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CANADA

MEDICAL & SURGICAL JOURNAL.

A Monthly Record of Medical and Surgical Science.

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CANADA

MEDICAL & SURGICAL JOURNAL

AUGUST, 1885.

Original Communications.

EXTRA-UTERINE FETATION TREATED BY ELECTRICITY.*

REPORT OF A SUCCESSFUL CASE, WITH REMARKS.

By WILLIAM GARDNER, M.D.,

Professor of Gynæcology, McGill University; Gynæcologist to the
Montreal General Hospital.

Mrs. —, æt. 38, married 19 years, four pregnancies all to full term, natural labors, slow recoveries. Ever since the birth of her second child, 16 years ago, has suffered from symptoms of uterine disease. The last child was born $9\frac{1}{2}$ years ago. Since then the uterine symptoms have been worse, consisting of pelvic and lumbar pain, bearing down sensations, profuse and protracted menstrual periods and leucorrhœa. The last appearance of menses previous to the symptoms about to be detailed occurred about October 1st, 1884. On the 16th of October a single complete act of coitus occurred, there having been complete abstinence for many months previous and subsequently during the interval before patient's illness. After the 16th of October she did not again menstruate, but had slight discharges of bright red blood, lasting one to two days and occurring at irregular intervals. She suffered from indigestion, nausea with occasional vomiting, and suspected that she was pregnant. On the 20th of December following, my friend, Dr. Gurd, had an urgent message to see her, and on arriving found that she had been suddenly seized with violent pelvic

* Read before the Medico-Chirurgical Society of Montreal.

and abdominal pain, vomiting and faintness, amounting almost to collapse; the pulse was weak and the surface deadly pale. Pain was principally referred to the right iliac region, and here also marked tenderness and induration were noticed. Next day, the patient seeming to be worse, I was asked to see her in consultation. On vaginal examination the uterus was found to be prolapsed and retroverted, the vaginal portion so low that it lay immediately within the vaginal orifice. To the right of the uterus, and adherent to it, lay a firm mass. Rectal examination merely confirmed the results of vaginal examination. Hæmatocele was considered to be the probable nature of the case. Morphia was freely given to control pain. The symptoms speedily subsided, but never completely disappeared, although she was able to sit up. Two or three weeks later another similar but milder attack occurred. A third and more severe occurred towards the end of January. During this latter, I again saw the lady several times with Dr. Gurd. Five weeks had elapsed between my first and second visits. Meanwhile the doctor, as a result of frequent visits and observations of the progress of the case, of the development of areola and follicles around the nipple and pigmentation of the linea alba and lower part of the abdomen, and because of steady increase in size of the mass in the right iliac region, began to suspect extra-uterine foetation. In this opinion I could not but concur. There were, however, some doubtful points. The tumor, it is true, had increased in size, but it felt solid; no distinct evidence of fluctuation could be had, no ballotement certainly. On the other hand, the softening and swelling of the cervix had become exceedingly well-marked. The prolapsed vaginal portion lay in the vaginal orifice, the elongated anterior lip projecting through it. Early in February *bruit de souffle* became distinctly audible over the tumor, which now extended upwards to a line drawn transversely on a level with the anterior superior spine of the ilium, and laterally to a line $\frac{3}{4}$ in. to the left of the middle line, completely filling the space between these lines and the margin of the pubes below and the crest of the ilium on the right. The most careful and repeated auscultation revealed

no foetal heart sounds. Vaginal examination showed the pelvis to be almost filled by the enlarging mass, together with the swollen, softened and retroverted uterus. I now ventured to pass the sound, which entered four inches, the concavity being backwards, and seemed to indicate an empty cavity.

The evidence being so strong, we now decided to use electricity. A strong Faradic current—as strong as the patient could bear it—was passed through the tumor. An olive-shaped insulated metallic bulb, coated with chamois leather, was made the terminal of one pole introduced within the rectum, while by an ordinary sponge electrode the other was applied over the tumor in the hypogastrium. The applications were of seven minutes' duration, and repeated daily five times and every other day twice. The immediate effect was to increase the size, pain and tenderness of the tumor. After the third or fourth application the *bruit de souffle* was stilled. In a few days after the cessation of the faradisation, a marked diminution in the size of the mass took place. The pain and tenderness had also markedly subsided. But shortly afterwards labor-like pains and moderate bleeding came on. On the second day of these symptoms, I visited the patient and found the cervix so dilated that I could with perfect ease reach the fundus with my finger. A decidual membrane was being detached from the endometrium, otherwise the cavity was empty. This membrane I peeled off. The bloody discharge ceased in a few days. After this she improved so much that I ventured to consent to her leaving her bed and going to a couch in the same room, but this proved unfortunate, for she immediately began to suffer from what we took to be symptoms of inflammation and suppuration in the tumor. It became very painful, tender and swollen, and presently a red blush with slight oedema of the surface appeared. Temperature rose three or four degrees, and altogether her condition gave us much anxiety for a week or two. These symptoms occurred on the closing days of March and first week of April. During this period, while I was absent in New York, she was seen by my friend and colleague, Dr. Shepherd. The question of incision and drainage of the supposed abscess cavity was seriously con-

sidered, but unexpectedly she began to improve in every respect, and a few weeks afterwards was able to leave her bed.

On the 15th June I had an opportunity of visiting and examining the patient. I found her out of bed, dressed, and able to go down stairs. She was pale and thin, but expressed herself as having a fair appetite and good digestion. She had menstruated twice since the beginning of April; profusely on both occasions. Slight pain of hypogastrium still complained of, increased by exertion. Bladder still irritable. On examination, the tumor in the right iliac region is still present, but greatly reduced in size. Per vaginam, the mass to the right of the uterus is to be felt, but also reduced in size. The uterus is decidedly firmer and smaller, measuring $3\frac{1}{2}$ inches.

Remarks.—That the case now related was really one of extra-uterine foetation can, I believe, admit of no doubt. The history, symptoms, the suspicions of the patient, the result of pelvic examination, the results of treatment, and, lastly, certain events after the use of the electricity, particularly the labor-like pains, hæmorrhage and expulsion of decidual membrane, combine to form a mass of evidence which cannot be controverted. The induration of the mass was perhaps exceptional, but easily enough accounted for by peritoneal and cellular inflammatory thickening. As regards the particular part or organ in which the foetation was lodged, there does not seem any reason to doubt that it was (at least primarily) the relatively common tubal variety. The history and previous symptoms further show that the case is no exception to the rule that extra-uterine pregnancy occurs in women advanced in sexual life who have hitherto been sterile, absolutely so, or for a long term of years, and have suffered from pre-existing uterine disease. It is more than likely that there was chronic disease of the Fallopian tubes, with its obvious predisposition to the condition.

Extra-uterine pregnancy justly excites much interest in the medical mind. The difficulty of diagnosis in many cases, the fact that in a goodly number no opportunity has been afforded to make a diagnosis, the patient either not having consulted a practitioner or no examination having been made, the sudden

tragic, perhaps fatal termination being the first intimation of the true nature of the case, amply account for this. Within the last five years this interest has become more intense. This is in part due to the fact of increased activity of discussion of all gynæcological topics, but mainly to the success of certain modern methods of treatment. I have alluded to the difficulties of correct diagnosis. But it is, indeed, doubtful if it be much more difficult to diagnose extra- than intra-uterine pregnancy during the first three months. All who make frequent examinations of the female sexual organs, or who are much consulted in this class of cases, will agree with me that it is often necessary for all but rash men to suspend judgment till, by the lapse of time, a doubtful case is cleared up. The treatment of extra-uterine fœtation by electricity and other agents which have for their object the death of the fœtus, to be successful, must be employed early, preferably between the second and third month, otherwise the fatal rupture so often occurring at this period may not be anticipated. Hence the importance of early diagnosis. Failure to diagnose the condition is doubtless sometimes due to an impression in the professional mind that the condition is extremely rare. This is erroneous. Dr. Garrigues of New York, while preparing a paper on the subject for the American Gynæcological Society three years ago, read the reports of 200 cases all published within four years. In January 1885, Thomas reported to the New York Obstetrical Society his thirtieth case. It is, of course, uncommon, but, compared with many other abnormalities of gestation, it is not so very rare. As in many other conditions difficult of diagnosis, mistakes would be few if it were borne in mind as one of the causes of pelvic symptoms, and, above all, if careful systematic examinations (under ether if necessary), were made.

To Dr. J. G. Allen of the United States we owe the successful employment of the faradic current in extra-uterine pregnancy. His first case occurred in 1869; the second in 1871. Since then, and especially during the last five years, a goodly number of successful cases have been reported, especially in the United States. The galvanic current, applied by puncture and exter-

nally by interruptions, has also been successfully employed, but it is more troublesome by whatever method selected, and no more efficacious than the induction apparatus. The dangers of puncture, from inflammation and suppuration of the sac are such as to render it, in my opinion, quite unjustifiable. Notwithstanding these facts, the value of the method is far from being generally appreciated, especially in Britain. The Barnes', father and son, in the first volume of "Obstetric Medicine and Surgery," published in 1884, dismiss it with a notice of a line and a half, giving it no prominence: on the contrary, rather advocating tapping of the cyst with the aspirator needle in preference to any other treatment. A great merit of the faradic current is that it is so easily applied as to be within the capacity of the merest tyro in the therapeutic use of electricity. In the great majority of successful cases, the current has been applied as described in our case. Another great advantage is, that if unsuccessful, it can do little, if any, harm. In case of mistaken diagnosis, if the pregnancy be uterine, the worst result is abortion. Such an occurrence cannot be admitted as an argument of any weight when the probability of the existence of so grave a condition as extra-uterine foetation is great. The other great step in the treatment of extra-uterine pregnancy is an outcome of the rapid progress of abdominal surgery, and is one of Mr. Lawson Tait's many contributions to that department of surgery. It is for the most part applicable to cases in which suddenly occurring and urgent symptoms of rupture and hæmorrhage are present. It consists in abdominal section, removing the foetus, clots, etc., ligating the affected tube, and then excising it. The indications then in the treatment of extra-uterine foetation when diagnosed during the first four months seem clear. If no evidences of internal hæmorrhage be present, the induced electric current is to be used with the object of killing the foetus. If rupture have occurred, however desperate the symptoms, the belly is to be opened, and the bleeding point having been secured, the cavity is well sponged out and drained before being closed. The case here reported is offered as a contribution to the literature of the subject, and is, so far as I know, the first reported case treated by electricity in the Dominion.

