not containing bacilli (Schotellius, Wood, Sanderson, Formad and Lebert).

(*c*) The bacilli of other affections, *e. g.*, syphilis, when inoculated in animals, will produce a disease resembling tubercle.

(*d*) Tuberculous deposits do not always contain bacilli, as has been shown by Sternberg, Spina, and Prudden, the last mentioned making six hundred and ninety-five sections from ninety-five tubercles of a tuberculous pleura, using all of Koch's precautions, and failing to discover the bacillus, though he has seen it in other cases. Koch gets over this difficulty by claiming that his bacillus is alone pathognomonic of tubercle. But this is begging the whole question. When the bacillus tuberculosis was found in various tissues, it was at once assumed that these tissues were all tuberculous, until now we have tuberculous abscesses, bones, muscles, testes, and tuberculous brains. With this sweeping assertion, a host of surgical diseases, formerly supposed to be distinct, were brushed into the tuberculous class.

9. If we assume that micro-organisms are the cause of all zymotic diseases because they accompany fermentation, we can, with equal propriety, assume that microbes are the source of all obscure reactions in organic chemistry. There should be a microbe in the salivary glands and pancreas to convert starch into sugar; a microbe in the stomach to change albuminoids into peptones; in fact, a micro-organism in each gland to bring about the chemical changes produced therein. Furthermore, even if these minute organisms do produce some chemical changes, it is not necessary to assume that they are specific. Simple addition or abstraction of oxygen is all that is required in most of them, and whether in a preparation of starch, for example, we use saliva, vegetable diastase or sulphuric acid, the result is the same. According to Ziegler, the same bacteria will produce lactic acid in milk and ammoniacal decomposition in meat. Brieger claims that the various aromatic products of the putrefaction of albumen are equally well obtained, whether it is set up by the addition of sewer mud or pancreas.

10. It is impossible to separate a micro-organism entirely from the medium in which it exists. In repeated cultures of bacteria this medium is only diluted, and it may be that the diminished toxic effect is due to the dilution of the poison, and not to the benign modification of the organism. Moreover, there is some evidence to prove that a chemical ferment can increase in volume as well as a bacterial ferment.

11. The specific character of no micro-organism, except, possibly, the bacillus anthracis, has been demonstrated. It seems very improbable that the comma bacillus, which now claims so much attention, is not the cause of cholera, for—

(*a*) Dr. Strauss, of the French Cholera Commission, reports that "the shorter and more violent were the fatal attacks of cholera, the fewer were the bacteria found in the intestine." This is the very opposite of what we should find were cholera due to bacteria.

(*b*) Koch, after showing how rapidly "comma bacilli" multiply when moist, states that they die after drying more quickly than almost any other form of bacteria. "As a rule, even after three hours' drying, every vestige of life disappears." But there are facts to prove that the fomites of cholera have preserved their infectious properties in dry places.

(*c*) No one has been able to produce cholera in any animal by inoculating "comma bacilli." Prof. Klein has even swallowed them without any injurious result. Pigs inoculated with cholera dejecta die, according to Emmerich, with septicæmia, with no choleraic symptoms whatever.

(*d*) Lastly, the "comma bacilli" have been discovered only in the intestine. Koch assumes that they secrete a poison which produces the symptoms, but Emmerich and Brunton have shown that the choleraic intestine is incapable of absorbing, and that reaction in the disease is too rapid to admit of a bacterial origin.

Having thus pointed out some of the difficulties to be overcome before accepting the germ theory of disease, we will now attempt to show how all the phenomena of zymotic affections may be at least equally well explained from a chemical point of view.

Chemical theories of disease assume that all diseases attended with variations of temperature are due to some abnormal chemical action in the system. In non-infectious febrile diseases the abnormal chemical action may be instituted by some unusual impression upon the nervous system, such as mental shock, surgical injury, or sudden change of temperature. Infectious and contagious diseases are due to chemical changes in the body, produced by the introduction of some chemical substance from without, presumably derived from another person having the same or a similar disease, and resembling the ferments produced by glandular action. As examples of the former class, may be mentioned pneumonia, meningitis simplex, and the variations in temperature attending concussion of

the brain. We know that many chemical changes in the human body are regulated by the nervous system. Fear and anxiety will suppress the secretions of the gastric glands; the poisonous compounds of the saliva of men and animals are increased by anger; while diabetes mellitus may be induced by irritation of the floor of the fourth vertricle. The recent experiments of Italian chemists have demonstrated that poisonous alkaloids, or ptomaines, are constantly found in the body, being eliminated with the urine, sweat and fœces. When these compounds are formed more rapidly than they can be eliminated, disease is produced. Schelmi, Pesci and Vella have proved that alkaloids and peptones are produced during the putrefaction of albuminoids; Spica has shown that a poisonous alkaloid can be extracted from normal blood; while Brieger has discovered a poisonous substance found in connection with peptones in ordinary stomach digestion. It is quite probable that the retention or excessive formation of these poisons will produce various diseases, just as the retention of uric acid or oxalic acid in the system produce their respective diatheses.

But in zymotic diseases it is assumed that the chemical substances which sets up the changes in the system are introduced from without; that they have special affinities for particular tissues, and that they themselves can increase in volume and still remain unaltered in composition. At the first glance it seems doubtful if these phenomena can belong to any except a vitalized substance. Yet we will find, on reflection, that all these requirements can be answered without calling any germs to our assistance.

It is no more remarkable that the chemical contagium of mumps should select the parotid gland, or the contagium of measles, the mucous lining of the air passages for their seat of action, than that woorara should confine its activity to paralyzing the motor nerves, and hydrocyanic acid limit its action to the respiratory centre. Zymotic chemical poisons may have selective powers just as well as drugs or bacteria. It is not

necessary to assume that the quantity of the contagious poison is large for its action in catalytic, or, preferably, eryptolitic, to use the word coined by Prof. R. A. Witthaus. It may induce chemical changes in other substances without itself undergoing change. Take, for example, the conversion of alcohol into ether by means of sulphuric acid, or the conversion of starch into sugar by the mineral acids, vegetable diastase or ptyalin. In all these cases the substance instituting the chemical changes is simply diluted and not otherwise altered. Moreover, some organic chemical compounds are capable of assimilating other substances. It is a well-known fact that a bad egg in a box will contaminate its neighbors. It is scarcely possible, however, that bacteria could penetrate the shell and vitelline membrane of the egg. Only chemical substances are capable of osmosis. Take, as another example, the poison of the *cobra* inoculated into an animal. The animal thus poisoned is destroyed and its secretions, when introduced into other animals, produce the same symptoms as the original poison, yet no one has attempted to show that the poison glands of the *cobra* secrete bacteria. So it is with the zymotic poisons; they produce pathological chemical changes and at the same time themselves increase in volume. In the case of septicæmia this has apparently been proved. Richardson and others have succeeded in separating a poisonous alkaloid in septic matter. This alkaloid produces, on inoculation, all the symptoms of septicæmia. It has been claimed by some observers that the inoculation of septin is followed by very different symptoms from the inoculation of septic pus. The former acts like a dose of an alkaloid, while the latter produces genuine septicæmia, due to the presence of the bacteria. But there are authorities, Paul Bert, Panum, Coze, Bergman, Schmiedeberg, Vulpian, Clementi, Zweifel, and many others, who have made experiments to prove that septicæmia may be produced without the presence of any organisms whatever. The alkaloid of septic matter is not the ferment, but the ferment is certainly not bacterial.

Zymotic poisons may be solid, liquid, or gaseous, thus accounting for the difference between contagious and infectious diseases, which can hardly be explained by the germ theory.

The poisons of purely infectious diseases are gaseous; the poisons of purely contagious diseases are solid or non-volatile liquids; the poisons of diseases both contagious and infectious are solids or liquids capable of volatilization. If these diseases are all alike due to micro-organisms, why are they not all alike contagious and infectious? And why should we not believe our patients when they tell us they have contracted gonorrhœa in water-closets? The attempts to explain these differences by the motility of bacteria have been failures.

The influence of season on disease can be more easily accounted for by assuming a chemical than a bacterial origin of disease. If germs were the cause of zymotic diseases we would expect to find them all most active and fatal in summer when micro-organisms are most readily developed. This, however, is not the actual case, for many zymotic diseases are most prevalent in cold weather.

With chemical substances, on the other hand, some require cold and others heat for solution. The phosphates found in urine, for instance, are precipitated by heat; the urates, by cold. So the chemical contagion may be affected by temperature; heat reducing some, like that of diphtheria, to a more solid state, and rendering others, like the poison of cholera, more volatile. The chemical constitution of the atmosphere varies in the different seasons. In summer there is more ammonia in the air than there is in winter. Many of the zymotic poisons seem to be carried, probably by solution, in the products of decomposition, such as ammonia and sulphuretted hydrogen, and this will account for the increased virulence of some zymotic diseases in badly drained and filthy districts.

In a similar manner we can explain nearly all the phenomena of zymotic diseases, by showing the analogy between the behavior of zymotic poisons and chemical compounds. We will discuss some of these phenomena in detail:

1. *Period of incubation.* In connection with the chemical processes associated with a zymotic disease, poisonous products are formed which are in part eliminated by the excretory organs. When these poisonous substances have accumulated in the system in sufficient quantities, the characteristic symptoms of the disease appear. The poisonous substance is produced more rapidly in some diseases than in others, thus explaining variations in the length of periods of incubation. In cholera Asiatica, for example, the poison is rapidly formed, and we have a very short period of incubation. In syphilis and hydrophobia, on the other hand, the chemical changes are slow and a long period of incubation is the consequence. The variation of the period of incubation of the same disease in different persons may be due to the chemical constitution of the body affected or to the activity of the excretory organs. If the excretory functions are active the poison accumulates slowly and the period of incubation is correspondingly lengthened. Variations in intensity of a disease may be accounted for in the same way. The immunity of some persons to zymotic diseases may be explained by the poison being formed in small quantities, or not at all, and being eliminated from the system as fast as produced. What physician has not observed the remarkably varied sequelæ of chancres? Some patients are rapidly overcome by the disease; others have a few papules and pustules, and that is all. There are many arguments to support the views of those who refuse to believe in the duality of syphilis. When the initial lesion is not followed by constitutional symptoms it may be due to the elimination of the poison from the system as fast as it is formed. Here the same poison is introduced and the various symptoms depend entirely upon the constitution of the patient inoculated.

The influence of hygienic surroundings is also explained on this theory. Impure air, dampness and filth affect the excretory functions of the lungs, skin and kidneys injuriously. As a consequence, typhus, scarlatina, measles and all infectious diseases are aggravated by such conditions.

2. *Sudden appearance of symptoms.* This is probably due to a cumulative effect of the poison formed. We know that many drugs, *e. g.*, digitalis and arsenic, may be administered for some time without producing any appreciable effect, when suddenly all the physiological symptoms of the medicine appear; and there is no good reason why the poison formed in disease may not act in a similar manner.

3. *Variations of temperature.* In all chemical reactions heat is either absorbed or liberated. As a rule, when substances pass from a solid to a liquid state heat is taken up; on passing from a liquid into a solid state heat is given off. When oxygen is given off from a compound, heat is absorbed. Example, the production of oxygen by heating chlorate of potash. When substances are oxidized heat is evolved. When fluids are formed and eliminated from the body in excess, as in Asiatic cholera, and in diseases attended with profuse perspiration, the temperature of the body is reduced. In Asiatic cholera there seems also to be deficient oxidation, for the blood rapidly becomes acid, excess of uric acid in the blood being supposed to indicate deficient oxidation, the fibrin diminishes, and urea is decreased. In rheumatism, on the other hand, the amount of fibrin in the blood is increased, and there is rise of temperature.

The albuminoids in the body pass through a long series of changes before being eliminated, and it is probable that some of these changes are attended with the absorption and others with the evolution of heat. So with the chemical changes in disease; the temperature of the body will rise or fall according as the prevailing chemical change is attended with the evolution or absorption of heat. Chemical reaction, attended with absorption of heat, seems to take place first in zymotic diseases, as in others, for we frequently have a chill and a reduction of temperature as the initial symptoms. Sometimes the secondary rise of temperature never takes place. There are cases of puerperal peritonitis, for example, in which the temperature remains below normal from the beginning.

4. *The eruption* on the skin, attending many zymotic diseases, is entirely analogous to that following the ingestion of many drugs. Belladonna causes a rash, which, according to the homœopaths, resembles that of scarlet fever; the bromides and iodides produce pustular eruptions; shell fish and game, especially when "high," that is, when they contain post mortem alkaloids, will produce urticaria in some persons. So the poisons of contagious and infectious diseases bring about cutaneous changes; that of scarlet fever, like belladonna, manifesting the symptoms early; that of typhoid and syphilis, like the bromides, only after a considerable quantity exists in the system.

5. *The non-recurrence* of most zymotic affections may be explained, (*a*) by assuming that the chemical constituents of the tissues, which can be attacked by a given zymotic poison, have all undergone a change, so that there is nothing to be acted upon at a second exposure; (*b*) by the establishment of tolerance for a vigorous zymotic poison. It is a well-known fact that the doses of many medicines must be increased to produce constitutional effects. Tobacco, when first taken by a person, usually produces marked physiological symptoms, yet the system soon becomes accustomed to its presence, and then even large doses have but little effect. So with the zymotic poisons; even if the chemical constitution of the body were not changed by its first action, a tolerance might be established, which would prevent the recurrence of morbid symptoms. The human system has the power of adapting itself to the presence of poisons. The Styrians can take large quantities of arsenic without injurious results. People may become accustomed to the presence of marsh miasms, without contracting malarial disease. This power, when once established, can be transmitted to posterity, for the natives of marshy districts seldom have ague, and the children of men who have had syphilis, even when they show no evidences of the inherited disease, are said to be exempt from the disease, or else will have it in a very mild form, a fact that has been observed in several parts of Portugal.

6. *The origin of zymotic poisons* may be in part accounted for by a chemical theory of disease. When organic matter undergoes decomposition, many compounds, probably alkaloidal in their nature, are produced. Water contaminated with decomposing vegetable substances will generally cause diarrhœa, especially in those persons not accustomed to its use. Some physicians think that typhoid fever may be brought about in the same manner. The effluvia from sewers will produce sore throat, and probably diphtheria. In three cases, during the past winter, the writer has seen malignant diphtheria developed in families who have removed from healthy localities into houses containing untrapped water-closets, though the other inhabitants of the block were unaffected. The "filth diseases," so called, all seem to be caused by the decomposition of organic matter. According to the germ theory, filth is only a favorable culture ground for the bacteria of these diseases, yet we frequently meet with zymotic affections where it seems impossible that the poison was derived from pre-existing cases of the disease.

Prof. Richardson goes so far as to believe that the zymotic poison may even be produced *de novo* in some individuals by powerful mental impression. In this way he accounts for cases of cholera, apparently due to fright. Although such an ideacannot be supported by scientific observation, it seems probable that cases of disease, apparently zymotic, may be developed under certain conditions, without the action of a specific poison.

7. *Mutability of zymotic disease.* We have seen that the same chemical substance, when introduced into different compounds, produces different results. Sulphuric acid in starch forms sugar; in alcohol, ether. Now, the chemical composition of the human body varies with conditions of age, disease, sex, and physiological state. Consequently the same zymotic poison may produce different diseases. The poison that will cause scarlet fever in a child may produce erysipelas in a wounded man, or puerperal fever in a lying-in woman. Measles

and mumps usually prevail at the same time, the latter being most common in boys, while scarlatina anginosa and diphtheria can, in some cases, hardly be distinguished.

8. *Sepsis and antisepsis.* It has been shown that in the decomposition of the human body poisonous alkaloids are produced, those first formed being most virulent in their action. That is, the lower the state of oxidation, the more poisonous are the alkaloids formed. When pus has become septic, it contains an alkaloid, which, on injection into the system, will set up all the symptoms of septicæmia. This alkaloid has been called septin, and, although its exact composition is unknown, it is probably capable of further oxidation, thus being made innocuous. If a wound is cleaned perfectly and so dressed that but little air can come in contact with it, and so that the discharges can be rapidly removed, septin is formed in small quantities only, and is removed before much has been absorbed. If the so-called air dressing of the French surgeons is employed, the alkaloids are more highly oxidized, and are thus rendered harmless. Septicæmia seldom occurs in wounded animals, yet the wounds are freely exposed to the air. The only dressing is the scab which nature provides, and the only antiseptic employed is the tongue of the animal, which removes the putrefying substance. Here free exposure to the air seems to be nature's method of cure, that is, rapid oxidation of the products of putrefaction. Examine our best antiseptics, and what do you find? That they are either powerful oxidizing agents, like bichloride of mercury or permanganate of potash, or else they are elements having a strong affinity for organic matter, like chlorine and iodine. The former oxidize the septic poisons, converting them into other harmless alkaloids, the same process that is carried on more slowly by nature; the latter convert the alkaloids into inert compounds, probably muriates and iodides.

9. Lastly, chemical theories of disease afford a more rational basis of treatment than germ theories. Instead of seeking a suitable germ, which is powerless unless given in sufficient quantities to kill the patient, we will endeavor—

(*a*) To prevent the formation of the poison. Here prophylactic remedies prove serviceable, and for this reason we may give quinine and coffee to prevent malarial diseases; we use caustics to destroy the virus of the initial lesion of syphilis, and the homœopaths give belladonna to prevent scarlatina.

(*b*) We attempt to destroy or counteract the effects of the poison by giving chemical or physiological antidotes. Mercury apparently antidotes the effects of the syphilitic virus. Cinchona is our best remedy for malarial poisoning. We use oxidizing agents to destroy septic poison in a wound, and these same agents seem to alter the character of some inflammations, especially those of mucous membranes.

(*c*) We endeavor to eliminate the poison by promoting the activity of the excretory glands. The beneficial effects of a "sweat" in fever have long been recognized; the Hot Springs treatment is beneficial chiefly by its sudorific action. Diuretics will remove other poisons, while pure air promotes excretion by the lungs.

(*d*) Lastly, we endeavor to support our patient until the abnormal chemical processes cease, and the poison is eliminated from the system.