NOTES ON THE MORBID ANATOMY OF TYPHOID FEVER.*

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Historical note.—The careful study of the morbid anatomy of continued fevers led to the recognition of typhoid or enteric fever as a specific disease. The younger men among us can scarcely realize that the generation has not yet passed away by whose labors the profession finally reached a clear and positive knowledge of the differences between typhus and typhoid fevers. The dates 1813 and 1850 include the modern discussion of the subject. Long before 1813, however, many observers had noted the clinical differences between the diseases, so well laid down by Huxham in his essay on Fevers (2nd ed. 1750); and Baillie had figured and others had described the intestinal lesions of fever, but in that year Pierre Bretonneau of Tours distinguished “dothinerite” as a separate disease, and Petit and Serres described entero-mesenteric fever. Trousseau and Velpeau were students of Bretonneau, and in 1820, when they went to Paris, were instrumental in making known his views to Andral and others. In 1829, Louis’ great work appeared, in which the clinical and anatomical features of the disease were presented in a manner not previously attempted. The constancy of enteric lesions was demonstrated, and the name *typhoid* given to the disease. At this period, in Paris, typhoid fever alone prevailed; and it was universally believed to be identical with the continued fever of Great Britain, where, in reality, both typhus and typhoid existed together, and the intestinal lesions were regarded as accidental occurrences in the course of ordinary typhus. Meanwhile Louis’ students, returning to their homes in different countries, had opportunities of studying the prevalent fevers in the thorough and systematic manner of their master. Among these were certain young American physicians,

* Part of third Pathological Report from the Montreal General Hospital.

to one of whom, Gerhard of Philadelphia,* is due the great honor of having been the first to clearly establish the difference between the two diseases. His papers, published in 1837 (*Amer. Jour. Med. Sciences*), are undoubtedly the first in any language to give a full and satisfactory account of the clinical, pathological and anatomical distinctions such as we now recognize. No student should fail to read these articles—among the most classical in American medical literature. Louis' influence was early felt in Boston, to which, in 1833, James Jackson, Jr., had returned, and in the same year demonstrated in his father's wards at the Massachusetts General Hospital the identity of the common typhus of the country with the typhoid of Louis. He had already in 1830 noticed the intestinal lesions in New England typhus. Though cut off at the very outset of his career, we may reasonably attribute to the inspiration of the younger Jackson the two elaborate memoirs on typhoid fever which, in 1838 and 1839, were issued from the Massachusetts General Hospital by James Jackson, Sr., and Enoch Hale. These, with Gerhard's articles, contributed to make typhoid—as distinct from typhus—widely known to the profession in America long before the distinctions were recognized in England. The recognition in Paris of a fever distinct from typhoid, and without intestinal lesions, was due largely to the influence of the able papers of G. C. Shattuck of Boston and Alfred Stillé of Philadelphia, which were read before the Société Med. d'Observation in 1838. At Louis' request Shattuck went to the London Fever Hospital to study the English disease, and quickly saw that there were two distinct affections, and brought back a report which must have been very convincing to the members of the Society. Stillé had the advantage of going to Paris knowing thoroughly the clinical features of typhus, for he had been Gerhard's house-physician at the Philadelphia Hospital, and had studied the disease under him in the epidemic of 1836. At La Pitié with Louis he saw quite a different affection, while in London, Edinburgh, Dublin and Naples he recognised his old Philadelphia foe. The results of his observations

* Pennock was associated with Gerhard in his studies upon Typhus.

were given in an exhaustive paper, which presented in tabular form the contrasts and distinctions, clinical and anatomical, between typhus and typhoid fevers.

British physicians were curiously slow in recognizing the affections as distinct, and persisted in regarding the enteric lesions as only occasional concomitants of typhus. There were, however, notable exceptions. My preceptor, Bovell, always maintained that Bright, whose pupil he was, knew and taught the differences. True, we are indebted to the distinguished Guy's physician for the most admirable description and delineations of the morbid anatomy of the intestinal lesions in his Reports of Medical Cases, Vol. I., 1827, and in the first article of the first volume of Guy's Hospital Reports he pleaded, from the facts of morbid anatomy, for a more rational method in the treatment of fever, and denounced the administration of irritating purgatives as tending to keep up the intestinal disorder; but I cannot find that he had a clear and distinct idea of two forms of fever—one with, the other without enteric lesions. Bright, however, strongly impressed upon his pupils and the profession the evil consequences of the purgative plan of treatment in fever—a plan by which, as Stokes asserted, British practitioners had killed thousands.* In Great Britain, the non-identity of typhus and typhoid was first clearly established at Glasgow, where, from 1836-38, Dr. A. P. Stewart studied the continued fever. The results of his observations were published in 1840, and his memoir has been reprinted (1884) by the New Sydenham Society. In the decade which followed many important works were issued and the more correct views gradually gained acceptance, but it was not until the publication of Jenner's observations, 1849-50-51, that the question was finally settled in England. The Irish physicians,

* The treatment of Fever forms an interesting and instructive chapter in the history of therapeutics, and illustrates the necessity of correct pathological views in the management of a disease. Nathan Smith, who in 1824 described the typhous fever of New England, was one of the first to advocate the rational or expectant treatment of the disease. With trifling exceptions, his method corresponds to "the most approved treatment of enteric fever of the present day" (1884), as given by Mahomed in the "Year Book of Treatment."

to whom we owe so much on the pathology and treatment of fever, were among the last to abandon the old views, and even as late as 1861 the identity of the diseases was maintained among them.

The extraordinary difficulty of establishing on an incontrovertible basis any great truth in medicine, is nowhere better illustrated than in the history of the subject which I have outlined in this imperfect and sketchy manner. Too often a truth has to grow to acknowledgment with the generation which announced it. After the intellectual climacteric—*la crise de quarante ans*—we assimilate new truths slowly,* and some by training become incapable of their reception. This was the case with many an ardent student of Fever, whose education had unfitted him to see a truth which the untrammelled mind readily grasped. Dwelling now in the clearer light and with fuller knowledge and looking back over the half century of doubt, dispute and discussion upon the question we have just considered, what lesson may we learn? Surely to see in it a picture of our own times—a picture the counterpart of which we can find any day in our current journals. The mists of doubt hang over many problems, disputes rage with the old intensity, discussion waxes hot, but by the light of history we can read with faith and trust the larger hope—in no faint manner—that a similar happy solution awaits many of the questions in pathology which to-day vex the mind of the profession.

Of the workers who were actively engaged in defining the distinctions between typhus and typhoid fevers three only, so far as I know, remain with us—Shattuck of Boston, Stillé of Philadelphia and Jenner of London. They, with their fellow-laborers who have passed before, have a claim on the gratitude of the profession which time can not efface but will rather deepen.

* * * * *

From 60 to 80 cases of typhoid fever are admitted yearly to the wards of the General Hospital; of late the number has, on several occasions, exceeded 100 annually. For the ten years

* True to-day as in the time of Harvey.

ending May 1st, 1879, 660 cases were admitted, and the death rate was a little over 10 per cent. I have notes of 53 autopsies, which are arranged in tabular form at the end of the article.

Thirty-six of the cases were in males and 17 in females. As Dr. James Bell's statistical report shows,* very many more men are admitted to the hôpital with fever, and the death-rate among them is slightly lower than in the women. Of 45 cases in which the age was given, 26 occurred in persons under 25 years of age.

In 16 cases there were no special complications.

“ 11 “ there was perforation with peritonitis.

“ 9 “ there had been hæmorrhage from the bowels.

“ 6 “ there were diphtheritic affections of mucous membranes.

“ 2 “ there was thrombosis of veins.

“ 3 “ pyæmia.

“ 9 “ affections of the respiratory organs.

ANATOMICAL LESIONS.—We shall speak first of the condition of the *alimentary canal*, in which the specific morbid changes chiefly occur.

No ulcers were met with in *pharynx* (or *larynx*). These parts were not examined in more than half the cases. In Germany ulcers in these regions seem to be much more common; the only cases I have ever seen were in the Berlin and Vienna *pôst-mortem* rooms. Murchison refers to them as rare in England. Necrosis of the laryngeal cartilages may occur. I have four or five large pieces of the *alæ* of the thyroid which were coughed up by a convalescent from typhoid, and I have recently had a patient with acute perichondritis which fortunately terminated in resolution.

There were no special alterations noted in *œsophagus* or *stomach*. The lesions of the *intestines* were all distinctive. The affection of Peyer's glands may be considered under the four stages recognized by all writers:

1ST STAGE. *Swelling and Hyperplasia*.—No matter at which

* *Montreal General Hospital Reports*, Vol. I., 1880.

period of the disease a patient dies, some of the patches will be found in this condition. It is rare, however, for death to take place before necrosis or sloughing has occurred. In *Case XVII.*, a girl, aged 24, died about the end of the first week with severe nervous symptoms. The patches of Peyer were much swollen, pitted and cribriform, but no sloughing had taken place. *Case XXXII.*, a man aged 63; there was great hyperplasia of the glands, particularly of the isolated follicles, but neither necrosis nor ulceration. The usual condition met with is sloughing or ulceration of the lower patches and swelling of the upper ones. In the early involvement one can frequently see with the unaided eye, or, better, with the assistance of a lens, the enlarged hemispherical follicles in a patch. The increase in size is due to a hyperplasia of the lymph elements, a process which also extends to the adenoid reticulation of the patches and the contiguous mucosa. The swollen condition of the lower part of the ileum is largely due to the great increase, intertubular and sub-mucosa, of the lymph elements. The affected patches usually appear with great distinctness, projecting from the mucosa for a distance of a line or two, and present a greyish-white appearance. They can be seen from the peritoneal surface, and the portions of the bowel in which they occur can be felt to be thicker and firmer than contiguous parts. The solitary follicles are not always affected; usually they are more or less swollen, and in rare cases they have been alone involved. They range in size from a pin's head to a large pea, and may be very deeply imbedded in the sub-mucosa. In the cæcum, appendix and colon the solitary glands may be greatly swollen. In *Case XXXII.* the solitary follicles of the ileum were very prominent, many of them almost pedunculated, which gave a very remarkable appearance to the bowel. There is generally hyperæmia of the mucous membrane, particularly about the patches, the situation of which may be plainly marked from the serous surface by deep congestion or ecchymosis. The swollen follicles undergo one of two changes—resolution or necrosis. In a majority of the patches the former process goes on. Even in the most severe cases, when six or seven feet of the bowel are involved, necrosis and ulceration do not often attack the

uppermost ones ; while in mild, abortive cases the swelling probably subsides without proceeding in any patches so far as sloughing and ulceration. On the other hand, a fatal result may occur while the glands are still in this stage, due to the intensity of the fever or the action of the poison on the nervous system. In connection with resolution, a curious condition of the patches is produced whereby the surface assumes a reticulated or cribriform appearance. These *plaques à surface réticulée*, which were first accurately described by Chomel, are very common, and may be produced in two ways. Either the swollen follicles of a patch undergo resolution and shrink more rapidly than the surrounding framework, or, what is more usual, I think, the follicles alone, owing to the intense hyperplasia, become necrotic and disintegrate, leaving little pits to mark their places. Small, superficial hæmorrhages may result from the rupture of vessels in this process. I have several times seen small ulcers which seemed to have originated from the fusion of several of these little pits.

Some have thought that the pigmentation which is found about the glands in the patches of Peyer indicated past swelling or disease of these parts, but it is so common that in persons over 25 or 30 years of age we may consider it almost normal. It is represented in Peyer's original figure.* It is important to remember that this condition of hyperplasia of the lymph elements is not peculiar to typhoid fever. In children it is exceedingly common, particularly when death has occurred from intestinal affections. I have seen it, too, in measles, diphtheria and scarlatina. E. Hale† gives a good account of it as met with in children, and Brunst‡ discusses the various conditions under which it has been found. While there is nothing specific and distinctive about the swelling of Peyer's patches in typhoid, yet in adults we rarely meet with affection of these glands, associated with fever, in any other condition. Cases of typhoid occur in which death takes place rapidly before any distinctive symptoms are mani-

* De glandulis intestinorum 1637.

† Typhoid Fever, Boston, 1839.

‡ Vol. X Transactions of Pathological Society of Philadelphia.

fested, and inspection of the small bowel alone reveals the true nature of the disease. Such a case I saw not long since with Dr. Sinkler. A lady came to town, a distance of several hundred miles, to see a specialist about her eyes, arriving on Thursday morning feeling apparently well. On Friday and Saturday she was seriously ill, high fever, temperature reached 105° , diarrhoea and semi-coma. Death took place on Sunday, less than sixty hours from the first visit of the attending physician. The nature of the case was demonstrated by Dr. Longstreth, who made the autopsy, and found swelling with commencing ulceration of Peyer's patches. No doubt before she left her home she must have had slight fever, and we had been dealing with a case of ambulatory typhoid, with sudden accession of fever and head symptoms.

2ND STAGE. *Necrosis and Sloughing*.—When the hyperplasia of the lymph cells reaches a certain grade resolution can no longer take place, the vessels become choked, a state of anæmic necrosis is induced, and a slough forms, which must be separated and thrown off. The process may be quite superficial, affecting only the mucous tissue of the patch or even only a part of it, but usually it extends to and involves the submucosa. In *Case XXVI*, there were many thin sloughs adhering to the patches, in which the follicles and pitted appearance could be distinctly seen. It is always more intense towards the valve, and in severe cases the greater part of the mucous membrane of the last foot of the ileum may be represented by a dirty brownish-black eschar. The solitary glands may also be capped with small sloughs. They have a yellow-brown color from the bile pigments. The depth to which the necrosis extends depends on the intensity of the lymphoid infiltration; it may be deep in the muscular coat, or even reach the serosa.

3RD STAGE. *Ulceration*.—The separation of the sloughs is gradually effected from the edges inwards, and is associated with great and unavoidable dangers, of which the opening of blood-vessels and perforation of the coats of the bowel are the most serious. The size of the ulcer is directly proportionate to

the depth and extent of the necrosis. When superficial, the entire thickness of mucosa may not be affected, and small, shallow losses of substance may frequently be seen in swollen patches. It is more common for the slough in separating to expose the submucosa and muscularis, particularly the latter, which forms the floor of a large majority of all typhoid ulcers. It is not common for an entire patch to slough out, and the perfectly ovoid ulcer opposite the mesenteric attachment is rare. Irregularly oval or rounded forms are the rule. A large patch may present three or four ulcers, divided by septa of mucous membrane. Very often the terminal six or eight inches of the ileum is one large ulcer, with islets of mucosa left here and there. The smaller circular ulcers have often a punched-out appearance, and may be funnel-shaped, the central deeper part of the slough having reached through the transverse fibres or even to the serosa. The edges are usually swollen, soft, sometimes congested, but in cases in which death has taken place late in the disease, they are thin and pale, and not always undermined. At this period the ulcers near the valve may have very irregular sinuous borders. Sometimes on a patch we may see an ulcer which has encroached upon the neighboring mucous membrane as if the ulceration had extended after the separation of the slough. The base of a typhoid ulcer is smooth and clean, usually formed of the circular layer of muscle fibres, occasionally of the peritoneum alone.

4TH STAGE. *Healing*.—When death occurs late in the disease from exhaustion or perforation, we may have an opportunity of studying the process of repair in the ulcers. Thus, in *Case XXIX*, death in the seventh week from septicæmia, all the ulcers in ileum were cicatrizing and one or two had completely closed. The process begins with the development of thin granulation tissue, which covers the base and gives to it a soft, shining appearance. From the edges, the mucosa gradually extends over this on all sides with a new growth of epithelium. The site of a healed ulcer is a little depressed, and is marked by pigmentation. Occasionally one sees an appearance as if an ulcer had healed in one part and was extending in another, but this is unusual. In some instances of relapse, with ulcers

healing in places there are fresh ulcers higher up in the bowel and patches in a state of hyperplasia. Theoretically, we may assume the healing to begin so soon as the sloughs have separated; indeed, when resolution is impossible, the removal of the necrosed parts is itself the first step in the process of repair, but practically we do not often in fatal cases meet with evidences of cicatrization. The majority of deaths occur before this stage is reached.

Large Bowel.—The cæcum and colon are frequently affected, but not to a severe degree. In nearly a third of the cases there were ulcers in the cæcum, and the solitary glands in this part and in the ascending colon were greatly swollen. In *Case XXIII.* the glands in the ileum were very small, while in the larger bowel they were very prominent. In one instance there was an ulcer in the appendix. In 1877 I dissected a case at the hospital, in which the patient died three or four months after an attack of typhoid fever. The appendix was perforated and surrounded by a localized abscess, and there was inflammation and suppuration of the mesenteric and portal veins with empyema.

Many cases of perforation of cæcum and of appendix in typhoid fever are on record.

Perforation.—In eleven instances death was caused by perforation and peritonitis. Of the ten cases in which it was noted, the orifice was found in seven within 8 inches of the valve. In only one was it distant 18 inches. In *Case XL.* there were two perforations—one at a distance of 7 inches, the other $2\frac{1}{2}$ inches from the valve. In five cases the perforation was in ulcers from which the sloughs had separated, but in three of these it appeared, from the condition of the other patches, that the perforation was directly due to the extension of the necrosis through all the coats. In only two was the perforation at the bottom of clean, thin-walled ulcers. In *Case I* the fatal result could be directly traced to an indiscretion in diet nearly two weeks after the temperature had been normal. In six instances the sloughs were still partially adherent about the site of perfo-

ration. A majority of the cases were in small, deep ulcers. Peritonitis was present in every case; in two it was localized in the lower abdominal and pelvic regions. In several instances the base of ulcers was formed, wholly or in part, of thin, greyish peritoneal tissue, evidently necrotic, and great care had to be exercised to prevent tearing in removal of the bowel. I have once or twice seen the serous coating covered with thin flakes of lymph in the vicinity of such patches.

Hæmorrhage occurred in nine cases, and contributed directly or indirectly to the fatal result. In two, perforation also occurred. In five there was blood more or less altered in the cæcum and colon; in one case in the ileum itself. In most of the cases the bleeding seemed to result directly from the separation of the sloughs, but in no instance was the bleeding vessel found, not even in *Case XXXVIII.*, in which only one patch had sloughed, and the clot was still adherent. The soft, swollen edges of the patches may have been the seat of bleeding in one or two instances.

Mesenteric glands.—Except in two or three cases in which death took place late in the disease, the group corresponding to the ileum was invariably involved—swollen, sometimes congested, more often in a state of intense hyperplasia. I have seen softening and suppuration in several cases; the softening is apparently due to an anæmic necrosis similar to that which affects the lymph elements of the bowel. The glands may be very deeply congested, and I have found in such specimens many cells containing red-blood corpuscles. As has long been known, there are, in addition to the ordinary lymph cells, many larger cells with two or three nuclei.