We have now given some of the analogies between zymotic poisons and the action of chemical substances. When organic chemistry is further developed, and scientists study pathological chemistry as well as pathological anatomy, we will expect our chemical hypothesis to be established as a fact. The labors of the bacteriologists are not, however, vain, for they will point out the relations between micro-organisms and abnormal chemical processes in the body, and perhaps by a process of *reductio ad absurdem* support the chemical theory of disease. They have already given the world many valuable discoveries. Just as the alchemists of old, while seeking the philosopher's stone and the elixir vitæ, brought forth what was even more valuable to mankind, modern chemistry, so the microscopists have paved the way for the greatest discovery of modern medicine, surgical antisepsis.

Koch's Experiments for the Eradication of the Cholera Bacillus.

By Geo. W. Lewis, Jr., A. B.

In the March number of the *Medical and Surgical Journal* I endeavored to present the characteristic features of a ten days' course, under Dr. Robert Koch, on the cultivation and detection of the comma bacillus of Asiatic cholera. Several methods for artificially producing the organism were described, and some of its more salient peculiarities, in contra-distinction to others of its class, were pointed out. No mention, however, was made of the effect which certain well-known re-agents have upon its growth and activity; and I desire, therefore, in this paper to give the results of the latest experiments which have been made with a view of finding some means for its effectual eradication. I shall also present a review of the sanitary precautions, which, under the sanction of Dr. Koch, the German government is prepared to enforce at any moment, in the event of a cholera visitation. They seem to me to form as complete a code of rules under which to act as it is possible to formulate from our present limited understanding of the organism and its life history.

Within the past year or two scarcely a week has passed but what some original worker has demonstrated before a medical society the existence of what he supposed to be a hitherto unknown organism. As a result it now requires a good-sized book to name and classify the new discoveries. For the most part these discoveries have been made in Germany, where, at present, I am sorry to say, by far the most original work in all departments of medicine is being performed. Not a few of the newly found bacteria are claimed to be pathogenic in their action upon the human system, and it is, of course, to these that the most attention is directed.

When we consider how difficult it is to distinguish between organisms which, for the mere delineation of their form, require

a magnifying power of from 1,000 to 2,000 diameters, it will not seem so strange, when I say that cultivation experiments and the application of various re-agents have proved, beyond a doubt, that a large number of the so-called pathogenic bacteria are identical with others already classified. This has placed a host of would-be experimenters on their guard, and now-a-days, a new bacterium, whether pathogenic or otherwise, is no sooner fairly launched, than this army proceed to attack it from all sides. As a general rule it requires but a short time to settle its right to originality, for in such hands as these and with such tests, any striking similarity which may exist between it and another is sure to be revealed. The whole field of bacteriology, so far, at least, as it bears upon disease, is therefore placed upon a foundation which entitles it to be regarded as a most important branch in a medical education, and to my mind it is only a question of time when the intimate relation which has already been shown to exist between pathology and bacteriology, will practically merge the one into the other.

In the case of most pathogenic bacteria, some re-agent has been discovered, which, in a weaker or stronger solution, exerts a marked influence, not only on the development and activity of the existing organisms, but also on the tissues in their immediate vicinity, so that a further growth of bacteria is greatly retarded. So far as is known there are no two species of micro-organisms which are affected by the same re agent in exactly the same manner. There has always been found to be some distinguishing effect produced in the one which is entirely or almost entirely absent in the other. Indeed, the application of re-agents has been carried to such an extent, in the endeavor to place the germ theory of disease upon a sound basis, that it is now recognized as about the only method by which the existence of a new organism can be definitely established.

The comma bacillus, from the time it was first demonstrated by Dr. Koch down to the present, has, naturally enough, been a favorite subject for discussion, not only among those capable

of treating it in an intelligent manner, but also, and more particularly, and again, I suppose, naturally enough, among those utterly ignorant of even the barest rudimentary knowledge of the science which it represents. As is generally the case, the latter element, always the larger of the two, has, for the time being, quite as much influence upon the majority as the former; their assertions are, in fact, even stronger and more apt to convince than those which result from careful experiment. It is, however, to this latter class, to the one which has established its every statement through a series of reliable tests, that we are glad to turn for positive information. Let us see, therefore, what has been and is still being done in the laboratory by Dr. Koch and his colleagues in their efforts to meet if possible the next visitation with a remedy.

Iodine, whose value as an intense poison for all bacteria has long been established, was naturally the first re-agent resorted to. When employed in quantities sufficient to destroy, or, at least, assist the development of other bacteria, its action upon the comma bacillus was not perceptible; and for this reason the poisonous property which the iodine possesses is only shown when it is applied to strongly diluted masses of bacteria, as, for example, very thin anthrax-blood. Even then it is necessary that the blood containing the bacilli should be almost pure water, in order to prevent the iodine from combining with the alkalies. We are never obliged to arrest the development of infectious matters in pure water, but in the alkaline contents of the intestines, or in the blood or in the juices of the tissues; and here the iodine does not remain free, but combines at once with the alkalies. To test the influence, therefore, of this re-agent upon the comma bacillus, a watery solution of iodine was added to meat-broth which contained the minimum amount of nutriment essential to keep the organisms alive. Iodine dissolves in water in the proportion of 1 to 4,000. One cubic centimeter of the iodine-water was mixed with ten cubic centimeters of meat-broth, but the growth of the bacilli was not hindered in the

least. The amount of iodine, therefore, necessary to arrest their development lies considerably above that used in this experiment; and it must be remembered that arrest of development does not imply disinfection. In fact, all the experiments which have thus far been made upon this point have aimed merely at ascertaining that amount of a substance which is requisite to hinder the growth of the bacteria; but with this the bacteria are by no means killed as should be done in disinfection. To increase this amount of iodine, however, seemed useless, for in practice larger quantities than this cannot be given.

Alcohol arrests development only when one part is added to ten parts of the nutritive fluid, *i. e.*, in the proportion of ten per cent. This concentration, however, cannot be practically utilized.

Common table salt was used in the proportion of two per cent. without influencing the growth of the bacilli in the least.

In experimenting upon artificial cultivations of comma bacilli, two facts have been ascertained: 1st, that the bacilli requires a considerable amount of nutritive substance in which to barely exist; and, 2d, this nutritive substance must not be acid. With regard to the first, the amount is rather above that essential to a luxuriant growth of most other bacteria; as to the second, experiments indicate that if either the gelatine or the meat-broth, when used as nourishing media, has the slightest acid reaction, the growth is greatly impeded, while, if the acid reaction is at all marked, the development ceases entirely. It is at the same time noteworthy that it is not all acids that seem to be unfavorable to the comma bacillus; for the cut surface of a boiled potato is known to have an acid reaction (malic acid), and yet a most luxuriant growth can be obtained from such a cultivation. So far, however, as is known, this is the only acid which is not antagonistic to its development.

In time of cholera, sulphate of iron has been considered valuable for purposes of disinfection. This substance was also tested to find what concentration was necessary to stop the development of comma bacilli. A two per cent. solution seemed

to act as a preventive to growth, but did not kill the organisms outright. The property which this substance has of arresting the development of the bacilli may be explained as follows:

The nutritive solution contains a certain amount of albuminates and peptone, which serve as food for the bacteria. By adding a two per cent. solution of sulphate of iron, an abundant precipitate is formed in the nutritive medium, and the albuminates and peptone are consequently driven out. It has been thought also that the acid reaction, which makes its appearence, has a checking influence on the growth, and, indeed, this would seem to be in perfect accordance with the known effect which acids in general have upon the comma bacillus. With regard to sulphate of iron as a disinfectant, however, there appears to be little doubt that it is useless. In fact, it is reasonable to suppose that, by its use, exactly the opposite result from that intended might be obtained; for example, if a cesspool, in which comma bacilli were present, had to be disinfected, the process of putrefaction which goes on of itself is sufficient to kill the comma bacilli. Now, if sulphate of iron is added until an acid reaction is obtained, the only object gained would be the cessation of the growth of the bacteria and of the comma bacilli. The bacteria, however, are by no means killed, and the comma bacilli by this method escape from the influence of the putrefaction bacteria, which are injurious to them and are preserved instead of being destroyed. It is evident, therefore, that great care must be taken in the selection of substances for disinfection, not to employ one which will merely arrest putrefaction, but one which will effectually kill all bacteria. By using the former it is probable that the end which we are seeking to attain will be defeated, namely, the infectious matter will be preserved.

Sulphate of copper, in the proportion of 1 to 2,500, has a very powerful effect upon comma bacilli; but if we were to calculate how much sulphate of copper must be given in order to check the growth of the bacilli in the intestinal canal, we

would arrive at quantities which could not be given to a human being. This substance, like a sulphate of iron, even when administered in the maximum dose, is no longer in a free state by the time it reaches the intestines, and has consequently lost its power of arresting development. To be of any real service, therefore, a substance must not only reach the intestinal canal very quickly, but it must remain in a free state.

Quinine stops the growth of comma bacilli when given in the proportion of 1 to 5,000. Here we have a substance which exerts a powerful influence over the organisms, and at the same time one that can be given with safety, but it is too slow in taking effect. Another substance even more powerful than quinine is corrosive sublimate, which effectually arrests development when administered in the proportion of 1 to 100,000.

In following out these experiments, a striking peculiarity of the comma bacillus was made known, namely, that it dies very soon after being dried. This would seem to indicate that it belongs to the group of screw-shaped bacteria, which are called spirilla, rather than to the family of bacilli; for so far as is known no member of the bacillus family undergoes death by being dried; they can, in fact, be preserved for years in the dry state, and when nourishment is again furnished, their activity at once shows itself. Especially is this true of pathogenic bacteria, such as anthrax bacilli, which, we know, form spores and eventually pass into a permanent state. Other infectious substances, for example, those of small-pox and of vaccine, do not seem to be affected in the least from want of moisture, and after being deprived of it for years, are still found to retain their power of infection. Comma bacilli, however, rarely ever show any indications of life after being dried for three hours. This is a most important question in the etiology of cholera, and investigation upon this property of the bacillus appears to have been both thorough and convincing. In France, cholera dejecta and the contents of the intestines of cholera corpses were allowed to remain in a damp condition on linen, in order that the bacilli

might develop under the most favorable circumstances. After short intervals, pieces of the linen were dried, to ascertain whether during these different periods any condition of permanence had been established.

In time of cholera it cannot be doubted that infection through the linen affords the only undisputed proof of the presence of an effectual infectious substance, and if this substance has a permanent state at all, it must certainly be found on cholera linen. But all experiments have thus far failed to reveal the slightest trace of anything that would lead to the belief that comma bacilli have more than a very brief existence. If now even this brief existence, which, by the way bears a most striking resemblance to the cholera-process, can be cut short by causing them to pass into a dry state, I can imagine that, in seeking a remedy, considerable advantage can be derived from this point; it will, at least, prove of great service in warding off an epidemic.

The following is a review of the sanitary precautions recommended by Dr. Koch to the Imperial German Board of Health in case the cholera visits that country during the coming summer. They will, as far as possible, be enforced by both military and police officers throughout the empire:

Cholera patients are to be removed at once from the house in which they were attacked, to large, commodious and well-ventilated quarters on the outskirts of the town or city. The other occupants are to leave the building until the process of disinfection has been thoroughly carried out by those who have this duty in charge. I will say here that representatives from every city and town in Germany have already passed through a uniform course of instruction at Berlin under Dr. Koch and his assistants.

The infectious matter, which for the most part is to be found in the dejecta, must be destroyed immediately by the use of *sublimate*. This, however, is not as safe in the hands of people unacquainted with its use as carbolic acid. On the other hand, the latter is not so quick in taking effect as the former. Therefore,

when an experienced person is near, the sublimate should by all means be employed; otherwise, carbolic acid.

Carbolic acid is to be made use of in such a quantity that the dejecta and disinfectant solution, when combined, produces a mixture yielding five per cent. carbolic acid; the disinfectant solution, therefore, when prepared, must necessarily contain considerably more than five per cent. carbolic acid. It is advisable that all dejecta be placed in covered stone jars and be allowed to stand for 24 hours under the influence of the disinfectant solution.

Sublimate should be employed in a two per cent. solution (mixture one per cent.), and should be allowed to remain in contact with the dejecta for from three-quarters to one hour. It is questionable, however, on account of the formation of albuminous compounds, whether sublimate is, under all circumstances, to be relied upon as a disinfectant for cholera dejecta.

At the end of the above mentioned periods the dejecta should be buried.

It must be remembered that washing with soap only arrests development; it does not kill the organisms. All linen and bed garments are to be repeatedly saturated with sublimate and then thoroughly dried.

The attendants should be made mindful of the danger both to themselves and to those with whom they come in contact; they should be instructed in all the precautionary measures to be made use of, and above all should allow nothing to be eaten or drunk in the sick room. Their hands, after every contact, should be washed first with sublimate and then with soap. The hands, moreover, should never touch the mouth or beard.

Cholera corpses should be buried within twelve hours after death; their clothes and linen should, as far as possible, be buried with them.

Laundrymen and all others engaged in the cleansing of soiled garments should be cautioned with regard to the danger and the means of avoiding it.

When the burial takes place within a few hours after death, there is no object to be gained in exposing the corpse to the process of disinfection, for the reason that the very part, namely the inner, which it is most desirable to influence, would not be affected by the disinfectant in so short a time.

Great care must be taken not to allow garments which have been worn either by cholera patients or by those attending them, to be misplaced and thereby escape the cleansing process. Those who have the burial arrangements in charge should, after performing the slightest service, thoroughly purify their own clothes with sublimate, and, moreover, should not wear them again until they are perfectly dry.

Soiled water which results from the cleansing of garments worn by cholera patients, must not pass off through the ordinary channels until it has been thoroughly disinfected. For this purpose, large stone jars will be found the safest and most convenient receptacles.

People who attend the funeral of a cholera corpse will not be allowed to enter the building in which he died.

Worthless effects of the deceased, together with everything in the sick room which is not considered of positive value, should be at once burned.

Whatever is to be preserved should be exposed to an atmosphere of steam for not less than one hour. At the expiration of this time, the following test will show whether the articles have been thoroughly disinfected. Placed in the middle of a pan of earth, they are to be heated in an oven for one half hour, and then the whole is to be poured out upon a plate of food-gelatine. (The description of this substance will be found in the March number of this journal.) If the disinfection has proved successful, no growth will make its appearance in the nutritive medium. If, however, at the end of 24 hours small white specks are found upon the food-gelatine, there is reason to believe that the infectious matter has not all been destroyed. A microscopic examination will then decide the

question as to whether or not the white specks constitute colonies of comma bacilli.

An equally good method consists in boiling the articles in a large kettle for a similar period. A piece of wooden lattice-work can be placed upon the surface of the water, and from this clothes and other effects can be suspended. The outpouring stream should reach 100° centigrade.

The effects can likewise be boiled in solutions of sublimate or carbolic acid, and afterwards be washed with soap in the usual manner.

The conveying of cholera linen from one place to another is extremely dangerous to those engaged in this work. It should, therefore, be guarded with the utmost care, and before removal should be placed in air-tight cans, so that contact with it will not be possible after it leaves the sick room.

Among those in poor circumstances are always to be found uncleanly articles, not alone of dress but of furniture and decorations as well, which, in time of cholera, are to be regarded with suspicion; such things should be saturated with the sublimate solution and then thoroughly dried. The drying, however, should, if possible, take place in an adjoining room, under the influence of free currents of air from both doors and windows, and with a very hot fire.

Floors, especially in the crevices where dirt has collected and around the corners; also bedsteads which have been occupied by cholera patients, should be kept moist with sublimate. Open fires should be kept burning day and night in the sick room. New but perfectly dry houses are strongly recommended.

A room in which a death from cholera has occurred should not be occupied again for at least six days.

As has already been stated, a microscopic examination of suspicious dejecta, or, better still, of a piece of linen upon which the dejecta rests, will enable the observer to satisfactorily diagnose the first case. The presence or absence of comma bacilli is always noticeable, and a person acquainted with the microscopic

appearance of healthy dejecta cannot fail to detect the ravages of these foreign invaders. When present, they are to be found in quantities altogether out of proportion to the other intestinal bacteria, and their characteristic form and rapid movements at once stamp them as pathogenic.

With regard to the way in which the first case was caused, the physical condition previous to the attack undoubtedly has more to do with it than anything else. Statistics show that by far the largest proportion of cases occurs on Monday and Tuesdays, that is, on the days which have been preceded by excesses in eating and drinking. It is probably true that comma bacilli under certain conditions cannot pass the stomach, at least of animals. This agrees perfectly with all our experience of cholera; for predisposition has always seemed to play an important part in cholera infection. It can be assumed that of a number of people exposed to cholera, only a fraction of them will fall ill; but, however large or small this number may be, it will generally be found that they have been suffering from some digestive disturbance. Catarrh of the stomach or intestines, or the overloading of the stomach with indigestible food, are common complaints, but are most dangerous in time of cholera. More or less undigested masses of food may pass into the intestinal canal, and bring with them the comma bacilli, which, on account of the poor work of digestion, were not killed in their passage through the stomach.

For these reasons the following precautionary measures should be taken: Water for either washing or drinking purposes should not be used unless it has been boiled for at least half an hour. If it is allowed to stand until it becomes cold, it should not be used again without being reboiled. Green vegetables, salads and all fruits shall not be eaten. Milk should be avoided as far as possible unless boiled. Great care must be taken to rinse vegetables with nothing but boiling water. All food should be throughly cooked. Milk should not be accessible to flies.

Sinks should be kept wet with sublimate and should not be

used while the disease prevails. Dirty brooms and rags should either be destroyed or be kept saturated with sublimate. Disinfection of the contents of water closets is not only impossible, but, according to Dr. Koch, is of secondary importance: The seats, however, should be kept moist with sublimate.

Rivers and springs should be carefully guarded during a cholera visitation, so as not to allow the people living in their vicinity to use the water for washing or household purposes; for flowing water, especially when it drains a densily populated country, is extremely dangerous.

Leipzig, May 14, 1885.