Spleen.—Moderate enlargement of this organ constantly takes place in typhoid. It is rare—in my experience—to be able to palpate the anterior edge under the left costal cartilages. Of 35 instances in which the weight was accurately noted, in only one case did the organ weigh over 20 ozs.; in three about 19 ozs. In four cases the weight was below the average.

COMPLICATIONS—*Pulmonary*.—The hypostatic congestion is almost always met with when death occurs slowly. In 6 instances there was actual pneumonia, in 2 simple pleurisy, and in 1 empyema.

Pyæmia.—In *Case XXVIII* there were suppurating infarcts in the lungs, and in *Case XXXIII* infarcts in spleen and kidneys. In neither case could any disease other than the intestinal be discovered.

Thrombosis.—In *Case IX*, the right circumflex iliac veins were distended and filled with firm thrombi. The superficial veins on the right side of the abdomen were enlarged and prominent. In *Case XXX*, in the 6th week, a thrombus formed in the left femoral and iliac veins, and in the former proceeded to suppuration, with intense phlebitis and involvement of the inguinal glands.

Diphtheritic affections.—Secondary membranous inflammation of the mucous surfaces is rare in typhoid fever. Louis mentions three cases in which diphtheria arose as a complication, and Murchison states that he has had several examples.

Six of the cases I have dissected presented more or less extensive inflammation of a croupous or diphtheritic character.

Case I (No. 12), female, aged 23. No special clinical features. Mucous membrane of pelvis of left kidney covered with a firm, greyish-white membrane, which could be stripped off in the form of a mould of the parts; deep congestion of subjacent tissues.

Case II, woman aged 35, admitted Nov. 25th. Had been ill for about two weeks. The case was tolerably severe, and lasted over eight weeks. Temperature-range during the first fortnight in Hospital was 103° to 104.5°. On December 31st it became normal. There was a good deal of nervous depression throughout. She had retention of urine, and was catheterized on several occasions, the first time on Dec. 4th. On the 14th there was a bloody discharge from the vagina; on the 23rd, bloody urine, and from this time shreddy matter was passed from the bladder. There was great pain on the passage of the catheter. Urine not diminished in amount. Death on Jan. 3rd. Temperature

normal for four days before the end. At the autopsy, healing ulcers were found in ileum. Spleen 95 grammes. The condition of the genito-urinary organs was as follows: *Kidneys* not enlarged, substance pale. On section, the pelvis and calyces were covered with a thick greyish-yellow exudation, in the left organ involving the entire membrane, in the right only the upper third. The surface of the exudation was rough, and on section it was seen to extend deeply, in some places 3 m. in thickness. It could not be lifted off the mucosa, but infiltrated it. The papillæ in two of the calyces were also covered. The ureters were not affected. *Bladder* contained a quantity of greyish, shreddy material and a membranous cast of the upper part of the organ, which had separated. It was about 2 m. in thickness, and was beginning to disintegrate. The parts about the neck were covered with a thick greyish exudation, which was with difficulty detached. In the central zone, there were many isolated patches projecting 2–4 m. The wall was of a dirty greenish colour, and was, in the greater part of its extent, denuded of mucous membrane. The orifice of the urethra was free, but the tissue about it was hæmorrhagic. *Vagina*—Mucosa in the lateral walls covered with a greyish membrane, which, in the right side extended, to the os, covering part of its margin. Towards the vulva the membrane surrounded the entire canal. It could be stripped off in flakes. The uterus was normal; no exudation in its cavity.

Case III (No. 36), male (young), admitted Feb. 22nd, with well-marked typhoid fever. All symptoms mild, except the diarrhœa, which was difficult to control. Pain and tympanites were troublesome. He was doing well, temperature had not once reached 103° , when on March 4th he complained of soreness in the caruncles beneath the tongue, and there was swelling beneath the chin at a corresponding point. The sore part was touched with nitrate of silver. On the morning of the 5th the swelling under the jaw had become more diffuse. Up to this time no increase in temperature, which was 101° , and the general symptoms did not indicate any serious change. In the evening the neck had become greatly swollen, and there was exudation on the pharynx. Temperature $102\frac{1}{2}^{\circ}$. Voice husky.

Swallowing impossible. Pulse weak. He passed a bad night, and on the 6th died asphyxiated at 2 p.m. rather unexpectedly, as at 1 p.m. the laryngeal symptoms were not very marked. Temperature at 11.30, 105°. The autopsy showed many ulcers and sloughs in lower part of ileum. There was great infiltration of all the tissues of lateral and anterior regions of the neck. Two small losses of substance on either side of frænum linguæ; œdema of pillars of fauces and uvula. Posterior part of soft palate was covered with a greyish membrane, which extended into the nares for a short distance. Posterior wall of pharynx covered with a similar membrane. Membrane on upper surface of epiglottis. Œdema and swelling of laryngeal folds; no exudation.

Case IV (No. 50), male, aged 39. Ordinary course, until perforation. No special symptoms. Pelvis of right kidney inflamed and covered with a thin sheeting of firm exudation.

Case V (No. 51), female, aged 43. Course of moderate intensity, and then severe laryngeal and bronchial symptoms. Many large ulcers in ileum. Extensive diphtheritic laryngitis, and a uniform membrane extended down the trachea and into the tubes of medium size.

Case VI (No. 52), female, aged 18. Death from the fever and exhaustion. Many intestinal ulcers. The vagina presented several patches of firm membranous exudation, beneath which the tissue was deeply congested.

Cases II, III and V may be regarded as instances of true diphtheria occurring in typhoid fever; the other cases as examples of local membranous inflammation, such as we meet with from time to time in the specific fevers.

Cases of Typhoid Fever examined post-mortem at the Montreal General Hospital, May 1876 to May 1884.

No.	SEX.	AGE.	CAUSE OF FATAL RESULT	ULCERATION OF SMALL INTESTINE.	ULCERATION OF LARGE INTESTINE.	SPLEEN.	OTHER MORBID CHANGES.
1	M	18	Perforation..	8 round ulcers in process of healing ..	0	19 ozs.	Peritonitis localized in lower part of abdomen.
2	M	17	F*	Much swelling; few ulcers.....	0	11 ozs.	—
3	M	23	Pneumonia..	14 patches ulcerated.....	0	10 ozs.	Great swelling of kidneys.
4	M	40	Perforation .	7 deep ulcers in ileum.....	0	7 ozs.	Lymph only on coils in the pelvis.
5	M	25	F	4 small ulcers, sloughs detached	0	15 ozs.....	Peculiar brown color of upper Peyer's patches.
6	M	40	F	Glands swollen, no sloughs, one small ulcer.....	0	15 ozs.	Solitary glands much enlarged.
7	M	29	Perforation .	Sloughs adherent and detaching	0	395 grms.....	Hæmorrhage beneath left pleura and into lung substance.
8	F	18	F	Great swelling of glands, lower ones ulcerated.....	0	.....	Old peritonitis; tubercles in lungs.
9	M	27	F	Patches very large, ulceration beginning in lower ones....	0	Much enlarged	Enlargement of veins on right side of abdomen. Thrombi in circumflex iliac veins.
10	F	20	Pneumonia..	All patches much swollen; six ulcers in lower ones....	0	215 grms.....	—
11	M	25	F	Ulcers healing in places; some patches much swollen.....	A few ulcers.....	315 grms.....	Cutaneous and sub-serous ecchymoses.

* F stands for fever and exhaustion.

Cases of Typhoid Fever examined post mortem at the Montreal General Hospital May 1876 to May 1884.

No.	SEX.	AGE.	CAUSE OF FATAL RESULT	ULCERATION OF SMALL INTESTINE.	ULCERATION OF LARGE INTESTINE.	SPLEEN.	OTHER MORBID CHANGES.
12	F	23	F	Only in lower 18 inches; two ulcers, many sloughs.....	One in cæcum ...	320 grms.....	Diphtheritic pyelitis in left kidney.
13	M	....	F	Lower 3 feet; ulcers deep, in places to the peritoneum ..	0	360 grms.....	—
14	M	30	Perforation	Many sloughs and ulcers.....	0	Enlarged.....	—
15	M	22	Hæmorrhage.	3 feet; great infiltration and swelling, sloughs detaching; adherent clot on one ulcer.	0	360 grms.....	Much blood in colon.
16	M	30	F	5 feet; patches swollen, 3 ulcers in lower 8 inches.....	0	560 grs.	Great swelling of mesenteric glands.
17	F	24	F	All lymph elements swollen; patches cribriform	0	200 grms.....	Mesenteric glands scarcely swollen.
18	M	17	Perforation	1 foot only; patches 1½ feet from valve normal; sloughs separating, one on the valve ...	0	153 grms.....	Heart muscle very pale.
19	F	24	Perforation ..	Only last foot and a half; sloughs detaching	0	270 grms.....	Deep congestion of lungs.
20	M	16	Hæmorrhage.	Extensive ulceration near valve, upper glands swollen.....	Ulcers in cæcum..	450 grms.....	Much blood in colon.

21	F	17	Pneumonia ..	18 inches, sloughs detached	20	ulcers in caecum	195 grms	
22	F	25	Hæmorrhage.	2 feet; ulcers deep, sloughs separated; vessel not found.		O	220 grms.	Great enlargement of mesenteric glands.
23	M	30	F	2 feet; sloughs detaching	One ulcer, 20 x 20 millimetres.		380 grms.	Extravasation of blood about abdominal aorta.
24	F	25	F	3 feet, great enlargement of patches, sloughs forming		O	400 grms.	Solitary glands remarkably prominent.
25	F	35	Diphtheria ..	Ulcers healing		O	95 grms.	Diphtheritic vaginitis, cystitis and pyelitis.
26	F	20	Pneumonia ..	Several feet; many sloughs; only one detached; ulcer extends to serosa		O	260 grms.	Heart large and dilated.
27	M	33	F	2½ feet; many ulcers, some extend to peritoneum, a few healing		O	227 grms.	Deep congestion of lungs.
28	M	....	Pyæmia	8 ulcers in ileum; one with stough in appendix	15 small ulcers in caecum; many in colon		610 grms.	Pyæmic infarcts in lungs.
29	M	26	Septicæmia..	3 feet, many ulcers, some have cicatrized	Many small ulcers in caecum and colon		180 grms.	Suppurating thrombus in left femoral vein.
30	F	34	Perforation .	Sloughs adherent, ulceration beginning		O	Very large	Peritonitis very extensive.
31	M	13	Empyema	Patches swollen and congested, no ulceration		O	Large	Pleurisy. Hemoptysis seven days before death; no lung disease.