Society Reports.

Buffalo Medical and Surgical Association.

Meeting of April 7, 1885.

The President, Dr. F. W. Bartlett, in the Chair; Dr. Frank H. Potter, Secretary.

Hoarseness and Loss of Voice—Dr. F. W. Hinkel read a paper with this title. (Published in full in the May number of this journal, page 435.)

In the discussion, Dr. W. W. Potter reported a case of aphonia from paralysis of the intrinsic muscles of the larynx, which he had relieved by external manipulation of the larynx, according to the method of Henry K. Oliver, of Boston, as described in the *American Journal of Medical Sciences* for April, 1870.

Dr. Van Peyma asked how old a child ought to be in order to make a laryngoscopic examination practicable.

Dr. Grosvenor asked whether tubercular phthisis could be a purely local disease.

Dr. W. S. Tremaine reported a case of paralysis of the adductor and abductor muscles on the right side, from a penknife wound of the throat. The puncture had wounded the

eighth pair of nerves, and also some filaments of the spinal accessory. Electricity was tried without avail; the man finally recovered, however, after some months spent in out-door life.

Dr. Cronyn complimented the author of the paper for the able manner in which he had presented the subject. He believed every physician should be familiar with the use of the laryngoscope to a degree sufficient to enable him to make a correct diagnosis. Reported a case of loss of voice occurring in intermittent fever, the voice returning as the fever disappeared. This occurred several times. Each time a remedy for the fever restored the voice as well.

Dr. Hayd also called attention to the necessity of being familiar with the uses of the laryngoscope. If diseases of the throat can be cured at all, it can be done with much more certainty in their early stages. A chronic laryngitis, for instance, is very difficult to cure. Tubercular laryngitis is often evident in the throat before the lungs show any involvement whatever, according to Schoeder, the first symptom being a peculiar pallor of the roof of mouth and head.

Dr. Frederick believed that every medical school should have a chair of laryngology, so that students could be taught the use of the laryngoscope before graduation.

Dr. Hopkins said that as the specialists exist by the consent of the general practitioners, it was no more than an act of justice for them occasionally to instruct the rest of the profession upon the advances made in the branch of medicine to which they have devoted themselves. He advised becoming familiar with the use of the laryngoscope by each one practicing upon himself by the aid of reflected light.

Dr. Hinkel said he had made a laryngoscopic examination in a child two years and a half old. He hardly considered it practicable at that age, however, for the child could seldom be controlled sufficiently. He had seen cases of tubercular disease of the larynx where no other signs of constitutional infection could be found. It was possible, however, that there was

present some constitutional disturbance, but of a latent character, which had as yet showed no other sign of its presence.

The President's Retiring Address—Dr. Bartlett then read his retiring address, in which he reviewed the work of the year just passed, and again called the attention of the association to the advisability of dividing it into sections, as he had suggested a year ago. He thought that by this means more accurate work could be done than was accomplished under the present plan.

On motion of Dr. Cronyn, a vote of thanks was given to Dr. Bartlett for the able and courteous manner in which he had presided over the meetings of the association during the past year.

Dr. Barnes presented the association with the record of its proceedings from the year of its organization, in 1845, to the year 1857, which he had found while looking over the books of his father.

The Treasurer then made his report, showing the financial condition of the society.

A number of members had not yet paid their dues, and it was desirable they should do so that the debts of the society could be met.

The President appointed Drs. Davidson, Thornton and Daniels a committee to investigate and report upon the Treasurer's accounts.

Officers for the ensuing year were then elected, as follows: President, Dr. Charles G. Stockton; Vice-President, Dr. W. W. Potter; Treasurer, Dr. F. E. L. Brecht; Secretary, Dr. Frank H. Potter; Librarian, Dr. J. B. Samo.

The society then adjourned.

Transactions of the Buffalo Obstetrical Society.

Stated Meeting, April 28, 1885.

The Vice-President, Dr. R. L. Banta, in the Chair; Dr. W. D. Greene, Secretary *pro tem.*

Dr. H. D. Ingraham read a paper on "Retro-Displacements of the Uterus; their Etiology and Pathology." He embraced,

under this title, the conditions known as retroversion and retroflexion, neither of which conditions often existed alone, but each was more or less complicated by the other.

The causes of backward displacements of the uterus might be due to inflammatory conditions existing in the pelvic cavity; to non-inflammatory pelvic faults; to conditions of the adjoining parts; or the causes might reside in the general system. Errors in development were also among the causes of versions and flexions of the womb; and this condition was especially liable to happen at puberty, when anything which retarded, prevented, or arrested nutrition, such as poor food, bad air, malassimilation, insufficient exercise, and the moral and social errors which tend to sexual precocity, were such action factors in the production of innutrition and faulty developmental growth. But the most frequent cause of retro-displacements was to be found in defective involution of the uterus, following childbirth and abortion. While the recently delivered uterus was still within the abdominal cavity, the vertebral column prevented its falling backwards; but when it sank below the promontory of the sacrum, and became subjected, while its ligaments were relaxed, to the pressure of the superincumbent viscera, retrodisplacements were quite likely to be produced.

In injuries of the cervix, during parturition, the circulation became impeded and irritative hyperæmia resulted, often causing retro-displacements. The relaxed condition of the uterus, during the puerperal convalescence, gave rise to a softened condition of the parenchyma, and hence many mechanical causes operated in the production of versions and flexions, such as prolonged dorsal decubitus with a tightly applied binder, and the like.

The early application of the child to the breast was an important factor in securing involution, hence these mal-positions were not as common in women who nursed their children. Menstruation coming on prematurely and suspending lactation, arrested involution and thereby served to produce versions and flexions. All inflammatory conditions of the uterus that followed labor or abortion, aside from the mere arrest or retardation

of involution, were important factors in the production of retro-displacements, softening as the result of acute inflammation being the most common of all.

Congestive dysmenorrhœa, menorrhagia, and metorrhagia, all tended to cause softening of the tissues, and hence were factors in the production of versions and flexions; so, too, was atrophy of the uterine muscular substance. Morbid growths, which became developed in the uterine walls, thus causing flexions and versions, were numerous, the most common being the so-called fibroid tumor. Those retro-displacements of the uterus due to inflammatory conditions existing in the pelvic cavity, might be caused by adhesions of the uterus to the adjacent parts. Septic poisoning, gonorrhœal infections, taking cold at the menstrual period, instrumental deliveries, and other like causes, might produce inflammation of the pelvic peritoneum, or the cellular tissue, and result in retro-displacements. An abscess, the too free use of caustics, or a fistulous opening, might cause cicatricial contractions of the tissue behind the cervix, and thus a backward displacement.

Of the many non-inflammatory conditions of the pelvis which assist in the production of retro-displacements, the most common was, perhaps, the lessened curve of the lumbar vertebræ, which took away just so much support from the abdominal viscera, and thus allowed them to gravitate within the pelvic cavity. Pelvic tumors, extra-uterine pregnancy, and peri-uterine hematocele, might act as displacing forces, and, in some cases, produce retro-displacements. Over-distension of the bladder, habitual constipation, and straining at stool, tended to provoke these displacements. Perineal ruptures, causing impairment of the integrity of the supporting column, are frequent sources of uterine displacements. He laid great stress upon the fact that constipation and ruptures of the perineum were more frequent causes of uterine mal-positions than was generally supposed.

Many general and special causes operated to produce these mal-positions of the uterus, among which he cited occupation;

the constant use of the sewing machine, and prolonged standing on the feet, as girls in stores and shops are obliged to do; masturbation, to a certain extent; frequent child-bearing, prolonged lactation, various anti-conception measures, and ill-assorted marriages; and, in fact, anything which lowered the general tone of the system, came with this category.

The pathology of uterine retro-displacements had a very important bearing upon their treatment. In that form in which the mal-position developed as the organ developed, there was usually no particular pathological change in its texture. In that class in which the uterus was once in a normal position and properly developed, we might find changes in the muscular tissue of the uterus, in the endometrium, in the cavity itself, in the blood-vessels, and, in fact, in any portion of the uterine structures. These changes might also produce alterations in the subjacent parts. In most cases of acquired flexion, the uterine tissue became softened and relaxed, as well as hypertrophied. The softened and relaxed condition was usually more marked at the internal os than elsewhere, and it was there that the displacing forces exerted their greatest strain. In flexions following abortion or parturition, the uterus was found enlarged, its walls softened, and the mucous membrane denuded, while involution of the organ was in abeyance. In such cases the version or flexion was usually due to loss of tone in the uterine tissue, and not to pressure of the superincumbent organs. Depending upon the length of time the displacement has existed, the walls of the uterus were either stiff, thick and resistant, or elastic, yielding, loose, and the vessels turgid with blood. In chronic flexion there was often a marked induration, without atrophy, in which condition the resistance to replacement was great, as the uterus quickly returned to its dislocated position upon withdrawal of the replacing force.

The external os, in flexions, was usually patulous, and often in a state of granular degeneration. The state of the cavity was generally catarrhal, due either to pressure at the internal os,

which prevented escape of the normal secretions; or to passive hyperæmia, caused by distortion of the uterine connection with neighboring parts, producing hypersecretion; in either case there was an expansion of the cavity. Traces of inflammation of the mucous membrane, both recent and chronic, were frequently found, such as red, rounded or flattened granulations, which obstruct the os internum; and occasionally granular swelling of the mucous membrane could be seen through the cervical canal. These morbid conditions added to the contraction of the canal, sometimes rendering it nearly impervious, and greatly impeding the escape of the menstrual discharges. In all retro-displacements the circulation was abnormal. If there was not active, then there was usually passive congestion or inflammation of the parts. Relatively there was more blood in the uterus than in the healthy state, the arteries carrying the usual quantity to the organ, but the veins being distorted, compressible, and valveless, were unable to return it as freely as required to maintain the equilibrium.

Discussion—Dr. J. W. Keene called attention to the fact that the causes of retroflexion were attributed, by very many text books, to the habitual dorsal decubitus during puerperal convalescence. He thought the profession was all at sea on the question of uterine displacements, as indicated by the great diversity of opinions on the subject. He was inclined to believe that the attachment of the placenta to the anterior wall of the uterus, with the consequent thickening at the site, would have a tendency to prevent retroflexion.

Dr. F. H. Potter said that he had been taught that the puerperal binder was liable to produce, among other things, uterine displacements; consequently, he was not favorable to its use to the extent that it was generally employed.

Dr. P. W. Van Peyma, in referring to the causes of the condition under discussion, selected two cases of backward displacement, produced by jumping, but which were easily restored.

Dr. George E. Fell thought it strange that the uterus was so

often displaced, when other organs of the body, subjected to similar influences, escaped.

The Vice-President said that although the treatment of these displacements was to be discussed at some future time, when they could be seen early they were much more tractable. The difficulty was that they rarely presented themselves to the observation of physicians until some dire necessity occurred, when the mischief done was already so great that it was often difficult to restore the organ to its normal state. He believed the moral effect of treatment was beneficial, in many cases, where the displacement was more imaginary than real.

Dr. W. D. Greene was a believer in the abdominal bandage for the first few hours after delivery, or until the danger of post partum hemorrhage had practically passed. If the woman was told to lie on either side the greater part of the time, he did not see how the bandage could do harm if properly adjusted.

Dr. Ingraham closed the discussion by saying that it was formerly his custom to use the bandage after delivery; that he discarded it altogether at one time; but that he had again commenced its use. He always requested the patient to lie upon her stomach a good part of the time, for the first few days following parturition, and, when this plan was followed, a good getting up was usually the result. He advocated the practice of always making an examination of the gentalia before finally dismissing a parturient patient, with a view to ascertain the precise condition of the parts, in order that intelligent advice may be given, should there be found any rents or other abnormal conditions.

Selections.

High Temperature Preceding Abortion.

In the *Medical Record* of May 9th, Dr. M. Howard Russell, of Philadelphia, reports two cases of high temperature preceding abortion, one rising to 105.4° the other to 103.5°. In the

experience of most observing general practitioners, the occurrence of high temperature before abortion is not uncommon, when there are even no pains, or hemorrhage, or other precursory signs or symptoms. A severe chill with sudden high rise of temperature in a woman known to be pregnant, especially when no adequate cause can be found for the condition, besides, should be looked upon as a possible and almost probable harbinger of an abortion to follow. Being thus forewarned he may by proper treatment avert the abortion. Dr. Russell concludes thus: "These two cases illustrate well the purely nervous origin of some febrile conditions.

Cocaine in Vomiting of Pregnancy.

Weiss, in the Centralblatt for Therapeutics, suggests the following preparation of Cocaine for vomiting in pregnancy:

Cocaine Hydrochlor, . .	Grains V.
Alcohol, ...	G'r to dissolve.
Water, ...	Ounces 10.

A teaspoonful every half hour.

Spontaneous Rupture of the Membranes at Full Term.

The results of his observations in fifty cases of spontaneous rupture of the membranes are given in "The Association of the Medical Sciences for Apr l," by Dr. G. W. H. Kemper.

The cases occurred in seven hundred cases of pregnancy. His conclusions are: That spontaneous rupture of the membranes at full term, before the advent of labor pains, is quite common about once in every fourteen pregnancies. Labor usually comes on at once or soon after, although there may be delay for several days or even weeks. The causes are not known, but the inherent tendency of some women to this accident is shown by its repeated occurrence in their pregnancies. The effects upon the duration or severity of labor, or upon the mortality of either mother or child, are nil. The duration of labor is probably shorter in cases where some time elapses before

pains begin. The plan of treatment is to place the patient in the recumbent posture and wait. All mechanical or other means used to excite labor pains are hurtful and meddlesome.

Dr. Kemper does not believe that the old cry of "dry labor" is justified in these cases, or that any ills in childbed are to be expected in consequence of this casualty.

The Treatment of Whooping Cough.

In his summary of treatment, in a clinical lecture delivered at the Philadelphia Hospital ("Medical News"), Dr. John M. Keating emphasizes the value of the steam spray and the atomization of medicated solutions, among which he ascribes value to Dobell's solution, eucalyptol, and thymol. With the bichloride he advises caution. Corrosive sublimate, which is now used for almost everything, he says, has also been applied here in the form of the spray. He remarks that it is a dangerous drug to put into the hands of an inexperienced person, and as we have so many other useful remedies for this affection, he thinks it wise to avoid the use of corrosive sublimate. He has used listerine extensively with good results in the treatment of whooping cough. He employs it in the strength of one drachm to two ounces of water, with an ordinary hand-atomizer, directs the nurse to apply it twelve or more times a day, and finds that the little children, even babies, do not object to it. He adds to it tincture of belladonna, potassium carbonate, or ammonium bromide, as the case may demand. Chloride of ammonium he also finds of great service in the form of spray. —*New York Medical Journal.*

Editorial.

The Illinois State Board of Health and Reform in Medical Education.

The State of Illinois is to be congratulated upon the possession of a Model Board of Health; certainly this must be admitted if we adopt, as the standard of judgment, "by their fruits ye shall

know them," in estimating the work accomplished by the several State Health Boards. The opportunities of the Illinois Board, it is true, have been somewhat greater than the others, for the reason that its powers were of a two-fold nature. In addition to the ordinary control of public sanitation, as exercised by boards of health in general, it also performs the functions of State Medical Examining Board, thus having control, to a certain extent, of medical educational interests within the State.

The capable and satisfactory administration of the laws relating to public health, and the practice of medicine in Illinois, have been the subject of much favorable comment, both in medical and lay circles, for some time past; and we desire to add our testimony in appreciation of the good work which is being accomplished, in both channels named, by the excellent Board of Health in that State. But it is our present purpose to speak more particularly of the educational work which is being wrought under its auspices. It is in this direction that its acts and offices are felt outside the State of Illinois; for there is not a medical school in the land which does not feel the influence, in some degree, of the attempt which the board is making to improve the educational standard in medicine. To show how far-reaching this effort on the part of a single State is, the following circular, which has been addressed to the Secretary of all medical colleges in the United States, is here introduced:

ILLINOIS STATE BOARD OF HEALTH,

OFFICE OF THE SECRETARY, SPRINGFIELD, May 4, 1885.

DOCTOR:

At the regular quarterly meeting of the ILLINOIS STATE BOARD OF HEALTH, held in the city of Chicago, April 16-17, 1885, the following preamble and resolutions were unanimously adopted:

CONCERNING MEDICAL EDUCATION.

WHEREAS, Many medical colleges do publicly announce that an entrance examination of candidates for admission to their lecture courses will be exacted, and do honestly and impartially enforce such examination; while, on the other hand, a number

of schools either avoid making such announcement, or evade the practical enforcement of any requirement of general education preliminary to the study of medicine; and

WHEREAS, These conflicting practices result in lowering the standard of medical education by attracting to a certain class of schools, students who are poorly prepared for the study of medicine: Therefore, be it

Resolved, That, in order to secure the recognition of its diplomas as in good standing for the purposes of the Medical-Practice Act in this State, it is necessary that each college shall distinctly state in its Annual Announcement that the conditions of admission to its classes are: 1. Credible certificates of good moral character. 2. Diploma of graduation from a good literary and scientific college or high school, or a first-grade teacher's certificate. Or, lacking this, a thorough examination in the branches of a good English education, including mathematics, English composition, and elementary physics or natural philosophy.

Resolved, That the Secretary of the Board be, and hereby is, instructed to furnish a copy of the foregoing preamble and resolutions to the Dean or Secretary of every medical college, and to the editors of medical journals, in the United States.

* * * * *

Resolved, That since the publication of the names and addresses of matriculates is desirable for purposes of information, the Secretary be authorized to request of all colleges desirous of being accounted in good standing in this State, that they publish in their successive annual announcements complete lists of the matriculates, as well as of the graduates, of each immediately preceding session.

Very respectfully,

JOHN H. RAUCH, M. D., *Secretary*.