Cases of Typhoid Fever examined post-mortem at the Montreal General Hospital, May 1876 to May 1884.

No.	SEX.	AGE.	CAUSE OF FATAL RESULT	ULCERATION OF SMALL INTESTINE.	ULCERATION OF LARGE INTESTINE.	SPLEEN.	OTHER MORBID CHANGES.
32	M	63	F	Patches enlarged, cribriform, peritoneum hyperemic, extraordinary enlargement of solitary glands	0	Not enlarged	Mesenteric glands enlarged.
33	M		Pyæmia	2 feet; many ulcers	Many ulcers in cæcum	Large suppurating infarct	Pyæmic blocks in kidneys; abscess in abdominal wall.
34	M	25	F	2 feet, two large patches; great swelling, no ulceration	Solitary glands, much swollen	5.3 grms.	Tuberculous cavities in lungs.
35	F	21	Perforation	3 feet, many ulcers	0	Very large	Heart pale.
36	M		Diphtheria	3 feet; sloughs and ulcers, some extend to peritoneum, one at orifice of Meckel's diverticulum ilei	Follicles much swollen	6.33 grms.	Diphtheria of fauces.
37	M	36	Hæmorrhage	2 feet, deep ulcers, sloughs detached	Few in cæcum	320 grms.	Hypostatic pneumonia.
38	M	28	Hæmorrhage	2½ feet, patches swollen; one slough separating	Glands enlarged	350 grms.	Ileum and colon filled with blood; hæmorrhagic œdema of arachnoid.
39	M		F	18 inches, little swelling; one small ulcer	0	Slightly enlarged	Congestion of lungs.

40	F	24	Perforation	2 feet; nine sloughs adherent; two perforations	0	240 grms.	Hæmorrhage also; peritonitis chiefly in pelvis.
41	F	17	F	4 feet, sloughs on lower patches, one patch 5 inches in length.	0	11 ozs.	Great enlargement of mesenteric glands.
42	M	.....	F	18 inches, few ulcers	Ulcers in cæcum.	5 ozs.	_____
43	F	19	Hæmorrhage	3 feet, sloughs adherent; one deep ulcer with adherent clot	0	Enlarged	_____
44	M	29	F	4 feet; sloughs adherent	0	20 ozs.	Temperature over 109°.
45	M	19	Perforation	1 foot; patches above this normal. Small deep ulcers near valve	0	153 grms.	Hæmorrhage as well. Death on 50th day.
46	M	27	F	2 feet; sloughs separating	6 or 8 sloughs.	380 grms.	Petechiæ in skin. Extravasation along aorta.
47	M	16	Hæmorrhage	3 feet: great enlargement of patches and solitary glands, sloughs deep and separating.	0	Enlarged	_____
48	M	36	Pneumonia	Ulcers close to valve; above, sloughs adherent	0	Slightly enlarged	_____
49	M	.....	F	3 feet; many sloughs; ragged ulcers near valve	Small ulcers in cæcum.	_____	_____
50	M	39	Perforation	12 inches; deep ulcers	Follicles swollen.	300 grms.	Pyelitis of left kidney.

Cases of Typhoid Fever examined post-mortem at the Montreal General Hospital, May 1876 to May 1884.

No.	SEX.	AGE.	CAUSE OF FATAL RESULT	ULCERATION OF SMALL INTESTINE.	ULCERATION OF LARGE INTESTINE.	SPLEEN.	OTHER MORBID CHANGES.
51	F	43	Diphtheria ..	4 feet; many large ulcers	0	355 grms	Pleuritic effusion in left side. Extensive diphtheritic laryngitis, with extension of membrane into bronchi.
52	F	18	F	5 feet; patches swollen; ulcers near valve	0 .....	.....	.....
53	M	F	15 patches; covered with sloughs; one large ulcer ..	0	Very large

CASE OF TETANY OF FIVE YEARS' DURATION.

By JAMES STEWART, M.D.,

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(Read before the Medico-Chirurgical Society of Montreal, June 12, 1885.)

A. C., aged 39, through the kindness of Dr. McConnell, consulted me about two months ago, complaining of diarrhoea and "spasms of the face, arms and legs." His diarrhoea began seven years ago, and has been more or less constant ever since. The spasms of the muscles of the limbs and face, which are of an intermittent character, first troubled him about five years ago. During the late American civil war he served as a private soldier throughout many of the Virginia campaigns. He had three attacks of malarial fever, and for eighteen months suffered from chronic dysentery; and it was not until he moved to the Western States, after the termination of the war, that he completely recovered from it. He never had either syphilis or rheumatism; never drank to excess; worked at his trade (stone-mason) until eighteen months ago, until he was no longer able on account of gradually-increasing general weakness and the stiffness of the muscles of his hands. In 1863 he received a severe scalp wound from a sabre, which healed in a short time. The family history is unimportant.

Patient is tall, emaciated and anæmic, with an anxious and careworn expression. About once a month the muscles of his fingers, hands and arms become the seat of tonic contractions, which generally last from ten to twelve days. The thumbs become adducted and opposed, while the fingers are adducted and semi-flexed. The contractions come at times suddenly, but usually are slow in making their appearance, and gradually increase in severity day by day up to the tenth or twelfth day, when they suddenly begin to decline, the parts becoming normal in about twenty-four hours. When the spasms are what he calls severe, the adductors of the upper arms become involved, bringing the arms crossed in front of the body, the forearms being usually semi-flexed. For some hours before, and during the

whole time that the tetany is present he has a disagreeable feeling of numbness in his fingers. The dorsum of his hands swell and become very painful also during this period. The pain is especially severe when an attempt is made to move the contracted muscles. The muscles of the face are usually more or less contracted at the same time. He has a feeling as if the skin was too tightly drawn across his face. The facial muscles are also the seat of almost constant fibrillary twitchings. The muscles of the lower extremities are only occasionally the seat of spastic contractions; when they are, the feet and toes are in a state of plantar flexion, the feet being turned inwards and the thighs adducted. During the existence of tetany he has diplopia.

The electrical reactions of the nerves and muscles affected are enormously increased. During the past week, while he was suffering from one of his usual attacks, contraction of the facial muscles was induced on the application of galvanism to the facial nerve by a strength of current not exceeding .25 of a milliampère (measured by Edelmann's galvanometer), while at the present time, when his muscles are no longer rigid, the tetany having passed away, it takes 3 milliampères to produce a similar result. There is a corresponding difference in the reactions of the radial, ulnar and median nerves.

	<i>Normal period.</i>	<i>Tetany period.</i>
Facial.....	3.0 milliampères.	.25 milliampères.
Radial	5.00	1.00
Median	4.25	.50
Ulnar	3.50	.50

Since coming under observation, the two attacks which he has suffered from have not been attended by contraction of the muscles of the lower extremities. On this account their electrical reactions have not been ascertained. Five milliampères is sufficient to produce tetanic contraction on the shutting of the kathode (K S Te) and on opening the anode (A O Te). There is no change in the normal formula, the $K S Z < A O Z$. The difference in the reactions of the nerves and muscles to the induced current during the tetany and after it has passed away is not marked. In fact, the interossei require a much stronger current to produce their contraction during the tetany state than

during the normal condition. This is plainly owing to the œdema of the hands during the attacks, the œdematous tissues greatly increasing the resistance. The muscles, although flabby, are in a fairly nourished condition. The patellar reflexes are greatly exaggerated during the period of tetany, while after it has passed away it is frequently impossible to produce any contraction of the quadriceps when the patellar tendons are struck. The triceps and biceps reflexes are exaggerated during the tetany period, and absent after the muscles have become normal. No ankle clonus at either period. There is nothing definite to be made out in regard to the superficial and organic reflexes.

The tongue is constantly in a raw-looking state. The appetite, however, is usually fair. He is seldom free from diarrhœa, the average number of stools in the twenty-four hours being usually about six; only very seldom is there one stool in the day. The diarrhœa always moderates when the tetany makes its appearance. The abdomen is constantly distended; stools are large, frothy, semi-fluid, and look like pea-soup. The urine is acid, but normal in quantity, specific gravity 1030; contains great excess of both urea and indican, but is free from albumen and sugar. At times he becomes deeply jaundiced. There is no further evidence, however, physical or subjective, of disease of the liver. The apex of the heart is in the normal position. There is no increase in the cardiac dulness, neither is there any other evidence of cardiac disease. Nothing abnormal in the respiratory system. There is no relative increase in the number of the white-blood cells; the red appear to be normal. There is no enlargement of the spleen.

Remarks.—We have here to do with a case of chronic diarrhœa of some seven years standing, with intermittent tetany of five years' duration. Tetany is a disease which has been known for some years. First described in France by Corvisart, later and more fully by Trousseau, but it is to Weiss and Chovstok of Vienna and Erb of Heidelberg that we are indebted, in the main, for our present knowledge of it. There are three apparently distinct forms of this disease, forms which differ much in the causes which give them origin and in their prognosis, but

little in the clinical pictures which they present. By far the most variety common of this disease is known as "rheumatic" or epidemic tetany.

The second variety of tetany is more chronic, and is due to either chronic diarrhœa, prolonged lactation, or other debilitating influences. The third form follows operations for removal of enlarged thyroid glands.

Clinically, these varieties differ somewhat. The so-called rheumatic form being essentially an acute affection, coming on suddenly and terminating usually inside of two weeks, the spastic periods of a few hours' duration intermitting with normal periods. Recovery nearly always occurs. The chronic form, due to debilitating agencies, differs little from the acute form, except in duration. Recovery in these cases nearly always occur also. The so-called surgical variety of the disease generally makes its appearance about a week after extirpation of enlarged thyroid glands, and especially when the subject has been a young female. Many of these prove fatal within a few days, while a number become permanently chronic. Early and complete recovery is very exceptional.

Judging from published observations, tetany is an extremely rare disease on this side of the Atlantic. In England it is equally rare. On the continent of Europe it is quite common, especially in France and Germany. This is true of all forms of the disease. In Vienna, not a winter passes without an epidemic of it, while cases of the chronic and surgical varieties are not at all rare. Up to May 1883, Billroth performed 78 operations for removal of goitres, 12 of which proved fatal, 6 of these deaths being directly due to tetany. In all, there were 13 cases of tetany following the 78 operations, 6 of which ended fatally. Two of the fatal cases ran a course of upwards of one year, while the remaining four terminated within two weeks.

Pathology.—There is nothing definitely known. In the very few cases where a histological examination of the nervous structures has been obtained after death, no lesion to account for the symptoms present during life could be discovered.

I have in my possession sections of the cervical cord of a

young girl who died from tetany two weeks after the removal of an enlarged thyroid gland, the only noticeable change being in the finely granular protoplasm of the ganglion cells of the anterior horns; the granules being considerably larger than they normally are. A few swollen ganglion cells are also noticeable. Simply saying that tetany is due to an exaggerated excitability of the spinal gray matter means nothing. How this excitability is induced remains unanswered. On the theory that the cerebellum is the centre for continuous movements, and the cerebrum for changing movements, Dr. Hughlings-Jackson has advanced the proposition that the phenomena of tetany are best explained by defective antagonism of cerebellar influences. That during the tetanic period the cerebral influences are removed.

To explain how causes, seemingly so diverse in their operation, as "rheumatic influences," diarrhoea, lactation, and operative interferences on the thyroid glands, can induce similar symptoms is very difficult. At one time it was thought that those cases following thyroid removals were due to injury of the recurrent laryngeal nerve during the operation. Cases of tetany, however, follow this operation, no matter what care may be taken in avoiding this nerve; it is therefore fair to conclude that there is no direct causative connection, especially when we take into account the fact that irritation of the recurrent laryngeal nerve from the pressure of tumors does not induce this disease. The active cause in the case reported is undoubtedly the diarrhoea, but whether induced by the direct impoverishment of the nerve centres, or through the constant peripheral (intestinal) irritation, it is impossible to say. The late N. Weiss of Vienna considered peripheral irritation to be the cause of the disease. He believed that this gave rise to alternate waves of vessel dilatation and contraction. During the former state we have, according to this assumption, the tetany period, while during the latter the muscles return to their normal condition. This theory might possibly explain cases like the one under observation and those following goitre removals, but it could not apply to the "rheumatic cases."

Treatment.—No medicinal agent has any power in absolutely

preventing or diminishing tetany. Billroth speaks favorably of the application of ice to the cervical spine. Erb, Chovstok and Weiss look upon galvanism as the only agent of any real value. Erb believes that it considerably shortens and ameliorates the attacks. He recommends the K A to be applied to the sternum while the A N is to be applied to the diseased parts in succession, including the muscles, main nerve trunks, and the cervical portion of the spinal cord. Since this patient was exhibited to the society, an attack was apparently averted by galvanization of the radial nerves.

QUARTERLY RETROSPECT OF OBSTETRICS AND GYNÆCOLOGY.

PREPARED BY WILLIAM GARDNER, M.D.,

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Diagnosis of Specific from Simple Inflammation of the Vagina.—At a recent meeting of the Paris Obstetrical and Gynæcological Society, Martineau stated a most important fact by which gonorrhœa can be diagnosed from other inflammations of the female sexual organs. In the specific form the pus is always acid, while in the simple it is alkaline. It is therefore easy to decide the question by a piece of litmus paper. The value of the fact (if verified) with reference to rape is obvious. If the person committing the rape was affected with gonorrhœa, the discharge from the parts of the female would be acid.—*Philadelphia Medical News.*

Remarkable Neurosis from Uterine Displacement.—Dr. Aveling, of London, reports in the *Lancet* of July 4th, 1885, the following case:—The patient was a married lady of 38, the mother of a family; no history of hysteria or other neurosis. In October, 1884, one of her children struck her left eye with the back of his head. Six weeks after, she felt something wrong with the eye, and had noises in the ears, tenderness of the nose and pain at the back of the head when she stooped or had the bowels moved; she had also hesitation and stammering of speech. These symptoms gradually got worse till March,

1885, when she had three blisters on the nape. The headache became constant, and was accompanied with vomiting. During this time she was seen by several eminent London physicians and surgeons. Finally, she spoke to her ordinary medical attendant about certain pelvic symptoms she had felt for a long time. These were feelings of weight, and bearing down and dysuria. The physician examined and found extreme anteversion of the uterus, with a full bladder, the fundus of the uterus resting on, and making as it were a bed for itself in, the bladder. On replacing the uterus and emptying the bladder, all the head symptoms disappeared. The relief was temporary—with return of the displacement the symptoms returned. Lying with the hips raised on a high pillow also relieved the symptoms. Dr. Aveling was called in consultation, and succeeded in giving complete relief by inserting a Graily Hewitt cradle-pressary. Six weeks afterwards, the relief continued.

The Causes and Prevention of Sublimate Poisoning from Irrigation of the Puerperal Uterus and Vagina.—In a paper in the *Archiv. für Gynäkologie* (Bd. XXV., Hft. 3), Dr. Otto von Herff discusses this most important subject. In my last report, published in the May number of this journal, I drew attention to the dangers of this remedy. A number of fatal cases and the modes of death were then alluded to. There can be no question of the danger of this remedy. There is, at the same time, no question as to its great value. A critical enquiry as to the causes of danger, with a view to their avoidance, may therefore be most profitable. As a result of his labors in this direction, the author concludes:—

1. That a considerable quantity of fluid may be retained in the vagina after an injection by the constrictor vaginae and levator ani muscles.

2. That toxic phenomena, after vaginal and intra-uterine injections in puerperal cases, arise mainly from absorption of the fluid through the vaginal *mucosa*, as, in the case of uterine injections, the fluid usually excites firm contraction of the uterus, thus closing any avenue of entrance to the circulation and securing expulsion of contents.

3. Absorption through the vagina is only possible when prolonged contact of the fluid obtains, especially when such contact occurs with increased intra-vaginal pressure.

4. It is probable that in most of the published cases of poisoning the absorption took place principally through the vagina. In two of these cases vaginal irrigation only was practised.

5. Direct entrance of corrosive sublimate solutions into the abdominal cavity or circulation results from increased pressure in the vagina from contraction, or when the Fallopian tubes are unusually patulous. Such an occurrence is rare, and can only happen when the irrigating fluid escapes imperfectly.

6. In all vaginal and uterine injections with sublimate solution, the greatest care must be taken to secure free return flow and so prevent any retention of the fluid, especially under pressure.

In order that the dangers of sepsis to lying-in women may be reduced to the minimum, Von Herff recommends :

1. Careful disinfection of accoucheur, midwife and nurse.

2. At the outset of labor, careful bathing of the genitals with weak sublimate solution and removal of the pubic hair.

3. During normal labor, prophylactic vaginal injections are superfluous. Only in cases of suspicion of infection from the attendant or in suspected decomposition of the secretions, as in tedious labor, are vaginal injections of 1-3000 or 5000 corrosive sublimate solution necessary.

4. Similarly, prophylactic intra-uterine injections after normal labor are equally unnecessary. They are only necessary when the hand has been introduced within the uterus, when any putrefaction of uterine contents has taken place, or after the birth of a putrid or macerated foetus.

5. The remedy is unnecessary, and may be injurious, during a normal puerperium. But, on the other hand, in puerperal disease requiring intra-uterine treatment, it must be thus employed, and is usually most efficacious.

6. The stronger solutions of say 1-1000 are only to be used in dangerous puerperal fever.

For the actual performance of irrigation with sublimate solutions, the author lays down the following rules :

1. Use small quantities of the fluid—one or at most two quarts.

2. Perform the operation of irrigation as quickly as possible.

3. Secure free return flow both during and after the irrigation, especially in cases where there seems to be free escape of fluid. For this purpose a finger is to be inserted in the uterus or vagina, as the case may be, by the side of the tube and the retracted perineum. In cases of suture of lacerated perineum, a return-flow tube may be necessary. The author further recommends that in extensive wounds of the genital tract irrigation with corrosive sublimate solution is to be avoided entirely; also in anæmic persons and those affected with chronic kidney disease, and in women who have been treated with mercury they are to be used with great care or dispensed with entirely. The accoucheur himself only is to administer intra-uterine injections. The very weak solutions of 1-5000 are alone to be entrusted to nurses. The best apparatus for administration of the douches is one which, through height of its fall, secures a continuous flow. For this purpose 26 inches is all that is necessary. The utmost cleanliness of instruments and all surroundings is necessary.

A New Oxytocic.—Dr. Arbery of Wotassulga, Ala., U.S., in a short paper in the *New York Medical Record* for July 25, '85, draws attention to the value of heat applied over the fundus of the uterus as an excitor and stimulant of uterine contraction during labor. The author's method is to apply poultices of mush as hot as they can be borne, and changed frequently. He relates a number of cases in which this remedy succeeded promptly after ergot, alcohol and quinine had failed. The remedy is well worthy of a trial and report of the results by our readers. As Dr. Arbery remarks, "it is certainly pre-eminently above all the oxytocics for safety and simplicity, as the case can be hastened or slowed at option by simply putting on or withholding the hot applications."