A careful perusal of this circular will give the medical student, who intends to locate after graduation in Illinois, but who prefers to pursue his studies in some college outside of that State, just

the information he requires in order to become legally qualified under its Medical-Practice Act. He will at once ob erve that it will be futile for him to obtain the degree of any college which does not conform to the above requirements. The advantages to the student of a uniform standard for entrance into, and graduation from, our medical colleges is too apparent to admit of extended argument in favor thereof; and, though it may be too much to expect the latter, it is quite within reason to hope for the former. Let the colleges agree, once for all, to demand of each matriculate a certain minimum standard entrance examination, and a great step will be taken towards the much needed reform in our system of medical education. The older colleges can afford to make this concession to the good of the cause, which all true lovers of our profession ought to have at heart; while the younger ones will, as a matter of necessity, fall into line.

It is a matter of pride that one of the medical colleges in our own city,—The Medical Department of Niagara University,—has taken such an advanced position in this matter. Organized in the interests of a higher standard for medical education, it is steadily advancing in the direction named, with a constantly growing confidence in the purity of its purposes, indicated by increased patronage and a manifest growth in public favor. The stand it has so boldly taken and successfully maintained places it in the front rank of American Medical Colleges, and entitles it to a continuance of public confidence and favor.

The attitude of the JOURNAL on the question of a State Medical Examining Board is well known. From the first, it has been an uncompromising champion of the principle of one licensing power for the whole State. It is to be deeply regretted that thus far all efforts in this direction have met defeat. We seem to have been handicapped by the medical sects—homeopathic and eclectic—which the laws of the State recognize. They demand separate examining boards, which is, of course, so impracticable a scheme that the whole plan falls temporarily to the

ground. This cannot prevent the ultimate passage of a law which shall divorce the teaching and licensing power; but it provokes a delay, which is as unfortunate as it is puerile. The tend of public sentiment is, however, so decidedly in favor of such a law, that it will not brook idle or trifling dalliance with a question involving the best interests of the commonwealth; and woe be to the man, the sect, ring, or clique, that shall thwart a mature and well-grounded demand of the people on a question effecting their health, longevity and good name. If the friends of education will only stand together in this matter for a little while longer, their efforts will surely meet with that success which they so richly deserve. The great State of New York, with its vast wealth, intelligence, and almost unbounded resources, cannot afford to fall to the rear of the column in the grand march of the commonwealth towards a higher civilization—a march in which Illinois, in so far as relates to a higher medical education, now so proudly leads the van.

A Promise Generously Fulfilled.

The publication of a translation of Lumssen's great work on Special Pathology and Therapeutics involved an enormous financial responsibility, and could succeed only by the liberal support of the profession. Messrs. Wm. Wood & Co. have always acted upon the belief that the American physician wanted, and was willing to pay for, the best productions of either native or foreign talent. Determining, therefore, upon the publication of this great work, the price was fixed upon the basis of fifteen volumes of 500 to 700 pages each. It was soon found, however, that new matter and material would swell the original estimate greatly, and the American publishers found that they had but two alternatives, either to increase the number of volumes or the number of pages in each. The first would throw the additional expense upon the subscriber, the second upon themselves. With remarkable generosity, they chose the latter alternative, thereby giving their subscribers about fifty

per cent. more matter than the original announcement promised. Notwithstanding this increase, the chapters on diseases of the skin were omitted from the work, for the very good reason that the articles were not written until quite recently. That no one might have any reason to complain of their failing to receive "Diseases of the Skin," Messrs. Wood & Co. announced at that time that when the articles appeared in Germany they would promptly have them translated and publish them, and present them to each subscriber to Lumssen who had completed his set. This promise they are now ready to fulfill, and we confess that we are agreeably surprised at the unprecedented liberality in its fulfillment. The new volume, in shape and general appearance, is somewhat different from ordinary medical publications, to distinguish it as a book prepared expressly for presentation. It contains 658 pages, and comprises contributions from some of the most distinguished dermatologists of the German school. The illustrations are excellent, many of them colored, and the publishers have plainly not spared expense in the issue of the volume. In a communication to this journal, they request us to notify all the subscribers to "Lumssen" to send to them their present address, and also their address at the time of their subscription.

Dr. Floyd S. Crego, who for several years has filled the position of Second Assistant Physician at the Buffalo State Insane Asylum, has resigned that position with a view to a permanent settlement in Buffalo for the practice of medicine. The Asylum loses, in the retirement of this accomplished and talented official, the services of an experienced medical attendant, who has combined with superior natural gifts, the advantages of broad intellectual and professional culture. Dr. Crego's success, in the public position from which he retires with the professional prestige earned through assiduous labor, foreshadows the professional position to which his superior abilities and attainments will surely gain for him at an early date.

Dr. Crego's connection with the Medical Department of Niagara University as lecturer on nervous diseases will, we hope, turn his attention especially to this important department of medicine. Here, with large experience and familiarity with a class of diseases prevalent in this community, we are confident he will find ample opportunity to employ the practical knowledge gained in the excellent institution which regretfully loses his services.

Reviews.

The Story of My Life. By J. Marion Sims, M. D., LL. D. Edited by his son, H. Marion Sims, M.D. New York: D. Appleton and Company, 1884.

The history of self-made men, who rise from obscurity to fame by dint of their own personal strength of character and will, is always attractive reading to an American; yet there is, ordinarily speaking, no novelty in such a record. The book-shelves of our libraries are full of "Lives" of men who have risen to the high pinnacles of renown from the humblest walks of life. These are not uncommon events in the history of the mart, the forum, or even the pulpit, but in medicine such an occurrence happens much more rarely. The number who attain prominence in our profession is so large that only a few can be truly great, and they generally have become so by reason of some especial advantage, either of birth, locality or favor.

In the story of Dr. Sims' life, we read the triumphs of genius over the most adverse environments; and its charm is not lessened by the simplicity of the narrative. Born in South Carolina in 1813, his paternal ancestors were of English, and his maternal of Scotch-Irish origin; and though without the advantages of early education, his parents were of sturdy character and noted for those strong qualities of head and heart which distinguished the men and women of the early part of the

present century. His youthful and college days were unmarked by special incident, though full of interesting experiences. But from the time of his graduation in medicine, in 1835, to his final establishment of the Women's Hospital in New York, in 1857, his life was filled with episodes and incidents, many of which possess thrilling interest. His graphic description of the investigation of, operation for, and final cure of vesico-vaginal fistula, continued during a period of four years, when, after repeated failures, he was finally successful in a case upon which he operated thirty times, is already embalmed in the history of American Medicine. Silver wire in surgery had its birth during the series of investigations of this terrible, and hitherto uncured, accident of parturition; and his ultimate success in the operation was ascribed to his invention of the silver suture.

There is no more pathetic picture in medical literature than the devotion of the seven or eight young colored women, all suffering with vesical fistules, whom he succeeded in inspiring with a confidence which clung to him, amid trials and defeats when all others deserted him and who submitted to repeated operations, so painful that none but a woman could endure. His failing health led to his subsequent removal to New York, where, after a few years spent in struggling with ill-health and poverty on the one hand and bitter opposition on the other, he finally succeeded in establishing the Women's Hospital, the first institution devoted exclusively to the treatment of the surgical diseases of women, which the world had yet seen. In this enterprise he encountered the strongest opposition of the greatest men in the profession; for he belonged to no clique or party. But having enlisted the sympathy and support of a few good, true and philanthropic women, who gave substantial aid and comfort to the scheme, he overwhelmed his opponents so completely that many of them were subsequently among his ablest coadjutors in perfecting plans for the hospital and establishing it upon an enduring basis.

It was in this hospital that American gynecology obtained its first impetus, and it was here stamped with its birth-mark by the originality and brilliancy of its first master. The men who Dr. Sims here taught have since become masters themselves, and the beneficial influences of his and their labors have made a lasting impression in two hemispheres.

The domestic life of Dr. Sims presents a most charming picture of conjugal devotion, virtuous simplicity and filial and parental affection. The sweetheart of his youth was no less the sweetheart of his maturer years, and to her influence, advice and judgment was due in a large measure his great success in life, which he gracefully acknowledges in a most delightful manner.

For several years he was the victim of that almost universally fatal malady of a warm climate, chronic diarrhœa, during which period he came nigh unto death several times; all his food during all these long years was prepared by the loving hands of his faithful, devoted and accomplished wife.

This book cannot fail to exert a good influence upon both the professional and lay readers, and especially do we hope it will find its way into the hands of young physicians. To them its lessons of patience, courage, perseverance, industry, honor and virtue cannot fail to be of value, when, in their early years of professional life, they so often experience the heart sickness of hope deferred. The life of Dr. Sims is an example worthy of any man's emulation. He was a man who wrung victory from the jaws of defeat as often as ever any man did. Poverty, ill-health and opposition were no hindrance to him—he triumphed over them all, singly and combined, even when arrayed in all the panoply of fierce and deadly conflict.

The defects in style of composition, which almost necessarily creep into such a purely personal story, are easily overlooked or forgotten in the absorbing interest of the narrative, and we advise our readers to possess themselves of this life of the foremost medical man of his time.

The International Encyclopædia of Surgery. A Systematic Treatise on the Theory and Practice of Surgery by Authors of Various Nations. Edited by JOHN ASHHURST, Jr, M. D., Professor of Clinical Surgery, University of Pennsylvania Illustrated with Chromo-Lithographs and Wood Cuts. In six volumes. Volume v. New York: Wm. Wood & Co. 1884.

This great work has now so nearly reached completion, that the profession can estimate it at its true value. We think that every one who is familiar with it, will say that both editors and publishers have more than fulfilled their promises. For the special purpose for which it is planned, we think there is no work, in any language, which can surpass it. The present volume opens with an article on Injuries of the Head, by Prof. Nancrede; Malformation and Diseases of the Head are well discussed by Dr. Treves, of the London Hospital.

The Injuries and Diseases of the Eyes and their appendages, and of the Ear and Nose and its accessory diseases, are discussed by American experts. Prof. Past's article on the Injuries and Diseases of the Face, Cheek and Lips, supplemented as it is by Christopher Heath, who writes upon the Mouth, Fauces, Tongue, Palate and Jaws, is both comprehensive and able. The Surgery of the Teeth and adjacent parts is followed by articles respectively upon the Injuries and Diseases of the Neck, Air Passages and Abdomen. Prof. Annandale, of University of Edinburg, provides an able article upon Diseases of the Breast. The volume is fully up to the preceding ones, not only in the merit of the articles, but also in the publishers' work, which is, in every way, excellent.

The Year-Book of Treatment for 1884. A Critical Review for Practitioners of Medicine and Surgery. 8vo., p.p. 308. Philadelphia: Lea Brothers & Co. 1885.

The preface states that "the object of this book is to present to the practitioner not only a complete account of all the more important advances made in the treatment of disease, but to furnish also a review of the same by competent authorities." The value of such a work will be apparent to all at this day, when medical literature is teeming with innumerable so-called

advances. The resumé has been made by a number of well-known masters in special fields of medicine and surgery, and, after carefully looking over the work, we can say that the object stated in the preface has been fairly attained. The practitioner will find here recorded all the more important advances, relating to treatment, that have been published during the year ending September 30, 1884.

Elements of Physiological Physics. An Outline of the Elementary Facts, Principles and Methods of Physics and their application in Physiology. By J. M. ROBERTSON, M. A., M. B , Assistant to the Professor of Physiology in the University of Glasgow. Illustrated with 219 Engravings on Wood. Philadelphia: H. C. Lea's Son and Co. 1884.

This is one of the valuable series of "Manuals for Studies," issued by Lea. The physician will find it both instructive and interesting. The chapters on electricity and magnetism, and their application in physiology and medicine, is a clear explanation of what by most practitioners is little understood. The elementary facts and principles of physics will, we hope, soon be a necessary part of the general knowledge demanded of the matriculates of our medical colleges. Those who have not had the opportunity to study such subjects are often now at a loss, when physics and chemistry are constantly appealed to, in working out physiological problems.

A Practical Treatise upon Diseases of the Ear. Including a Sketch of Aural Anatomy and Physiology. By D. B. St. JOHN ROOSA, M D., LL. D , Professor of Diseases of the Eye and Ear in the New York Post Graduate School, etc. Sixth edition. Revised and enlarged. New York: Wm. Wood & Co. 1885.

Of a book, which, in eleven years, has reached a sixth edition, it is superfluous to say that it is a good one. The author, however, informs us in his preface that many pages have been added, and hardly a page escaped alteration. The larger part of the work is essentially a digest of its distinguished author's experience, and has thus increased in value with every successive edition. At the same time, he does not ignore the experience of other physicians, both of this country and Europe, and the present volume will fully sustain the high position so universally accorded to the work as without a rival in its special field.

THE

BUFFALO

Medical and Surgical Journal.

VOL. XXV. JULY, 1885. No. 12.

Original Communications.

PELVIC ABSCESS IN THE FEMALE.

BY WILLIAM WARREN POTTER, M. D., BUFFALO, N. Y.

In presenting to the association the subject for discussion this evening, which has been announced on the programme, attention is respect lly invited to the following history of a case of acute pelvic abscess, which is related by way of introduction:

Mrs. A., aged 38 years; twice married; living with her second husband; mother of three children by first husband—never pregnant by the second; fell ill on the 17th of March with severe pain in the right illiac region. I saw her first on the 19th, two days after the attack, when her condition was noted as follows: decubitus dorsal, lower extremities flexed, severe pain in lower abdomen, nausea, temperature 100 F, pulse 100, abdominal muscles tense, but no distension. Per vaginam: uterus hanging somewhat low in the pelvic cavity but mobile, os patulous but smooth, bladder tender, rectum empty. Bi-manual palpation attempted, but abandoned on account of pain inflicted; vesical tenesmus extreme. Treatment: Morphia and atropia hypodermatically administered; oleate of morphia to abdomen;

hot vaginal douche. Catheterization at regular intervals. Next day, condition much the same, excepting temperature 101 F, pulse 110. Pain still severe, unless under full influence of anodynes. Right broad ligament very tender.

For the next few days, or until the 26th—one week after my first visit—the patient was kept in a state of semi-narcosis, with a daily increase in the quantities of the drugs; the temperature had reached 102² F, pulse 120; abdomen somewhat distended and very tender; uterus pushed forward under pubic arch—pelvic impaction; and at night she had a severe chill. Fluctuation detected in post-uterine space; consultation sought, and Dr. Thomas Lothrop saw the case with me on the 27th. He confirmed the diagnosis of pelvic abcess, but advised a day's delay in invoking surgical interference. Accordingly, next day, the 28th, nine days after my first visit, the patient was placed under ether by my son, Dr. F. H. Potter, and, with the kindly assistance of Drs. Lothrop and Tremaine, I drew off with the aspirator more than three pints of feted pus from an abscess occupying the position of Douglas's pouch. The needle, a medium-sized one, was thrust through the roof of the vagina, behind the uterus in the median line, and after the pus was drawn, the cavity was washed out with a mercuric chloride solution, 1 to 3,000. The opening was next enlarged, a drainage tube inserted, the vagina filled with marine lint, and the patient placed in bed. She had no more pain of any consequence, but she was very feeble, and emaciated to an extreme degree. Two days after the operation, at my evening visit, I thought she was dying; there was no pulse at the wrists, and she lost consciousness for a time; but under the hypodermatic use of alcohol, brandy, and ether, successively and rapidly administered, she rallied a little, and soon passed out of immediate danger. Her food and medicine had been administered per rectum for some time before the operation, as the stomach would hold nothing but iced champagne. Now, however, stomachal ingestion was partially resumed, though with great caution, for the slightest over-feeding provoked vomiting.

The washing out of the pus cavity was carefully carried out, first with the mercuric chloride, 1 to 5,000, then with carbolic water; but neither controlled the feted odor, nor seemed to diminish the quantity of pus, which, at the end of five days, was still of a dirty brownish tinge, and horribly offensive. Finally, in boxing the compass for a method by which iodoform could be carried into the cavity, I came across a plan which Dr. David Prince, of Illinois, adopted for injecting it into the bladder in chronic cystitis. Accordingly, an emulsion of iodoform with starch was prepared after his formula, which I injected into the abscess cavity, after first washing it out with carbolic water. This was done on the 2d of April, five days after the operation, and from that moment the case began to improve. All fetor at once disappeared, and the quantity of pus rapidly diminished. The cavity was washed out several times a day with the carbolic water, and the iodoform emulsion which was injected twice daily, was retained in the sac by means of a pine plug fitted into the mouth of the drainage tube. This plan was continued until the 12th of April, when the flow of pus ceased, the sac had filled by granulation and the drainage tube was withdrawn. The pulse and temperature had now reached the normal level, and convalescence was fully established. A few weeks more and she seemed fully restored to health.

I have omitted to mention that for some weeks prior to the attack which we have been considering, this lady had been visiting a so-called clairvoyant doctor, under whose advice she had taken about two pints of a mixture of cotton root and gin, but of what strength I was unable to learn.

This history is condensed from full daily records of the case, many interesting details of which have been omitted, for the sake of economizing time.

Among the many interesting features which the case presented, the following seemed to me especially noteworthy:

1. The rapidity with which so large an abscess formed in the non-puerperal state.

2. The corresponding rapidity with which it filled by granulation and finally closed.

3. The unusually large quantity of pus found upon opening the abscess, and drawn off at a single sitting.

4. The rapid improvement following the injection of iodoform into the abscess sac.

5. Did the cotton root play any considerable part in causing the abscess ?

I am unable to offer any satisfactory answer as to etiology in this case. I never saw the woman before this illness, and consequently know nothing of her previous history, excepting such facts as were obtained during the conduct of the case, and which have already been given in abstract.

But following, as did the abscess, so soon after taking the cotton root mixture, there is ground for the suspicion that the medicine may have at least served as an exciting cause.

Interest in the subject of peri-uterine abscess, both acute and chronic, has of late grown apace. This is due largely, no doubt, to the improved methods of diagnosis of diseases of the pelvic cavity, which have followed the introduction of the Sims speculum, bi-manual palpation, and the aspirator. The topographical anatomy of the pelvis is no longer a sealed book. We are no longer groping in the dark, so to speak, as was the case a few years ago ; but since Henle, Savage, Foster, Hart, and Ranney have given us the benefit of their labors, the female pelvis may be said to be one of the best topographically mapped regions of the body. The improvements in the pathology and surgery of this region have been equally marked. The importance of early recognition of diseases of the pelvic connective tissue has been pointed out, and urgently insisted upon by Emmet, and his observations and teachings have made a lasting impression upon the profession ; especially that portion of it more particularly concerned with the diseases of women. Here we have a fruitful and interesting field of observation, for the real pathogenesis of a multitude of pelvic disorders in woman

lies, I am very sure, in an unrecognized, and, therefore, frequently uncured cellulitis.

When we consider the manifold conditions which are constantly at work, singly and in groups, having a tendency to light up inflammatory action the areolar tissue of the pelvis, this asseveration will not appear strange nor exaggerated. The area of exposure is enormously large. This connective tissue dips into all the pelvic interspaces; surrounds, overlaps, or envelops, partially or completely, all the pelvic organs; is in intimate relation with the tubes and ligaments; the bladder, uterus, vagina and rectum are mutually dependent upon it for its cushion-like steadying support. It is permeated with blood-vessels and nerves interwoven and doubled upon themselves, until, in attempting to trace them, one becomes lost in the mazy labyrinth of vessel and fibre—so intricate is the net-work of vein, artery and nerve. This is a wise arrangement, in that it permits great mobility of the organs which receive their blood and nerve supply through the cellular tissue, without placing the vessels on the stretch, or otherwise diminishing their calibre, whereby the proper nutrition of the viscera would become impaired. But once let inflammation invade the structures, and the weakness of the plan becomes manifest in the blood-stasis which it permits.

The nidus of pelvic cellular inflammation may be, oftentimes, a mere trifle—a slight irritation arising from that unknown quantity which we so succinctly formulate in the expression "taking cold." Irritation produces hypervascularity—there is hyperæmia. Hyperæmia produces arterial tension—there is loss of tone. Loss of tone causes an increase of blood pressure—there is congestion. This fulness of the vessels creates an exaltation of nervous force—there is nerve turmoil. These phenomena produce dilatation of the arterioles—there is inflammation. The veins refuse to return the increased quantity of blood—there is true blood-stasis. A stasis of blood is quite likely to set up peri-uterine inflammation, which may end in suppuration—in pelvic abscess.

Or, the disease may be of puerperal origin, following labor at term, or an abortion; the inflammation extending from the uterus into the connective tissue. The use of cold water vaginal injections, during or near the menstrual period; the various nefarious practices for the prevention of conception; the criminal interference with that function; and, lastly, a salpingitis may result in a pelvic abscess. I would not wish to be understood as having listed all the causes which serve to produce abscesses in the pelvis; these are merely a few examples that come readily to mind; I need not take time to mention others. If left to themselves, these abscesses generally rupture either into the peritoneum, the bladder, rectum, vagina, or even the uterus itself. I have seen two examples of the latter method of the spontaneous exit of pus from an abscess sac. In exceptional cases, the pus may burrow in the cellular tissue without making exit at all, ravaging the pelvis and finally ending the life of the patient by septicæmia and exhaustion. Sometimes several small collections of pus ultimately coalesce to form a larger single abscess. Rupture into the abdomen, of course, means death, and that speedily. If we could be assured that an abscess, in a given case, would certainly break through into the vagina, it would perhaps be justifiable practice to await the surgery of nature, provided the constitutional powers warranted such a delay. But observation and experience has sadly taught that the avenue through the vagina is as rarely sought spontaneously as any other; perhaps more so.

The expectant plan—that convenient name for idle waste of valuable time—has already been found inadequate here. Lives have been sacrificed through the glamour of its seductive influence. It is not many years since he would have been considered a bold surgeon, who would dare invade the pelvic cavity with a knife in search of pus; for, it must be admitted, there are few localities where it is more dangerous to cut than here. Competent authority asserts that there is not to be found in any other portion of the body, within the same extent of space, the same number of blood-vessels and nerves, as are distributed to the pelvic connective tissue. Nevertheless, pus

is as much an enemy of the economy here as elsewhere; and I am persuaded that the soundest surgical principles would dictate the *early* artificial evacuation of a pelvic abscess. The difficulty, in many cases, lies in the way of diagnosis. It is not always possible to tell, with certainty, whether there is pent-up fluid lurking in some nook or cranny of the pelvic cavity; still less is it within the diagnostic ability of the most skilful touch to differentiate between serum and pus in all cases, even when once a deposit is found. But when the diagnosis of the presence of pus is made clear, we may not, I asseverate, hold off our hands a single day without jeopardy to the patient, and danger to our reputations as well; for should the abscess, meanwhile, rupture into the peritoneum, then surely would both patient and reputation be "in one red burial blent." This direful accident—minus the reputation—once happened to Sir James Y. Simpson. Thomas relates that Sir James saw a patient suffering with pelvic abscess one day with Dr. Zeigler. Feeling sure that it would soon discharge, they waited a day, when, to their surprise, it had burst into the peritoneum.

Having determined upon the necessity of an operation in a case of pelvic abscess, how shall it be performed? becomes a pertinent inquiry. If the case is one favorable for operation through the vagina, we have a number of different methods to choose from. There is the knife, the aspirator needle, and the thermo-cautery, the use of latter having been advocated by some surgeons, who would thereby avoid the danger of hæmorrhage. I should reject this instrument for the following reasons: 1st—If the pus sac should be deeply located, requiring much depth of incision to reach it, the dissection with the cautery would be coarse and unsurgical; besides, it would create a large slough, that would embarrass the after treatment. 2d—If the abscess walls were thin, and within easy reach, the danger of hæmorrhage would be too inconsiderable to establish its claims to superiority over simpler and neater methods. Since the aspirator has come into vogue, it furnishes an ample, and at the same time a neat and simple method of evacuation in these cases.

The needle is readily thrust through the vaginal wall into the abscess, and after the pus is evacuated, the sac, by reversing the pressure, can be injected with an antiseptic fluid of some sort. This should be withdrawn, and the process repeated until the water returns clear. The opening should then be enlarged, either with a bistoury or an expanding steel dilator—the latter is preferred as being safest—and a drainage tube inserted. If the knife is used, the needle affords a proper guide. It is a good plan to pack the vagina with antiseptic cotton or marine lint to bring, by pressure, the abscess walls into apposition.

The cavity must now be washed out daily—perhaps several times a day—with an antiseptic fluid, the mercuric chloride perhaps, or carbolic water; and an iodoform emulsion thrown into the sac after each washing. Pardon me if I stop to pay some attention to details here, for, upon the after treatment wholly depends the successful management of the case. If the mercuric chloride is employed, 1 to 5,000 will be strong enough. I am persuaded that this solution has been used, in many cases, stronger than necessary; hence, the reports of poisoning and other direful results with it. I have found a glass syringe holding 2 or 3 ounces to serve the best purpose for washing out the abscess; it enables one to observe his work best, and to avoid the introduction of air into the cavity, as the nozzle fits snugly into the tube. The surgeon must, even though it be irksome, do this work himself. He alone, by reason of having so often explored the parts, is familiar with the topography of the abscess and its surroundings. He is better able to judge of the thickness of the walls of the sac, and of the tension they will endure, without danger of rupture. Then, too, he will surely know when the cavity is absolutely clean, and when the work is otherwise well done. Even a very competent nurse must not be entrusted with this duty. There must be absolute cleanliness, and the surgeon must be satisfied with nothing short of it. Many a case, otherwise skilfully ministered unto, has been sacrificed by neglect, or only indifferent attention in this particular. I am well aware, gentlemen, that I am addressing an

audience of skilled medical men, who are more or less familiar with these details, many of which may, perhaps, seem commonplace; but it certainly can do no harm for us to review them again, and I plead their special importance in connection with the subject of our discourse, in mitigation of the offence.

In chronic abscesses, which do not yield with reasonable promptitude to this plan, Prof. Byford proposes to scrape the interior of the sac with the curette, having for its purpose the removal of certain tag-like projections, which hang from the abscess walls. These excrescences are pathological proliferations of the granulations, which retard or prevent the healing process, and are easily broken down by the finger or dull curette. He says that if these masses are not removed, the cure is not so prompt, and pyæmic fever continues longer; but if we curette them off and thoroughly cleanse the cavity of them, the offensive odor of the discharge will at once disappear.

He furthermore asserts that cicatricial changes occasionally occur in the lining membrane of these cavities, converting abscesses into cysts; that he has, in some cases, been able to trace the formation of cystic tumors from abscesses, by the absorption of inflammatory deposits, disappearance of hardness, and the metamorphosis of the abscess walls into cicatricial membrane. The pus then gives place to serum, and the abscess assumes the appearance of an encysted tumor, possessing the qualities of a cyst, which absorbs and exudes fluid.

This is certainly a most interesting pathological phenomenon, and it is well to bear in mind its possibility.

It is interesting to note in this connection that the late Prof. Brickell of New Orleans, some years ago, drew attention to the fact that he had observed two distinct forms of pelvic inflammation—the one phlegmonous and tending to or resulting in abscess or suppuration; the other serous, and tending to or resulting in an effusion of serum, with occasionally flakes of coagulable lymph combined. He takes the ground that pelvic serous effusions are much more common than is generally supposed; and that they demand the same treatment as collections

of pus require, viz.: prompt evacuation, either through the vagina or by abdominal incision. He reports a number of cases in support of his views, successfully treated by surgical interference, and pronounces tentative measures valueless after the effusion occurs. It seems probable, however, that some of his cases were such as Prof. Byford describes as having been converted from abscesses into cysts.

There is still another important way of evacuating a pelvic abscess, which deserves consideration before I close. It is by laparotomy, and known as the method of Mr. Lawson Tait. The operation consists essentially in opening the abdominal wall, stitching the abscess sac to the margins of the incision, opening the sac freely, cleansing it thoroughly, and finally treating it with the drainage tube.

The question presents itself, when shall we operate through the vagina; and when should Tait's operation be made?

There can be no doubt—the presumption is reasonable—that each operation has its own proper sphere; but to fully outline the field of either is a difficult labor, one which I shall only essay to hint at, very briefly, at this time.

The greatest difficulties in the way of operating through the abdomen, are presented in those cases in which the abscesses are small and situated low down in the pelvic cavity. It is extremely difficult, in such cases, to stitch the abscess sac to the peritoneal margins of the incision; per contra, in these very cases, the vaginal operation is made with comparative ease. We might, therefore, conclude that the position and size of the accumulation has much to do with the selection of the operation.

For myself, I should say that when the tumor lies along the utero-vaginal junction, and does not extend above the pelvic brim, I would select the vaginal operation; but in cases in which I had to press hard against the vaginal vault to reach the lower portion of the sac, and in which its upper border was easily mapped out above the brim, I would employ abdominal section.

Permit me to say, in conclusion, that I have purposely refrained from entering into Mr. Tait's interesting field of tubal diseases, with its various subdivisions of pyo- hydro- and hemato-salpynx, limiting myself to the consideration of pelvic abscess as it occurs in the cellular tissue. What I have said in regard to the evacuation of pelvic abscesses by laparotomy, refers simply to Tait's method of operating in the form of disease I have been considering, and not to the Hegar-Tait operation, which has for its special object the removal of the uterine appendages, when diseased.

When the modest Kentucky surgeon, in the year 1809, by his skill and courage, boldly opened Mrs. Crawford's abdomen, and successfully delivered her of a large ovarian cyst, he laid the foundation for all the abdominal surgery which the world has since seen grow into such splendid proportions and achieve such magnificent results. If it were possible to even approximatively estimate the years which have been added to the life of woman by this one operation, it is probable that the aggregate would seem incredible.

Around this one stalwart example of heroic and devoted skill has been constructed a series of surgical achievements which have made scores of men famous, and given gynecological art a lasting claim to recognition as a cognate branch of medical science. And when, in future ages, students of medical science and literature shall examine the records of the nineteenth century, though the list of benefactors to woman will be a long one, they will find McDowell's name first, and near it, in conspicuous characters, emblazoned on the scroll of fame, the name of Lawson Tait.

306 Franklin Street.

The Treatment of the Intestinal Diseases of Infancy.

By Charles G. Stockton, M.D.,
Professor of Materia Medica and Therapeutics, Niagara University.

Our honored President, who has a place for this society near his heart, selected the title of this paper, and that is authority

enough to excuse me for writing upon an old subject. Yet it is one constantly before us, and, with every heated term, assuming such importance that doctors and societies of doctors feel it their bounden duty to add their mite of experience to the end that the terrible infant mortality may be lightened.

The time has passed for priest, parent and practitioner to exclaim: "Submit, submit! It is the interposition of Providence." We feel that here is a waste of life, a loss of energy, a prolongation of the probation of the race. And in this spirit I shall expect a more excellent discussion to-night than the merit of the paper could of itself provoke.

A short article, in which some medical man compasses the entire subject in a few pages, setting forth the causes, the prevention and the cure of an affection, according to the writer's ideas, is common. I purpose following a part of the common plan, that is, to express briefly my views on the subject of infantile gastro-enteritis without any attempt at collaborating what has been written by others. We have to consider, in the first place, the alimentary tract of the very young, the functions of the various organs in this tract, and we have to remember that these organs are in a state of development; that they gain in strength of function, increase their repertoire, as it were, as the child gains in age, but not always in proper ratio to the gain in age; and upon this I wish to lay particular stress. The digestive organs of a child three months old may be less developed than those of a healthful infant of three weeks. These organs are commissaries of the body. They have to supply aliment to children varying in race, temperament, diathesis and environment, not to speak of disease.

The aliment within reach is of two classes. First, the mother's milk.

Second, artificial food.

The mother's milk is generally wholesome, but not infrequently is unwholesome.

The artificial food is generally unwholesome, but may be made wholesome.

If, after this short survey, anyone asserts that the problem before us is simple, his powers of generalization surpass mine.

Let us now consider the organs of digestion more minutely. First, the mouth with its salivary and mucous glands, the secretions of which is alkaline in reaction, and, when introduced into the stomach, stimulates the flow of acid gastric juice. This secretion has also a ferment that converts amyloids, when the reaction is not acid. Second, the stomach, which secretes an acid juice, containing pepsine and hydrochloric acid, and which digests nitrogenous substances when the reaction is not alkaline. Third, the small intestines, whose alkaline secretions, supplemented by those with a like reaction from the pancreas and liver, digest sugars and fats, besides the leavings of starchy and albumunoid substances that have passed the pylorus. The flow of *succus-gastricus* is stimulated by the alkaline saliva, the presence of food, etc., but the *succus-entericus*, together with the secretion from the pancreas and liver, is stimulated by means of the acid gastric juice, etc., when the stomach's work is done.

I desire to emphasize the liver.

This organ, so large, so vascular, so active in the young child, is extremely susceptible to derangement from forces internal and external. The functions of these organs are under the control of a sensitive nervous apparatus. Let us keep this constantly before us.

The stomach and liver are most engaged in the digestive act during the early months, the salivary glands and pancreas lying comparatively dormant until later. It, therefore, follows that the nitrogenous, and, in a lesser degree, the saccharine food, are most likely to be provided for in the digestive tract of the infant, and that the starchy and fatty foods are unlikely to be assimilated until the child is further developed.

Having examined the physiological side of the question, let us follow the history of a case of gastro-enteritis.

The child nurses its mother. The milk has, besides water and salts, casein that coagulates in flocculi, some sugar and very little fat. It is very slightly alkaline or neutral in reaction, it

is warm, and the child obtains it slowly, after a vigorous sucking, which stimulates the flow of alkaline saliva; and this, descending to the stomach, excites the flow of acid gastric juice, and this, in turn, the stomach having played its role, passes the pyloric ring in such a just and proper degree of acidity as to stimulate a yield of intestinal digestive fluids. If it were too feebly acid, the stimulation would be too little; if excessively acid, the intestinal apparatus would become over stimulated—irritated.

A proper developed child nursing a gentle and wholesome mother, goes on nursing and growing, never has colic or diarrhœa, and is a sight to warm a bachelor into a realization of his self-neglect.

But the infant whose history we are pursuing is deprived of its mother's breasts when two weeks old. Resort must now be had to artificial food.

This is a civilized community; so I will tone down the picture and suppose that an intelligent physician advises the child to be fed upon cow's milk, properly diluted and sweetened, to be taken through a rubber nipple.

The milk from a fairly fed cow is a fairly long time in transportation, and reaches the child with the lactic acid fermentation fairly begun. At the end of twenty-four hours, when the baby has its last feed from this milking, acetic acid fermentation is beginning. The baby receives the milk through a rubber nipple having too large an opening, and so without the effort of sucking. It reaches the stomach, not alkaline but acid in its reaction. This organ is not naturally stimulated, and it does not energetically secrete; yet it has to contend with a casein, coagulating rapidly into hard lumps, and with an over supply of fat. This passes the pylorus unaccompanied by its just proportion of hydrochloric acid. The bowels become inactive, the liver sluggish, the child has a coated tongue, the colic, sleepless nights, an anodyne, disturbed nervous system, a dose of oil—and then a temporary relief. After a few days, the poor stomach tires out, and its normal secretions are lessened. The nitrogenous, the saccharine and the oleaginous principles, instead of going in the

way which nature has provided, are retained in the stomach until acetic and butyric acid fermentations are established, the gastric mucous membrane is irritated, and when at length the load passes into the duodenum, that organ, recently too inactive, is now excited, the liver becomes hyperæmic, bile is poured in the suffering duodenum, until it writhes and the baby writhes, and there is diarrhœa. The stomach revolts, and sour curds and whey with vitiated gastric juice are ejected. The alvine evacuations are acid.

The intelligent physician attempts to relieve these symptoms by administering alkalies. Lime-water is given with the milk, the amount of milk is lessened. This improves the complexion of things somewhat, and with the free use of castor oil to relieve the intestines of their mischievous contents, sometimes leads to convalescence. In this particular case, the improvement is limited. The child has appreciably wasted from innutrition and the loss of rest so necessary to healthy infancy. Then ensues fever and head symptoms, and vomiting. There is again intestinal inactivity, the few dejections being clay-colored, or there is diarrhœa of green, acid, offensive stools, with colic.