The Medicinal Treatment of Uterine Hæmorrhage.—A year or two ago, in one of these reports, I drew attention to a paper by Prof. Schatz of Rostock on the value of *Hydrastis Canadensis*

or Golden Seal. This paper was read before the annual meeting of the Society of German Physicians and Naturalists, held at Freiberg in 1883. It will be remembered that Schatz's experience of the drug in uterine hæmorrhage from quite a variety of conditions, including myoma, was most favorable.

Dr. Mendes de Léon, Privat-Dozent at the University of Amsterdam, gives his experience with Golden Seal in a paper published in the *Archiv für Gynäkologie* (Bd. XXVI, Hft. 1, 1885). He has found it a most useful remedy in uterine hæmorrhage occurring in the following conditions:—

1. Menorrhagia due to increased determination of blood to the uterus, attended with, it may be, increase of pain, even of colicky character. But in dysmenorrhœa depending upon obstruction to the escape of menstrual blood, and in the so-called spasmodic or neuralgic dysmenorrhœa, which often ultimately becomes complicated with profuse menstruation, the drug has no effect.

2. In catarrhal inflammation of the *mucosa* of the uterine body and cervix. This is an important fact, in view of the great frequency of this disease, the most common of all uterine affectons.

3. In chronic pelvic cellulitis, in which, as is well known during the menstrual period, there is sometimes quite severe pelvic pain due to excessive congestion.

4. In displacements, especially retroflexion and retroversion, in which menstruation is often painful and prolonged. It is especially indicated when from adhesions the uterus cannot be replaced.

5. In climacteric menorrhagia.

Dr. Mendes de Léon has had very little experience of it in bleeding myoma. He appends short notes of a number of cases in which the drug was decidedly useful. His method of administration is to order 15–20 drops of a strong tincture or fluid extract four or five times a day to be taken during the fortnight preceding the advent of the menses. In some of the cases it was given throughout the intermenstrual interval.

The Thermo-cautère in the Treatment of Chronic Metritis.

—In a paper published under the above heading in the *Central-*

blatt f. Gyn. (No. 29, July 18, '85), Dr. Schwarz of Halle discusses the relative merits of cutting surgical operations, and compares them with thermo-cautery of the cervix in the treatment of chronic metritis. For extreme cases of disease, with marked hypertrophy of the uterus, especially of the *mucosa* and *parenchyma* of the cervix, he thinks that the wedge-shaped excision of both lips so warmly recommended by Schröder and Martin, and generally practised in Germany, is the best treatment. The merit of this operation is that it not only removes a considerable portion of the diseased tissue of the cervix, but it institutes a more or less rapid involution of the whole abnormally vascular and hypertrophic organ. Both by the deep lateral incisions and the excision of portions of tissue a considerable number of enlarged arteries and veins are opened, and so their atrophy or closure secured. This atrophy extends some distance beyond the incisions. But it may proceed too far. The uterus may become small, hard and cirrhotic, and menstruation become too scanty or entirely cease. Further, such an operation involves anæsthesia, loss of blood, and, in certain nervous women, serious disturbance of assimilative processes and, in very rare cases, fatal results. Moreover, it renders the presence of assistants necessary, and a longer interference with the liberty of the patient. In certain cases, excision is rendered difficult or impossible by reason of high fixation of the uterus, or contra-indicated by para- or perimetritis, or the patient objects. In retroflexions, moreover, excision of the lips reduces so much the size and length of the vaginal portion as to seriously interfere with or render impossible replacement by pessaries. In mild cases, and others in which, for one or more of the reasons mentioned, excision seems not feasible, the author uses actual cautery applied by Paquelin's apparatus. He makes wedge-shaped or circular eschars involving as much as possible of the diseased tissue with its blood-vessels. The extent of such excisions is in length $1\frac{1}{2}$ –2 cm. and $\frac{1}{2}$ to 1 cm. in thickness. Smaller portions may be removed than with the knife, and yet the ultimate reduction of size of the uterus may be equal. The operation requires but a few minutes of time, may be done in one's surgery, and

skilled or any assistance is unnecessary. It is, as a rule, not painful to any extent. Anæsthesia is therefore not needed. The uterus need not be drawn down. After the operation the cervix is dusted with iodoform, and then the vagina packed with anti-septic gauze. The slough is usually cast off within eight days. The author's experience includes 30 cases, and he is much pleased with the results. I cannot but believe that many of the cases thus treated by Schwarz would have been better treated by Emmet's operation, which, when properly done, reduces the size of the uterus, involves removal of much diseased tissue without leaving cicatricial tissue, and does not shorten the vaginal portion and so complicate the treatment of the retroflexed or retroverted organ by pessaries.

Reviews and Notices of Books.

Handbook of Diseases of the Skin.—Edited by H. von ZIEMSSEN, Editor of *Ziemssen's Cyclopedia of the Practice of Medicine*. Illustrated with 80 wood engravings and color prints. New York: William Wood & Co.

This is a translation of the book on Skin Diseases brought out by the publishers of *Ziemssen's Cyclopedia* last year. Messrs. Wm. Wood & Co., with commendable generosity, have published this work in handsome form and made a free presentation of it to the subscribers of the American edition of that work.

There are eleven contributors to this volume, most of them well known men in connection with syphilis and skin diseases. Dr. Paul Unna gives an exhaustive chapter on the Anatomy and Development of the Skin and Appendages, and is followed by Prof. H. von Ziemssen in a short chapter on the physiology. Next follows a very valuable contribution by H. Auspitz, of Vienna, on the General Pathology and Therapeutics of the Skin, which includes a classification of skin diseases. The various diseases of the skin are then treated of according to the group they come under. Prof. Schwimmer treats of Hyperæmiæ, Anæmiæ and Hemorrhages of the Skin, Chronic,

Deep-spreading Inflammations and Neuroses of the Skin, and, in association with Dr. Babes, the New Formations of the Skin. Dr. Th. Veiel describes the Simple Inflammatory Dermatoses, under which head comes eczema. Dr. Veiel believes that the predisposition to eczema differs in different individuals, and that debilitating influences will increase this predisposition. However, he does not think we are justified in separating eczema from these inflammatory symptoms caused by external irritants. He relies more on local than constitutional measures in treating the disease. Speaking of dyspepsia in connection with eczema, he says that dyspepsia is frequently the result, not the cause, of general eczema, as the constitutional school asserts. Professor Geber writes on Acute Deep-spreading Inflammations, Diseases of the Nails, Anomalies of the Sudoriferous Glands and Neuroma, Adenoma, Epithelioma-Molluscum and Carcinoma of the Skin. In erysipelas, Prof. Geber thinks no form of treatment of any value except the expectant and symptomatic. He advocates the application of cold compresses, because they are grateful to the patient. Prof. Neisser contributes the chapter on Chronic Infectious Diseases of the Skin. This includes leprosy, lupus, syphilis, actino-mycosis, etc. He holds that the evidence, as far as known, is against leprosy being hereditary. Accompanying this chapter is a map marking out the districts of the world affected with leprosy. In the map of America, the north instead of the south bank of the Gulf of St. Lawrence is marked as the seat of the leprosy settlement at Tracadie. Prof. Neisser looks upon syphilis as a bacterial disease. He also considers that the dual theory is by far the more firmly established, and that syphilitic virus is "altogether different from those noxæ which produce the forms generally termed 'soft chancres.'" Nothing is said about treatment, except that mercury is a direct poison for the bacteria of syphilis, and potass. iodide furthers the absorption of neoplasms. We have not space to notice all the articles in this interesting work, but may say that it is a most valuable contribution to dermatology, and although not likely to be very popular with the general practitioner because of the rather scanty directions

given as to treatment, still by those interested in dermatology as a science it will be much appreciated. The illustrations are good and the typographical work excellent.

A Theoretical and Practical Treatise on the Hemorrhoidal Disease.—By WM. BODENHAMER, A.M., M.D.
New York : Wm. Wood & Co., 1884.

The author of this work says, in his preface, that it is a remarkable fact that in America there is no complete classical or systematic treatise on Hemorrhoidal Disease, and therefore he sets about supplying the "long-felt want." We do not think it at all remarkable that a separate book of some 300 pages has not before been written on this subject, but do think it very remarkable that so much space has now been devoted to a disease which can be, and has been, fully treated of in the numerous works on the Diseases of the Rectum. The tendency of the day is for specialists to magnify their subjects and write large treatises on not only the diseases of each separate portion of the body but each separate disease of that portion. This tends to narrow rather than to broaden the view of the subject, and although more minute and elaborate work is produced the power of generalization is somewhat impaired.

Most of these special works are heavily padded ; the one we are now treating of, if deprived of its padding (such as illustrations of instruments, curious poetical and prose quotations, history of the disease from pre-Adamite times, bibliography, etymology, advertisements with eulogistic extracts of reviews of the author's previous works, etc., etc.), would be reduced to a pamphlet of fair size, which could be read easily and profitably. Life is too short and works too many, for any one seeking for information on hemorrhoids, to read a 300-page book ; it is like looking through a bushel of chaff for a grain of wheat.

To show how much a specialist can spin out a work of this kind, we might mention that eight pages are devoted to *Equitation*, considered as a cause, a preventive and cure of hemorrhoids ; fifteen pages to the question, "Are Hemorrhoids Salutory ?" thirty-three to Bibliography. The *Etymology and*

application of the term Hemorrhoids is discussed in eighteen pages.

The treatment of the disease is very fully dwelt on, nearly half the book being devoted to it. Speaking of the surgical treatment, the author prefers the ligature applied after a manner peculiar to himself, which he calls the *improved method*.

There is much of interest in the book and evidence of a great deal of research, but it is not the book for the busy man. Any one who has time to spare, and is fond of the curious and ancient, will find much information in this work. We might recommend it to young practitioners, waiting for a practice, who wish to improve their minds and at the same time learn something of a subject which is too much neglected in the ordinary college course.