Then comes the inevitable prescription—calomel, gray powder, bismuth, Dover's powder, bromides, chloral, etc., etc.

Meanwhile, the intelligent practitioner is struggling with the question of diet. Evidently, there must be a change. He bethinks himself of condensed milk—and to that particular brand put up in Switzerland, where the cows enjoy forced quietude and where the scenery is sublime. Anything ought to thrive on such milk, but this child is obstinate and grows worse. Despite the lime-water, the excess of sugar ferments, or, if it reaches the circulation via the disordered liver, it is imperfectly oxidised and the baby has lithæmia.

The amount of lime-water is increased—and so is the vomiting ; while the curds, like Banquo's ghost, will not down.

The intelligent practitioner perceives that milk must be withdrawn. The child is fed for days upon albumen water, gelatine water, or gluten water, and improves. But at length his little

organs cry out for their natural pabulum, which the whites of eggs cannot provide, and the persecuted stomach will retain it no longer. Beef tea, beef peptones are resorted to. Good for one day only. A second intelligent practitioner is called in consultation, and appears to be surprised that milk, in combination with oatmeal, or barley, or biscuit food, was not given in the beginning, and quotes Dr. Jacobi. But the attendant remarks that he has thoroughly tried that plan and with frequent failures; besides, he is satisfied that this child will not digest milk in any form, apparently not knowing what it needs. Several prepared foods are discussed—and now they are upon dangerous ground. They recognize the impracticability of requiring an infant duodenum to digest starch, for it can rarely accomplish it at the best, and even when assimilated imperfectly, the infant is illy nourished, anæmic, a fit prey for any disease, a victim for any disorder. After due deliberation, Liebig's malt food is fortunately determined upon. In this food the starch is, by the action of malt, mostly converted into dexterine and maltose, and is a very acceptable nutriment to many children. In this case, however, it is not well tolerated and only imperfectly assimilated, owing to the state erythism into which the digestive tract has been driven by means of a disturbing diet and innutrition.

The subject of our history has now reached a most critical epoch in its career. Its tiny skeleton almost may be seen through its withered, skinny, clammy covering. The pinched face, with sunken eyes and shrunken lips,—the cranium with fontanels depressed and with bones that seem let loose by their softening cartilages, the puckered, retracted little belly, all tell of the waste that has been going on, and the baby's piteous wail will not deny it.

What is to be done with such a case? Some one replies, "Transplant it to the seaside or to the mountains." But in this instance such a removal is impracticable and, possibly, in the child's feeble condition, inadvisable. Is there anything else to be done at home? is the question that we are called upon to answer. In this history, I have endeavored to depict a typical

case from a class which, at the age of six weeks or under, usually terminate fatally, and, in the discussion, pray remember that I am speaking of the very early weeks. "Almost one-half of the infant dead, before the end of the first year, die before they are one month old" (Jacobi).

I would propose this treatment:

Procure a pint of fresh, pure cow's milk, and prepare from it a whey, by mixing pure pepsine, grains five to ten, or a little infusion of rennet with the milk, bringing it to a temperature of 90° F., and when the curd appears, strain it, pressing out all that will flow. This whey should be placed immediately upon ice, and be prepared at least twice in twenty-four hours. Let the baby have one-fourth drop of the wine of ipecac, with five drops of lime water, or a little soda, properly diluted. In a few moments, let it nurse, through a bottle, an ounce of warmed and slightly sweetened whey. Repeat this as the stomach will permit, increasing the quantity with each feed, if admissible. Let the bowels be kept open by means of castor oil—the tasteless London oil is the best. Inunctions with cod-liver oil or a warm milk-bath may be employed. The child should be removed into the open air, but its body temperature carefully regulated by wraps and artificial heat.

After the lapse of one or two days, if the patient retains the whey, a feed of milk should be tried, peptonized after the following rule: Dissolve from three to five grains of pure pepsine in a pint of perfectly fresh, warm milk. (The milk from some cows requires more pepsine than from others.) Raise the temperature of the mixture to 90° F. Watch it constantly. In a few minutes, at the first sight of curding, remove and strain through a coarse linen, squeezing out the last drops of milk, and leaving a small residue in the strainer cloth.

This milk, if kept upon ice, will remain fit for use for twelve hours. It is partially peptonized milk. It should be diluted a little before feeding. It is slightly acid in reaction.

I should add the fraction of a drop of the tincture of nux vomica to the medicine already prescribed, giving it every two

hours, and feeding the baby as often. If this milk is properly peptonized, it will be retained, and the child will smile at you in the morning. It requires some patience on the part of the nurse to learn the art of stopping the peptonization just at the right point. If you carried too far, she has whey instead of milk, and "Love's labor lost." No matter how troublesome it may be to prepare, milk thus treated will save life when nothing else will, or I greatly err in numerous observations.

After the lapse of days, the progress before noted often comes to a halt. The food doesn't seem to be agreeing well, and another change must be made. Hitherto, the food taken has been slightly acid, and it would seem reasonable to replace it with that which is slightly alkaline. Practically, this is found to be sound reasoning, and it is well to make the change before a retrograde action begins.

Still let the patient have peptonized milk, but prepare it with the extract of pancreas and a very little soda. It will disappoint you if too much is used. The original formula of the manufacturers of extractum pancreatis, Fairchild Bros. and Foster, was fifteen grains of soda to five grains of extract. This combination will be tolerated for a certain period of time, but not by infants with digestion greatly deranged. Five grains each of the extract and the soda to a pint of milk is about right, and, if you choose, the soda may be omitted entirely. At present, let us employ the small amount of soda, and keep the milk in a warm place until the bitter taste of the peptonate is just perceptible. Then place the milk on ice, and feed well diluted and slightly sweetened. In the place of the lime water in the mixture of nux vomica and ipecac, use half a drop of diluted hydrochloric acid; and, in place of giving it before, give it fifteen minutes after feeding.

I should expect the patient to thrive on this diet and treatment for a fortnight, and if evidence of indigestion should appear, return to the other form of peptonized milk.

The history above narrated, with the details of treatment and diet, is not supposible, but is an abstract from clinical experience.

Several years since, when summoned to care for an infant with intestinal disturbance and artificially fed, I expected it would die; and in nothing did my foresight prove more reliable. But now such cases so commonly recover, and it is so great a satisfaction to behold that the helpless little creatures grow in vigor, that there is compensation for all the time and care spent in digesting their dinners for them. As time and development advance, the baby may be successfully nourished on pure milk and water, and, later, farinaceous matter may be added. The diastatic properties of malt extract are at length understood by the profession in the treatment of disturbances in older patients, yet I do not see these well-known principles exercised in treating indigestion in young children. Before a child can successfully assimilate starchy food, it will flourish upon the same if it be mixed with the extract of malt. By this I mean that when bread and milk disagrees with and retards, bread and milk, in which a little malt extract is dissolved, favors comfortable digestion.

If people will persist in feeding infants on oatmeal, Imperial granum, *et hoc genus omne*, in the form of pap, let a little malt extract be used to sweeten the mixture.

It would be impossible, within the short space at my command this evening, to cover all the phases of the intestinal diseases of children. While I have really examined—yet not exhausted—a single type of these diseases, this may serve to bring out the central truths that bear upon allied conditions.

The child is undeveloped, is in a state of growth; some organs are occasionally behind their neighbors in the process; and the structures are yet so embryonic that much rest is needed for their repair.

Nature's food is adequate, and deviation from it perilous. In substituting, let us imitate nature; and to succeed, let us study physiology rather than advertisements.

Organic chemistry has not attained the secret of transforming cereals into breast-milk, and the philosopher's stone is undiscovered.

Physiology is the law of common practice. A respite may be granted, a ransom may be received, but lawlessness is always punishable.

I affirm with confidence that the methods of using milk set forth in this paper are physiological, and in compliance with the well-known law that an alkali excites an acid, and an acid excites an alkaline secretion. And not only this, these methods subserve another purpose, in assisting the stomach secretions on one occasion, and the intestinal secretions on another, thus inducing a fair division of rest and activity. Furthermore, I consider peptonization the greatest practical advance that has been made recently in the management of infantile diseases.

And after all, healthy infancy is largely a question of diatetics. What else remains has been epigrammatically stated by an eminent Italian, to be, "A clean skin, a sunny room, and a bottle of castor oil in the cupboard."

371 Porter Ave., Buffalo, N. Y.

Clinical Reports.

Removal of Bursæ of the Wrist by the Operation of Extirpation.

By Charles C. F. Gay, M. D.

At a recent meeting of the New York Surgical Society, *Dr. A. C. Post narrated the case of bursal swelling at the back of the wrist, for which he operated successfully by puncturing the cyst, whereupon Dr. Sands "inquired how frequently the members of the society had performed cutting operations for the cure of this disease, as it seemed to be a question of considerable interest at the present time; that his knowledge of extirpation of such ganglia had been limited to two cases; the first case was successful, but the second case left the hand nearly useless."

*Feb. 20, 1885, *New York Medical Journal*, March 14th, page 312.

The question propounded by Dr. Sands—accompanied by the statement that a hand had been rendered useless after the operation of extirpation—has induced me to look through my record of cases of operations by compression, free or subcutaneous incision or puncture, ligature and extirpation. I have selected two representative cases of the latter, and transcribe them from my notes precisely as they were recorded at the time, or immediately after the operations were made, although subcutaneous incision may be included in the term "cutting operation," yet the doctor has reference only to operation by extirpation; hence, other methods of cutting, of which I have notes, will not be here considered.

Case I.

Bursa upon the Front of the Right Wrist, of Four Years' Duration.—Operation by Extirpation.

Mr. B., *act.* thirty years, has tumor upon the front of the wrist, which began to show itself four years ago. The tumor is now large and extends out upon the palm of the hand. There is numbness of two fingers, and when the fingers are extended there is much pain; for this reason, the fingers are kept flexed. Three years ago, the patient was treated three times by application of electrolysis, which was very painful and served no good purpose. At my office I etherized the patient, applied Esmarch's bandage, and, assisted by Dr. Bartow, made an incision over the tumor one and a half inches in length. Dissection was carried forward, care being taken not to open the sheath of the tendon until it was found impracticable to remove the sac entire, when the sac was opened and its contents evacuated, which consisted of a teaspoonful of matter resembling boiled rice. The larger portion of the sac was now excised, leaving a small part of it in the wound. The edges of the wound were brought together and secured by two silver sutures, and dressed by wet compress and bandage. Three months after the operation, the wrist was entirely well and strong, and has remained so ever since, with no

recurrence of the disease; it being now about six years since the operation was made.

Case II.

Bursa of the Back of the Wrist, of Two Years' Duration.—Operation by Extirpation.

Miss A. G., *act.* 30 years, has a bursa upon the back of the wrist, about the size of a large hickory nut, located chiefly upon the ulner border of the wrist, which has become very troublesome and painful. She thinks it was caused by lifting a tub of water. At my office, the patient was etherized, Esmarch's bandage applied, when, assisted by Dr. Warren, I removed the greater portion of the sac by careful dissection.

Believing the function of the joint would be imperiled by attempt to remove the sac entire, it was excised, leaving a small portion of it in the wound. The sac contained a thick, translucent fluid. The wound was closed and secured by two silver sutures, and dressed by wet compress and bandage. Three months afterwards, the cure was perfect. There has been no return of the disease, three and a half years since the operation; the wrist being quite as strong as it was before the operation.

At the time I performed these operations, I thought I had strong ground for suspecting a recurrence of the disease, inasmuch as I was obliged to leave a portion of the sac behind, which might serve as a nucleus for another growth, but the results show that my suspicions were unfounded. The successful issue of these cases may help to resolve doubts as to the propriety of the operation by extirpation. If there be no danger of recurrence of the disease, when a portion of the sac is allowed to remain, it is the best operation for the cure of bursal tumors of the wrist. The age of the tumor will, however, influence the surgeon in making choice of the method of removing the tumor. The contents of a recent cyst will be more fluid and less concrete in character than the contents of an old cyst; hence, subcutaneous punction may be advisable for the former, and extirpation in case of the latter.

An Unusual Case of Fracture of the Skull—Trephining—Recovery.

By W. S. Tremaine, M. D.,

Surgeon-in-Chief Buffalo Hospital of the Sisters of Charity, Etc.

On December 16, 1884, I was called on by Dr. Banta, of this city, to see with him in consultation, Otto M. German, aged 32, who had been struck, the previous day, on the head by some bricks from a falling house. For a few hours subsequent to the injury, he was conscious and rational.

When I saw him on the 16th instant, about 24 hours after the accident, he was unconscious, without paralysis, with a pulse of 60; respiration slow but not stertorous; temperature normal.

Careful examination of the head showed no external marks of violence. There was some ecchymosis of the left eyelid, with sub-conjunctival effusion, suggesting the possibility of fracture of the base of the skull. As the most careful examination showed no contusion of the scalp, no evidence of depressed or other fracture, so far as manipulation could discover, I recommended that a purgative be given, and further developments awaited. Next day, Dr. Banta informed me that his symptoms were graver, and that the friends were extremely anxious that something positive should be done. It was decided to remove the patient to the Emergency Hospital, where, assisted by Drs. Banta, Mickle and Potter, I again made careful examination, and beyond the very *slightest* ædæma over the left forehead, nothing could be discovered. The man at this time was profoundly unconscious. Pulse, 50; respiration, sighing. I had his head shaved; at about the middle of the upper part of the left parietal bone, a scale of what appeared to be black dirt, about the size of a dime, was scraped off, and beneath it was a faint bruise about half the size of a dime. I made an exploratory semi-lunar incision around this point, turning up the scalp, when I found two fissured fractures of the skull passing from behind forward V-shaped. At the apex of the triangle formed by these fissures, a triangular piece of bone was depressed; a linear fissure extended from this forward.

The trephine was applied, and this piece of bone elevated. A clot was found between the cranium and dura mater. On removing this, a rent was discovered in the dura mater, with the clot extending beneath it. A sharp arterial hemorrhage came on, evidently from a vessel in the dura mater. In order to find the bleeding point and secure it, an additional button of bone was removed. About this time the bleeding stopped; it undoubtedly came from a vessel wounded at the time of the accident. The wound was dressed antiseptically with iodoform, after thorough irrigation with mercuric bi-chloride solution, 1 to 1000. Towards the close of the operation, the patient manifested symptoms of returning sensibility; no anesthetic was used. Ten minutes after the last dressing was applied, he gave his name correctly, and asked for something to eat. The next morning consciousness was complete; he was quite rational. Uninterrupted recovery took place; he was discharged, cured, Jan. 12th, 1885.

Of course, the chief interest of this case centers in the difficulty in discovering the exact seat of the lesion in the skull, and demonstrates the utility of thorough search. This man's life was undoubtedly saved by decided and prompt operative interference. It is unnecessary to discuss here the currents and counter currents in regard to the use of the trephine, to be found in surgical literature, the widest difference of opinion prevails. But one thing, to my mind, seems certain, that the operation of trephining adds but little to the danger of the patient, proper antiseptic precautions being taken and competent operative skill understood.

After considerable experience in injuries of this class, and careful reading of the literature pertaining to the subject, I have come to the belief that in cases of doubt the use of the trephine as an *exploratory* measure is justifiable.

The indications for operative interference are admirably set forth in a paper recently read before the American Surgical Association by Dr. Roberts, of Philadelphia.

Society Reports.

Buffalo Medical and Surgical Association.

Meeting of May 5, 1885.

The President, Dr. Charles G. Stockton, in the Chair; Dr. Frank H. Potter, Secretary.

The names of Drs. H. Bauer, S. T. Howell and F. R. Campbell were presented for membership, and upon separate ballots they were declared duly elected.

Dr. Stockton then delivered his inaugural address, in which he called attention to the position the Society had occupied in the profession in former times, and mentioned some of the illustrated names connected with it. He had two suggestions to make for the work for the coming year: 1st. That the papers presented to the Society should receive, and were entitled to receive, the freest criticism. It was only in this way that the subjects considered could be thoroughly brought before the Society, and the differences of opinion in the profession made manifest. He hoped the discussions during his term as President would be made one of the interesting features of the meetings. 2d. He thought that in this matter of criticism too much deference was paid to authority. Each man's opinion should be presented without fear, even if they differed from those held by others whose teachings are received with respect by the profession. As an illustration, he instanced the opinion of Prof. Austin Flint upon the question of diet. The advice given by the latter to eat as much as you liked and whenever you were hungry, he considered to be at variance with sound physiological principles. Only one step more was needed, and we would be told that mastication was unnecessary, and that we could get along just as well by "bolting" our food, like the anaconda.

Dr. James W. Putnam then read the paper of the evening, entitled the "Causes and Treatment of Lithæmia." This paper will appear in a future number of the Buffalo Medical and Surgical Journal, and an abstract is, therefore, omitted.

In the discussion—

Dr. F. W. Bartlett reported a case in which the symptoms had been severe, but which had yielded to treatment similar to that advised by Dr. Putnam. He called attention to the fact that the nails often presented transverse, instead of longitudinal, lines in patients suffering from lithæmia, and said that Bright's disease and some other diseases, such as endocarditis, might often be primarily cases of lithæmia.

Dr. M. D. Mann had had some personal acquaintance with the disease in question. He believed heredity to be a very important factor in the disease. Some members of a family might suffer from gout, others from rheumatism, and still others from lithæmia, as it had been described by Dr. Putnam. He had also observed that women at the menopause frequently suffered from this disease. Among the symptons of which they complained at this time, he specially mentioned great irritability of the bladder and a watery leucorrhœa associated with an elytritis of a low grade. These and their other symptoms might often be made to disappear by careful attention to the diet and exercise. As to treatment, he preferred a meat to a vegetable diet. He thought Dr. Putnam had not sufficiently considered the important part the starches and the sugars played in the production of lithæmia. It was important to avoid the use of them altogether, if possible, in these cases. It was also necessary for the patient to abstain from alcohol, beer, and the sweet wines, as they were potent factors for evil. Thorough mastication was likewise an important point in treatment.

Dr. Cronyn thought the question of heredity had some bearing on the difference in the lines of treatment advocated by Dr. Mann and Dr. Putnam. He called attention to an order of the Roman Catholic Church—the Trappists—whose members never suffered with gout. They lived exclusively upon a vegetable diet and drank no wine. They generally attained to a very old age.

Dr. Hinkel considered lithæmia a not infrequent cause of recurrent amygdalitis. Catarrhal conditions of the mucous

membranes of the air-passages were also produced by it. He believed in the line of treatment advocated by Dr. Mann.

Dr. W. S. Tremaine had suffered from the disease, and had tried various sorts of treatment with varying degrees of success. He believed that, on the whole, the avoidance of the starches and sugars would give the best results. Mastication he considered of the greatest importance. This was apt to be neglected, and it was necessary to instruct the patient particularly on this point.

Dr. Wetmore had also suffered from the disease, and added his testimony to that of the others concerning its symptoms and treatment. In his case, one of the earliest symptoms was a sore throat. He believed there was reason in both methods of treatment, and that the cases should be carefully classified before the treatment was decided upon. A peculiarity of some cases was in the urine remaining normal, not showing a deposit, as was observed in the majority of cases.

Dr. Tremaine confirmed this observation about the urine. He said its acidity was not increased, although the patient presented many of the symptoms due to the lithæmic condition.

Dr. Putnam said he always prohibited the sugars and alcoholic liquors, as well as all fried meats, pork, bacon, etc. He believed that the difference in the results was due to the difference in the cases.

The quantity of food was as important as its quality. Too large an amount favored the production of lithæmia, from the inability of the system to assimilate it. The tendency of many cases of gonorrhœa to become gleet was due to the lithæmic condition, and relief was obtained by the alkaline treatment.

The prevailing diseases reported were measles, scarlet fever, pneumonia and inflammatory rheumatism.

The President appointed Drs. F. W. Hinkel, J. W. Putnam and E. H. Long as the standing Financial Committee for the ensuing year.

The Society then adjourned.

Transactions of the Buffalo Obstetrical Society.

Stated Meeting, May 26, 1885.

The President, Dr. W. W. Potter, in the chair; Dr. William H. Thornton, Secretary.

Dr. Charles G. Stockton read a paper on "The Treatment of Intestinal Diseases of Infancy." [See Original Communications, page 541.]

Dr. Thomas Lothrop most thoroughly and cordially endorsed the views expressed in the paper. He argued with the writer in the place of treatment proposed, based as it was upon strictly physiological principles, and stated that it was the greatest advance made since he had been in practice in the treatment of infantile diseases of the intestinal tract. He believed that the successful treatment of these cases, speaking generally, was more a question of management in regard to feeding than of mere drug-giving. When the profession would take this view and address itself to the perfection of infant feeding, he thought more good would be accomplished and better results obtained in reducing infant mortality.

Dr. C. C. Frederick had become familiar with the writer's views and with his plan of management in these cases, in the last year or two, from association with him in the case of a number of patients. He had put into practical use the treatment recommended, and found it, with scarcely an instance of failure, to prove efficient, and promptly so, even when other plans have been tried and failed. The plan of preparing the food according to his instructions might appear, at first, a little difficult, but with some practice and patient attention to details, most mothers and nurses soon acquired proficiency in this regard, and became quite expert in the preparation of the food.

Dr. F. H. Potter said that often a correct plan of action had been formulated, as had been so admirably done by the author of the paper, it only remained to obtain familiarity with its details to ensure success. Upon thoroughness in the technique, rested the successful application of the measure to practice. He

thought it would be difficult or impossible to obtain the pure milk, insisted upon so properly by the writer as essential to the proper foundation of his line of treatment, from cows stabled and fed in the "cow barns" in this city. These distillery-fed animals certainly did not appear healthy, and he looked upon their milk with suspicion. He thought it very important for the doctor to examine into the sources of the milk supply when treating these cases with a view to the correction of errors at the fountain head.

Dr. P. W. Van Peyma was reminded by the paper of the fact, which he believed was admitted, that the children of the other countries, especially European, did not suffer with these diseases as much as children in America; that summer complaint, so-called, was more prevalent in the United States than in Europe. He did not pretend to offer any explanation of the difference, as he had never been able to determine the reasons for it, but simply spoke of it as interesting, and as having some bearing in explanation of our apparent want of success in the treatment of the diseases in question. He called attention to the influence which the nervous system exerted over these cases, and suggested the importance of carefully ministering to the nervous phenomena when they preponderated; also of guarding against sudden changes of temperature, and all things that predisposed to fermentation.

Dr. M. Hartwig, while he thoroughly enjoyed the philosophical and agreeably written paper, regretted that the writer had confined himself to the chronic forms of ill-nutrition, passing with mere mention that form of indigestion pertaining to breast-fed children. In regard to the means employed, he could see no good foundation for ipecac wine. He had observed certain advantages in the use of salicylic acid in very minute doses, to prevent fermentative changes. He thought there would be difficulty in carrying out the details of the writer's plan in poor families.

Dr. J. W. Keene had tried the plan of peptonizing milk, and had come to look upon it as a good deal in the line of the last

new thing, which was the universal panacea. He had found difficulty in getting children to take peptonized milk on account of its taste; thought it could only be properly prepared by an experienced person. He had employed condensed milk considerably, and found it to work satisfactorily, when properly prepared, in most instances; though, of course, there were cases when that, or anything else for that matter, would not be well borne.

Dr. W. S. Tremaine was impressed with the unanimity of sentiment in the meeting, and how well the members agreed with Dr. Stockton, showing that his treatment must be correct. He was, however, surprised that the doctor had not given us the name, species, order and genus of the microbe that causes the diseases referred to! This seemed to be so much the fashion now-a-days that its omission was alike notable and refreshing.

He corroborated Dr. Van Peyma's statement regarding the greater prevalence of infantile diarrhœa in this country than in Europe; thought it might possibly be due to the preponderating influence of the nervous system over the physical organism. He thought the influence of long-continued hot weather, producing innervation, so that indigestion does not properly go on, might be one potent cause of these diseases. He believed in the use of calomel and gray powder in the treatment of infantile diarrhœas, to be given in the early stages. He had tried peptonized milk with adults, but found that, owing to its unpleasant taste, they would seldom take it long enough to be beneficial.

Dr. H. D. Ingraham agreed with the writer of the paper in regard to the use of peptonized milk. He had used it himself and was very much in favor of it, though he found it difficult oftentimes to get it properly prepared. His experience with the formula given for pancreation and soda was that the quantity of soda was too large. Did not have difficulty in getting children to take properly peptonized milk.

The President alluded to the fact that the mother's milk was frequently difficult in its watery constituents, and, as a consequence, contained an excess of solid matter. This was especially

the case with the working mothers, who perspired excessively, and this was one reason why breast-fed children did not thrive. In each case, he would supply them with liberal quantities of pure water. He believed in the proposition of Dr. Van Peyma, reiterated by Dr. Tremaine, that intestinal diseases of infants are, if not caused, at least aggravated by some peculiar influence of the nervous system, rendering it difficult to treat them efficiently and successfully, unless this important factor was recognized and carefully ministered unto. He raised the question whether it was so much heat as sudden changes from cold to heat and *vice versa* that caused infantile diarrhœas. The mortuary records of the cities always exhibit a large number of deaths from cholera infantum, while, as a matter of fact, this was not a very common disease. He took the occasion to say a word against the careful manner in which death certificates were made up. There was a looseness of nomenclature which rendered health board statistics nearly valueless for purposes of scientific research. He referred to a paper by Dr. Alex. Hutchins on salicylate of calcium in serious diarrhœas, and expressed a favorable opinion in regard to the salicylates in these diseases. He opposed the use of the bromides as routine practice ; they irritated the intestinal tract very frequently, besides increasing cerebral anæmia, a condition so desirable to overcome. He expressed very little faith in lime waters, so far as the alkaline properties were concerned, but was decidedly in favor of the bismuth treatment. He gave the latter in larger doses than usual—fed it in form of cream with water and gum arabic—the only limit being the amount a child will take when the case is extreme. He opposed the use of astringents as a rule, but favored the employment of anodynes to allay nervous perturbation, and cordially approved of the methods set forth in the paper as to artificial feeding. With pure milk, artificially digested when necessary, fresh air, wholesome water and scrupulous cleanliness, these cases were placed in as favorable a condition for recovery as possible, requiring very little medicine and much management.

Dr. Stockton, in closing the discussion, stated that he had

employed peptonized milk in more than one hundred cases, having used it in every case when indicated, for two summers, and it was from this experience that his views had been given to the Society. He thought there was no difficulty in getting pure milk in Buffalo, and mentioned the supply from a number of cows as being preferable to the milk from one cow, the popular idea to the contrary notwithstanding. The long-continued use of artificial food of any kind, excepting milk, was certainly detrimental. He thought that failure in peptonizing milk was due to lack of careful or scientific attention. It was a matter that needed a little knack, and that was all there was of it. It should not be made too bitter, and he seldom found trouble in getting infants to take it, unless it became necessary to very thoroughly peptonize it, then they sometimes declined it on account of its bitterness. Believed in the importance of fresh air, and endorsed the bismuth treatment; but thought the nervous element probably the most important part of the whole subject.

Medical Society of the County of Erie.

Semi-Annual Meeting, June 9th, 1885.

The semi-annual meeting of the Medical Society of the County of Erie was held at the Y. M. C. A. Building on Mohawk street Tuesday, June 9th, 1885. The meeting was called to order at 10.30 A. M. by the President of the Society, Dr. J. B. Andrews, and the following members were present, viz.: Drs. Cronyn, F. F. Hoyer, Pryor, VanPeyma, Persons, Willoughby, G. W. McPherson, Johnson, Barnes, Haberstro, Wetmore, J. H. Potter, Wm. G. Ring, Wm. Ring, W. D. Bidaman, F. W. Abbott, Gay, F. H. Potter, S. H. Warren, J. W. Putnam, Dorland, W. W. Potter, B. P. Hoyer, Hubbell, Croakley, Briggs, Gumaer, B. G. Long, Bailey, Frederick, Mary Berks, Armstrong, Keene, Sheehan, Walsh, Brecht, Rochester, Howe, O'Brian, Ballou, Vandenberg, Gregory, Ellwood, Bissell, Packwood, Barker, Wilson, Samo, Runner, Hayd, Mullen, E. H. Long, Crawford, Daggett,

case from a class which, at the age of six weeks or under, usually terminate fatally, and, in the discussion, pray remember that I am speaking of the very early weeks. "Almost one-half of the infant dead, before the end of the first year, die before they are one month old" (Jacobi).

I would propose this treatment:

Procure a pint of fresh, pure cow's milk, and prepare from it a whey, by mixing pure pepsine, grains five to ten, or a little infusion of rennet with the milk, bringing it to a temperature of 90° F., and when the curd appears, strain it, pressing out all that will flow. This whey should be placed immediately upon ice, and be prepared at least twice in twenty-four hours. Let the baby have one-fourth drop of the wine of ipecac, with five drops of lime water, or a little soda, properly diluted. In a few moments, let it nurse, through a bottle, an ounce of warmed and slightly sweetened whey. Repeat this as the stomach will permit, increasing the quantity with each feed, if admissible. Let the bowels be kept open by means of castor oil—the tasteless London oil is the best. Inunctions with cod-liver oil or a warm milk-bath may be employed. The child should be removed into the open air, but its body temperature carefully regulated by wraps and artificial heat.

After the lapse of one or two days, if the patient retains the whey, a feed of milk should be tried, peptonized after the following rule: Dissolve from three to five grains of pure pepsine in a pint of perfectly fresh, warm milk. (The milk from some cows requires more pepsine than from others.) Raise the temperature of the mixture to 90° F. Watch it constantly. In a few minutes, at the first sight of curding, remove and strain through a coarse linen, squeezing out the last drops of milk, and leaving a small residue in the strainer cloth.

This milk, if kept upon ice, will remain fit for use for twelve hours. It is partially peptonized milk. It should be diluted a little before feeding. It is slightly acid in reaction.

I should add the fraction of a drop of the tincture of nux vomica to the medicine already prescribed, giving it every two

hours, and feeding the baby as often. If this milk is properly peptonized, it will be retained, and the child will smile at you in the morning. It requires some patience on the part of the nurse to learn the art of stopping the peptonization just at the right point. If you carried too far, she has whey instead of milk, and "Love's labor lost." No matter how troublesome it may be to prepare, milk thus treated will save life when nothing else will, or I greatly err in numerous observations.

After the lapse of days, the progress before noted often comes to a halt. The food doesn't seem to be agreeing well, and another change must be made. Hitherto, the food taken has been slightly acid, and it would seem reasonable to replace it with that which is slightly alkaline. Practically, this is found to be sound reasoning, and it is well to make the change before a retrograde action begins.

Still let the patient have peptonized milk, but prepare it with the extract of pancreas and a very little soda. It will disappoint you if too much is used. The original formula of the manufacturers of extractum pancreatis, Fairchild Bros. and Foster, was fifteen grains of soda to five grains of extract. This combination will be tolerated for a certain period of time, but not by infants with digestion greatly deranged. Five grains each of the extract and the soda to a pint of milk is about right, and, if you choose, the soda may be omitted entirely. At present, let us employ the small amount of soda, and keep the milk in a warm place until the bitter taste of the peptonate is just perceptible. Then place the milk on ice, and feed well diluted and slightly sweetened. In the place of the lime water in the mixture of nux vomica and ipecac, use half a drop of diluted hydrochloric acid; and, in place of giving it before, give it fifteen minutes after feeding.

I should expect the patient to thrive on this diet and treatment for a fortnight, and if evidence of indigestion should appear, return to the other form of peptonized milk.

The history above narrated, with the details of treatment and diet, is not supposible, but is an abstract from clinical experience.

Several years since, when summoned to care for an infant with intestinal disturbance and artificially fed, I expected it would die; and in nothing did my foresight prove more reliable. But now such cases so commonly recover, and it is so great a satisfaction to behold that the helpless little creatures grow in vigor, that there is compensation for all the time and care spent in digesting their dinners for them. As time and development advance, the baby may be successfully nourished on pure milk and water, and, later, farinaceous matter may be added. The diastatic properties of malt extract are at length understood by the profession in the treatment of disturbances in older patients, yet I do not see these well-known principles exercised in treating indigestion in young children. Before a child can successfully assimilate starchy food, it will flourish upon the same if it be mixed with the extract of malt. By this I mean that when bread and milk disagrees with and retards, bread and milk, in which a little malt extract is dissolved, favors comfortable digestion.

If people will persist in feeding infants on oatmeal, Imperial granum, *et hoc genus omne*, in the form of pap, let a little malt extract be used to sweeten the mixture.

It would be impossible, within the short space at my command this evening, to cover all the phases of the intestinal diseases of children. While I have really examined—yet not exhausted—a single type of these diseases, this may serve to bring out the central truths that bear upon allied conditions.

The child is undeveloped, is in a state of growth; some organs are occasionally behind their neighbors in the process; and the structures are yet so embryonic that much rest is needed for their repair.

Nature's food is adequate, and deviation from it perilous. In substituting, let us imitate nature; and to succeed, let us study physiology rather than advertisements.

Organic chemistry has not attained the secret of transforming cereals into breast-milk, and the philosopher's stone is undiscovered.

Physiology is the law of common practice. A respite may be granted, a ransom may be received, but lawlessness is always punishable.

I affirm with confidence that the methods of using milk set forth in this paper are physiological, and in compliance with the well-known law that an alkali excites an acid, and an acid excites an alkaline secretion. And not only this, these methods subserve another purpose, in assisting the stomach secretions on one occasion, and the intestinal secretions on another, thus inducing a fair division of rest and activity. Furthermore, I consider peptonization the greatest practical advance that has been made recently in the management of infantile diseases.

And after all, healthy infancy is largely a question of diatetics. What else remains has been epigrammatically stated by an eminent Italian, to be, "A clean skin, a sunny room, and a bottle of castor oil in the cupboard."

371 Porter Ave., Buffalo, N. Y.

Clinical Reports.

Removal of Bursæ of the Wrist by the Operation of Extirpation.

By Charles C. F. Gay, M. D.

At a recent meeting of the New York Surgical Society, *Dr. A. C. Post narrated the case of bursal swelling at the back of the wrist, for which he operated successfully by puncturing the cyst, whereupon Dr. Sands "inquired how frequently the members of the society had performed cutting operations for the cure of this disease, as it seemed to be a question of considerable interest at the present time; that his knowledge of extirpation of such ganglia had been limited to two cases; the first case was successful, but the second case left the hand nearly useless."

*Feb. 20, 1885, *New York Medical Journal*, March 14th, page 312.

The question propounded by Dr. Sands—accompanied by the statement that a hand had been rendered useless after the operation of extirpation—has induced me to look through my record of cases of operations by compression, free or subcutaneous incision or puncture, ligature and extirpation. I have selected two representative cases of the latter, and transcribe them from my notes precisely as they were recorded at the time, or immediately after the operations were made, although subcutaneous incision may be included in the term "cutting operation," yet the doctor has reference only to operation by extirpation; hence, other methods of cutting, of which I have notes, will not be here considered.

Case I.

Bursa upon the Front of the Right Wrist, of Four Years' Duration.—Operation by Extirpation.

Mr. B., *act.* thirty years, has tumor upon the front of the wrist, which began to show itself four years ago. The tumor is now large and extends out upon the palm of the hand. There is numbness of two fingers, and when the fingers are extended there is much pain; for this reason, the fingers are kept flexed. Three years ago, the patient was treated three times by application of electrolysis, which was very painful and served no good purpose. At my office I etherized the patient, applied Esmarch's bandage, and, assisted by Dr. Bartow, made an incision over the tumor one and a half inches in length. Dissection was carried forward, care being taken not to open the sheath of the tendon until it was found impracticable to remove the sac entire, when the sac was opened and its contents evacuated, which consisted of a teaspoonful of matter resembling boiled rice. The larger portion of the sac was now excised, leaving a small part of it in the wound. The edges of the wound were brought together and secured by two silver sutures, and dressed by wet compress and bandage. Three months after the operation, the wrist was entirely well and strong, and has remained so ever since, with no

recurrence of the disease; it being now about six years since the operation was made.

Case II.

Bursa of the Back of the Wrist, of Two Years' Duration.—Operation by Extirpation.

Miss A. G., *act.* 30 years, has a bursa upon the back of the wrist, about the size of a large hickory nut, located chiefly upon the ulner border of the wrist, which has become very troublesome and painful. She thinks it was caused by lifting a tub of water. At my office, the patient was etherized, Esmarch's bandage applied, when, assisted by Dr. Warren, I removed the greater portion of the sac by careful dissection.

Believing the function of the joint would be imperiled by attempt to remove the sac entire, it was excised, leaving a small portion of it in the wound. The sac contained a thick, translucent fluid. The wound was closed and secured by two silver sutures, and dressed by wet compress and bandage. Three months afterwards, the cure was perfect. There has been no return of the disease, three and a half years sinc e the operation; the wrist being quite as strong as it was before the operation.

At the time I performed these operations, I thought I had strong ground for suspecting a recurrence of the disease, inasmuch as I was obliged to leave a portion of the sac behind, which might serve as a nucleus for another growth, but the results show that my suspicions were unfounded. The successful issue of these cases may help to resolve doubts as to the propriety of the operation by extirpation. If there be no danger of recurrence of the disease, when a portion of the sac is allowed to remain, it is the best operation for the cure of bursal tumors of the wrist. The age of the tumor will, however, influence the surgeon in making choice of the method of removing the tumor. The contents of a recent cyst will be more fluid and less concrete in character than the contents of an old cyst; hence, subcutaneous punction may be advisable for the former, and extirpation in case of the latter.

An Unusual Case of Fracture of the Skull—Trephining—Recovery.

By W. S. Tremaine, M. D.,
Surgeon-in-Chief Buffalo Hospital of the Sisters of Charity, Etc.

On December 16, 1884, I was called on by Dr. Banta, of this city, to see with him in consultation, Otto M. German, aged 32, who had been struck, the previous day, on the head by some bricks from a falling house. For a few hours subsequent to the injury, he was conscious and rational.

When I saw him on the 16th instant, about 24 hours after the accident, he was unconscious, without paralysis, with a pulse of 60; respiration slow but not stertorous; temperature, normal.

Careful examination of the head showed no external marks of violence. There was some ecchymosis of the left eyelid, with sub-conjunctival effusion, suggesting the possibility of fracture of the base of the skull. As the most careful examination showed no contusion of the scalp, no evidence of depressed or other fracture, so far as manipulation could discover, I recommended that a purgative be given, and further developments awaited. Next day, Dr. Banta informed me that his symptoms were graver, and that the friends were extremely anxious that something positive should be done. It was decided to remove the patient to the Emergency Hospital, where, assisted by Drs. Banta, Mickle and Potter, I again made careful examination, and beyond the very *slightest* ædæma over the left forehead, nothing could be discovered. The man at this time was profoundly unconscious. Pulse, 50; respiration, sighing. I had his head shaved; at about the middle of the upper part of the left parietal bone, a scale of what appeared to be black dirt, about the size of a dime, was scraped off, and beneath it was a faint bruise about half the size of a dime. I made an exploratory semi-lunar incision around this point, turning up the scalp, when I found two fiss ured fractures of the skull passing from behind forward V-shaped. At the apex of the triangle formed by these fissures, a triangular piece of bone was depressed; a linear fissure extended from this forward.

The trephine was applied, and this piece of bone elevated. A clot was found between the cranium and dura mater. On removing this, a rent was discovered in the dura mater, with the clot extending beneath it. A sharp arterial hemorrhage came on, evidently from a vessel in the dura mater. In order to find the bleeding point and secure it, an additional button of bone was removed. About this time the bleeding stopped; it undoubtedly came from a vessel wounded at the time of the accident. The wound was dressed antiseptically with iodoform, after thorough irrigation with mercuric bi-chloride solution, 1 to 1000. Towards the close of the operation, the patient manifested symptoms of returning sensibility; no anesthetic was used. Ten minutes after the last dressing was applied, he gave his name correctly, and asked for something to eat. The next morning consciousness was complete; he was quite rational. Uninterrupted recovery took place; he was discharged, cured, Jan. 12th, 1885.

Of course, the chief interest of this case centers in the difficulty in discovering the exact seat of the lesion in the skull, and demonstrates the utility of thorough search. This man's life was undoubtedly saved by decided and prompt operative interference: It is unnecessary to discuss here the currents and counter currents in regard to the use of the trephine, to be found in surgical literature, the widest difference of opinion prevails. But one thing, to my mind, seems certain, that the operation of trephining adds but little to the danger of the patient, proper antiseptic precautions being taken and competent operative skill understood.

After considerable experience in injuries of this class, and careful reading of the literature pertaining to the subject, I have come to the belief that in cases of doubt the use of the trephine as an *exploratory* measure is justifiable.

The indications for operative interference are admirably set forth in a paper recently read before the American Surgical Association by Dr. Roberts, of Philadelphia.

Society Reports.

Buffalo Medical and Surgical Association.

Meeting of May 5, 1885.

The President, Dr. Charles G. Stockton, in the Chair; Dr. Frank H. Potter, Secretary.

The names of Drs. H. Bauer, S. T. Howell and F. R. Campbell were presented for membership, and upon separate ballots they were declared duly elected.

Dr. Stockton then delivered his inaugural address, in which he called attention to the position the Society had occupied in the profession in former times, and mentioned some of the illustrated names connected with it. He had two suggestions to make for the work for the coming year: 1st. That the papers presented to the Society should receive, and were entitled to receive, the freest criticism. It was only in this way that the subjects considered could be thoroughly brought before the Society, and the differences of opinion in the profession made manifest. He hoped the discussions during his term as President would be made one of the interesting features of the meetings. 2d. He thought that in this matter of criticism too much deference was paid to authority. Each man's opinion should be presented without fear, even if they differed from those held by others whose teachings are received with respect by the profession. As an illustration, he instanced the opinion of Prof. Austin Flint upon the question of diet. The advice given by the latter to eat as much as you liked and whenever you were hungry, he considered to be at variance with sound physiological principles. Only one step more was needed, and we would be told that mastication was unnecessary, and that we could get along just as well by "bolting" our food, like the anaconda.

Dr. James W. Putnam then read the paper of the evening, entitled the "Causes and Treatment of Lithæmia." This paper will appear in a future number of the Buffalo Medical and Surgical Journal, and an abstract is, therefore, omitted.

In the discussion—

Dr. F. W. Bartlett reported a case in which the symptoms had been severe, but which had yielded to treatment similar to that advised by Dr. Putnam. He called attention to the fact that the nails often presented transverse, instead of longitudinal, lines in patients suffering from lithæmia, and said that Bright's disease and some other diseases, such as endocarditis, might often be primarily cases of lithæmia.

Dr. M. D. Mann had had some personal acquaintance with the disease in question. He believed heredity to be a very important factor in the disease. Some members of a family might suffer from gout, others from rheumatism, and still others from lithæmia, as it had been described by Dr. Putnam. He had also observed that women at the menopause frequently suffered from this disease. Among the symptons of which they complained at this time, he specially mentioned great irritability of the bladder and a watery leucorrhœa associated with an elytritis of a low grade. These and their other symptoms might often be made to disappear by careful attention to the diet and exercise. As to treatment, he preferred a meat to a vegetable diet. He thought Dr. Putnam had not sufficiently considered the important part the starches and the sugars played in the production of lithæmia. It was important to avoid the use of them altogether, if possible, in these cases. It was also necessary for the patient to abstain from alcohol, beer, and the sweet wines, as they were potent factors for evil. Thorough mastication was likewise an important point in treatment.

Dr. Cronyn thought the question of heredity had some bearing on the difference in the lines of treatment advocated by Dr. Mann and Dr. Putnam. He called attention to an order of the Roman Catholic Church—the Trappists—whose members never suffered with gout. They lived exclusively upon a vegetable diet and drank no wine. They generally attained to a very old age.

Dr. Hinkel considered lithæmia a not infrequent cause of recurrent amygdalitis. Catarrhal conditions of the mucous

membranes of the air-passages were also produced by it. He believed in the line of treatment advocated by Dr. Mann.

Dr. W. S. Tremaine had suffered from the disease, and had tried various sorts of treatment with varying degrees of success. He believed that, on the whole, the avoidance of the starches and sugars would give the best results. Mastication he considered of the greatest importance. This was apt to be neglected, and it was necessary to instruct the patient particularly on this point.

Dr. Wetmore had also suffered from the disease, and added his testimony to that of the others concerning its symptoms and treatment. In his case, one of the earliest symptoms was a sore throat. He believed there was reason in both methods of treatment, and that the cases should be carefully classified before the treatment was decided upon. A peculiarity of some cases was in the urine remaining normal, not showing a deposit, as was observed in the majority of cases.

Dr. Tremaine confirmed this observation about the urine. He said its acidity was not increased, although the patient presented many of the symptoms due to the lithæmic condition.

Dr. Putnam said he always prohibited the sugars and alcoholic liquors, as well as all fried meats, pork, bacon, etc. He believed that the difference in the results was due to the difference in the cases.

The quantity of food was as important as its quality. Too large an amount favored the production of lithæmia, from the inability of the system to assimilate it. The tendency of many cases of gonorrhœa to become gleet was due to the lithæmic condition, and relief was obtained by the alkaline treatment.

The prevailing diseases reported were measles, scarlet fever, pneumonia and inflammatory rheumatism.

The President appointed Drs. F. W. Hinkel, J. W. Putnam and E. H. Long as the standing Financial Committee for the ensuing year.

The Society then adjourned.

Transactions of the Buffalo Obstetrical Society.

Stated Meeting, May 26, 1885.

The President, Dr. W. W. Potter, in the chair; Dr. William H. Thornton, Secretary.

Dr. Charles G. Stockton read a paper on "The Treatment of Intestinal Diseases of Infancy." [See Original Communications, page 541.]

Dr. Thomas Lothrop most thoroughly and cordially endorsed the views expressed in the paper. He argued with the writer in the place of treatment proposed, based as it was upon strictly physiological principles, and stated that it was the greatest advance made since he had been in practice in the treatment of infantile diseases of the intestinal tract. He believed that the successful treatment of these cases, speaking generally, was more a question of management in regard to feeding than of mere drug-giving. When the profession would take this view and address itself to the perfection of infant feeding, he thought more good would be accomplished and better results obtained in reducing infant mortality.

Dr. C. C. Frederick had become familiar with the writer's views and with his plan of management in these cases, in the last year or two, from association with him in the case of a number of patients. He had put into practical use the treatment recommended, and found it, with scarcely an instance of failure, to prove efficient, and promptly so, even when other plans have been tried and failed. The plan of preparing the food according to his instructions might appear, at first, a little difficult, but with some practice and patient attention to details, most mothers and nurses soon acquired proficiency in this regard, and became quite expert in the preparation of the food.

Dr. F. H. Potter said that often a correct plan of action had been formulated, as had been so admirably done by the author of the paper, it only remained to obtain familiarity with its details to ensure success. Upon thoroughness in the technique, rested the successful application of the measure to practice. He

thought it would be difficult or impossible to obtain the pure milk, insisted upon so properly by the writer as essential to the proper foundation of his line of treatment, from cows stabled and fed in the "cow barns" in this city. These distillery-fed animals certainly did not appear healthy, and he looked upon their milk with suspicion. He thought it very important for the doctor to examine into the sources of the milk supply when treating these cases with a view to the correction of errors at the fountain head.

Dr. P. W. Van Peyma was reminded by the paper of the fact, which he believed was admitted, that the children of the other countries, especially European, did not suffer with these diseases as much as children in America; that summer complaint, so-called, was more prevalent in the United States than in Europe. He did not pretend to offer any explanation of the difference, as he had never been able to determine the reasons for it, but simply spoke of it as interesting, and as having some bearing in explanation of our apparent want of success in the treatment of the diseases in question. He called attention to the influence which the nervous system exerted over these cases, and suggested the importance of carefully ministering to the nervous phenomena when they preponderated; also of guarding against sudden changes of temperature, and all things that predisposed to fermentation.

Dr. M. Hartwig, while he thoroughly enjoyed the philosophical and agreeably written paper, regretted that the writer had confined himself to the chronic forms of ill-nutrition, passing with mere mention that form of indigestion pertaining to breast-fed children. In regard to the means employed, he could see no good foundation for ipecac wine. He had observed certain advantages in the use of salicylic acid in very minute doses, to prevent fermentative changes. He thought there would be difficulty in carrying out the details of the writer's plan in poor families.

Dr. J. W. Keene had tried the plan of peptonizing milk, and had come to look upon it as a good deal in the line of the last

new thing, which was the universal panacea. He had found difficulty in getting children to take peptonized milk on account of its taste; thought it could only be properly prepared by an experienced person. He had employed condensed milk considerably, and found it to work satisfactorily, when properly prepared, in most instances; though, of course, there were cases when that, or anything else for that matter, would not be well borne.

Dr. W. S. Tremaine was impressed with the unanimity of sentiment in the meeting, and how well the members agreed with Dr. Stockton, showing that his treatment must be correct. He was, however, surprised that the doctor had not given us the name, species, order and genus of the microbe that causes the diseases referred to! This seemed to be so much the fashion now-a-days that its omission was alike notable and refreshing.

He corroborated Dr. Van Peyma's statement regarding the greater prevalence of infantile diarrhœa in this country than in Europe; thought it might possibly be due to the preponderating influence of the nervous system over the physical organism. He thought the influence of long-continued hot weather, producing innervation, so that indigestion does not properly go on, might be one potent cause of these diseases. He believed in the use of calomel and gray powder in the treatment of infantile diarrhœas, to be given in the early stages. He had tried peptonized milk with adults, but found that, owing to its unpleasant taste, they would seldom take it long enough to be beneficial.

Dr. H. D. Ingraham agreed with the writer of the paper in regard to the use of peptonized milk. He had used it himself and was very much in favor of it, though he found it difficult oftentimes to get it properly prepared. His experience with the formula given for pancreation and soda was that the quantity of soda was too large. Did not have difficulty in getting children to take properly peptonized milk.

The President alluded to the fact that the mother's milk was frequently difficult in its watery constituents, and, as a consequence, contained an excess of solid matter. This was especially

the case with the working mothers, who perspired excessively, and this was one reason why breast-fed children did not thrive. In each case, he would supply them with liberal quantities of pure water. He believed in the proposition of Dr. Van Peyma, reiterated by Dr. Tremaine, that intestinal diseases of infants are, if not caused, at least aggravated by some peculiar influence of the nervous system, rendering it difficult to treat them efficiently and successfully, unless this important factor was recognized and carefully ministered unto. He raised the question whether it was so much heat as sudden changes from cold to heat and *vice versa* that caused infantile diarrhœas. The mortuary records of the cities always exhibit a large number of deaths from cholera infantum, while, as a matter of fact, this was not a very common disease. He took the occasion to say a word against the careful manner in which death certificates were made up. There was a looseness of nomenclature which rendered health board statistics nearly valueless for purposes of scientific research. He referred to a paper by Dr. Alex. Hutchins on salicylate of calcium in serious diarrhœas, and expressed a favorable opinion in regard to the salicylates in these diseases. He opposed the use of the bromides as routine practice ; they irritated the intestinal tract very frequently, besides increasing cerebral anæmia, a condition so desirable to overcome. He expressed very little faith in lime waters, so far as the alkaline properties were concerned, but was decidedly in favor of the bismuth treatment. He gave the latter in larger doses than usual—fed it in form of cream with water and gum arabic—the only limit being the amount a child will take when the case is extreme. He opposed the use of astringents as a rule, but favored the employment of anodynes to allay nervous perturbation, and cordially approved of the methods set forth in the paper as to artificial feeding. With pure milk, artificially digested when necessary, fresh air, wholesome water and scrupulous cleanliness, these cases were placed in as favorable a condition for recovery as possible, requiring very little medicine and much management.

Dr. Stockton, in closing the discussion, stated that he had

employed peptonized milk in more than one hundred cases, having used it in every case when indicated, for two summers, and it was from this experience that his views had been given to the Society. He thought there was no difficulty in getting pure milk in Buffalo, and mentioned the supply from a number of cows as being preferable to the milk from one cow, the popular idea to the contrary notwithstanding. The long-continued use of artificial food of any kind, excepting milk, was certainly detrimental. He thought that failure in peptonizing milk was due to lack of careful or scientific attention. It was a matter that needed a little knack, and that was all there was of it. It should not be made too bitter, and he seldom found trouble in getting infants to take it, unless it became necessary to very thoroughly peptonize it, then they sometimes declined it on account of its bitterness. Believed in the importance of fresh air, and endorsed the bismuth treatment; but thought the nervous element probably the most important part of the whole subject.

Medical Society of the County of Erie.

Semi-Annual Meetng, June 9th, 1885.

The semi-annual meeting of the Medical Society of the County of Erie was held at the Y. M. C. A. B uilding on Mohawk street Tuesday, June 9th, 1885. The meeting was called to order at 10.30 A. M. by the President of the Society, Dr. J. B. Andrews, and the following members were present, viz.: Drs. Cronyn, F. F. Hoyer, Pryor, VanPeyma, Persons, Willoughby, G. W. McPherson, Johnson, Barnes, Haberstro, Wetmore, J. H. Potter, Wm. G. Ring, Wm. Ring, W. D. Bidaman, F. W. Abbott, Gay, F. H. Potter, S. H. Warren, J. W. Putnam, Dorland, W. W. Potter, B. P. Hoyer, Hubbell, Croakley, Briggs, Gumaer, B. G. Long, Bailey, Frederick, Mary Berks, Armstrong, Keene, Sheehan, Walsh, Brecht, Rochester, Howe, O'Brian, Ballou, Vandenberg, Gregory, Ellwood, Bissell, Packwood, Barker, Wilson, Samo, Runner, Hayd, Mullen, E. H. Long, Crawford, Daggett,

INDEX.