Hay-fever, and its Successful Treatment by Superficial Organic Alteration of the Nasal Mucous Membrane.—By CHARLES E. SAJOUS, M.D., Instructor of Rhinology and Laryngology in the Post-graduate and Spring Course, Jefferson Medical College, etc., etc. Illustrated with thirteen wood engravings. Philadelphia: T. A. Davis, Atty.

In this essay, the view chiefly advocated by the author is that the affection called hay-fever arises from the combination of an unduly irritable state of the nerve-centres (perhaps hereditary) and an hyperæsthetic condition of certain of the nasal nerves due to local disease. When these two necessary elements exist, it only requires the addition of certain irritating substances in the atmosphere for a paroxysm of hay-fever to result. The argument then goes on to assert that removal of any one of these three necessary factors will eliminate the occurrence of the paroxysm. The only one capable of being definitely controlled is the state of the nasal mucous membrane. Dr. Sajous claims that these special hyperæsthetic areas are capable of demonstration, and proposes to destroy their sensitive condition by the application of the actual cautery. He claims to have had much success by the use of this remedy. Of

course it is not to be supposed that this is entirely original, as several independent observers in the United States have been working up the same subject, and have arrived to a certain extent at similar conclusions. The misery endured by the sufferers from this disease will lead them to gladly accept any means of relief. The treatment by cautery is not as painful as might be supposed (after cocaine, not at all), and will very probably be extensively employed.

A Text-Book of Medical Physics. For the Use of Students and Practitioners of Medicine.—
By JOHN C. DRAPER, M.D., LL.D. With 377 illustrations. Philadelphia: Lea Brothers & Co., 1885.

Of all subjects which form the curriculum of studies for the matriculation in medicine, none are of more importance than physics. It is, therefore, a hopeful sign when we find a distinguished scientist willing and able to present to the practitioners of the future a work which, we feel assured, will be a great aid to them in the acquirement of this subject.

Dr. Draper, who is Professor of Chemistry and Physics in the Medical Department of the University of New York, is already well known to the medical world by numerous scientific contributions. This work is the substance of his lectures before the medical classes of the University of New York. Considering the fact that the students of this medical school are not required to furnish any evidences whatever of general education, it is fortunate that they are obliged to take at least a fairly full course on the relation of physics to medicine. It is not alone the salutary mental training obtained from such a course that makes it of value. The utter impossibility of understanding many of the important facts in physiology and physical diagnosis without some knowledge of physics, is the great reason why it is of importance that every medical student should be well grounded in this branch.

Physics should be a subject in the medical student's preliminary training. In medical schools demanding four and five sessions no time is found for this subject, and how seriously,

then, must its consideration interfere with the clinical and other work where the whole course is included in three and often two short sessions.

When the day arrives when our enterprising "cousins" will replace their present "certificate of good moral character" for a stiff matriculation examination, including physics, there will be a decided advance made in their medical education.

Dr. Draper's work is a very large one. It is entirely too large. He easily could have said all that is essential for medical students to know on this subject in a work half the size of this portly volume. It contains much that has no relation whatever with physics. Why, for instance, should a work on medical physics be burdened with a crude and antiquated description of how to cut, stain and mount microscopic sections? We cannot understand why a description of micro-organisms should form a part of this work.

The section devoted to electro-therapeutics is far from what we naturally expected, and far from what it should be. What can be the meaning of recommending the constant current in "inflammation of spinal cord attended by hemiplegia," or in "inflammation of the cerebrum attended by tremors and convulsions?"

When the author says "the cathode is placed on the inflamed part and the anode near by," and "if there is water exudation the application is reversed," we fail to understand what he means.

In a table of the nervous supply of the principal muscles of the body, we find the statement that the radial nerve supplies the flexors of the thumb and hand.

No reference whatever is made to the galvanometers recently introduced into medical practice; neither is there any account of the modern methods of interrupting the continuous current.

We have pointed out a few of the blunders that disfigure this work. It contains, however, much that is good and well presented. This is especially true when its writer deals with such subjects as the general properties and composition of matter, acoustics, heat and light.

When the author is called upon to prepare a second edition

of his work, we would respectfully advise him to confine himself to medical physics, leaving histology to the histologists, bacteriology to the pathologists, and electro-therapeutics to the neurologists.

The work is well illustrated and printed, the publishers having performed their part in their usual creditable manner.

Malaria and Malarial Diseases.—By GEO. M. STERNBERG, M.D., F.R.M.S., Major and Surgeon, United States Army; Member of the Biological Society of Washington, etc. New York: Wm. Wood & Co.

This volume, published some months ago in Wood's Library, contains a complete exposition of the present state of our knowledge on the subject of this widely-spread and important affection. The various theories which have been suggested to explain the complex phenomena associated with malarial poisoning are passed in review and the conclusion (as we might expect) arrived at that, though many are ingenious, none as yet is sufficiently complete to have been universally accepted. Beyond quinine and arsenic, the author's experience leads him to put no confidence in anti-malarial remedies, such as carbolic acid, iodine, potassium bromide, etc. The chapters upon the various forms of malarial disease are very full, and furnish copious descriptions of the varied symptomatology of aguish disorders.

The Oleates; an Investigation into their Nature and Action.—By JOHN V. SHOEMAKER, A.M., M.D., Lecturer on Dermatology at the Jefferson Medical College; Physician to the Philadelphia Hospital for Skin Diseases, etc. Philadelphia: F. A. Davis, Atty.

The use of the oleates of various bases has within the past few years become very general, and much satisfaction is commonly expressed at the results obtained. The introduction of these agents to the profession has been effected in this country to a considerable extent through the enthusiastic advocacy of this writer, who has urged their claims to attention in a number

of communications to various medical journals and before medical societies. The essence of these essays, together with some new matter, is contained in the present volume, from which can be gathered all essential matters concerning the various oleates which have proved serviceable and the cases in which they are specially indicated: All having to deal with cutaneous affections will do well to acquaint themselves with these valuable aids to treatment.

Transactions of the New York State Medical Association for the Year 1884. Vol. I.—Edited for the Association by AUSTIN FLINT, Jr., M.D. New York: D. Appleton & Co.

This is the first volume issued by the Association as reorganized after the split upon the Code question. It forms a large volume of 600 pages, and contains the presidential address, the addresses of the sectional presiding officers, and all the papers read in the various sections, with the discussions thereon. Many of these have already appeared in the weekly and other journals, but, for reference, the collection is a very valuable one, and includes many essays of merit in every important department of medicine and surgery. It is handsomely gotten up, in general appearance resembling the volumes of the "Gynæcological" Transactions.

What to Do in Cases of Poisoning.—By WILLIAM MURRELL, M.D., F.R.C.P., Lecturer on Materia Medica and Therapeutics at the Westminster Hospital. Fourth Edition. London: H. K. Lewis.

The best little pocket volume of its kind extant. It is so well known as to need no introduction. We are told that, for this edition, "alterations and additions have been made on almost every page." Not knowing at what moment its guidance may be suddenly called for, every one should keep it constantly within reach.

Books and Pamphlets Received.

A TEXT-BOOK OF PHYSIOLOGY. By M. Foster, M.A., M.D., F.R.S. Third American from the fourth and revised English edition, with extensive notes and additions by Edward T. Reichert, M.D. Philadelphia: Lea Brothers & Co.

COMPARATIVE ANATOMY AND PHYSIOLOGY. By F. Jeffrey Bell, M.A. Philadelphia: Lea Brothers & Co.

DISEASES OF THE TONGUE. By Henry T. Butlin, F.R.C.S. Philadelphia: Lea Brothers & Co.

CHOLERA: ITS ORIGIN, HISTORY, CAUSATION, SYMPTOMS, LESIONS, PREVENTION AND TREATMENT. By Alfred Stillé, M.D., LL.D. Philadelphia: Lea Bros. & Co.

THE ANATOMY OF THE INTESTINAL CANAL AND PERITONEUM IN MAN. By Frederick Treves, F.R.C.S. London: H. K. Lewis.

A HANDBOOK OF PATHOLOGICAL ANATOMY AND HISTOLOGY. By Francis Delafield, M.D., and T. M. Prudden, M.D. New York: Wm. Wood & Co.

THE TECHNOLOGY OF BACTERIA INVESTIGATION. Explicit Directions for the Study of Bacteria. By Chas. S. Dolley, M.D. Boston: T. E. Cassino & Co.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, May 29th, 1885.

T. J. ALLOWAY, M.D., 1ST VICE-PRESIDENT, IN THE CHAIR.

DR. R. J. B. HOWARD exhibited the following pathological specimens:

Atheroma of Aorta—Infarct in Spleen—Granular Kidneys.—The heart showed a moderate degree of calcification of the aortic valves, normal in other respects. Aorta showed very advanced atheroma, there being all degrees from slight yellowish sub-intimal deposit to extensive calcification of the inner and middle coats; also many spots where the intima had been destroyed, laying bare the middle coat, which was calcified. In one place two of these "atheromatous ulcers" communicated by a passage running under the intima, admitting a pencil. The spleen had a large infarct raising the capsule, marked off from the surrounding tissue by a dense, yellow, fibrinous capsule. The substance of the infarct was of a dull reddish brown color, soft and friable, apparently structureless, and looking like a decomposing blood clot. The kidneys were a little smaller than normal. Cortex shrunken, surface typically granular, surface tough on section.

The patient had a spot of softening in the pons. This specimen was in Dr. Wilkins' possession. The condition of the aorta, etc., was not suspected during life.

Dr. WILKINS said this patient, aged about 73, came to hospital with paresis of the left side, contracted pupils and mental derangement. The muscles of the thumb of the left hand were wasted, the right less so. Five or six days before death, left-sided hemiplegia set in, which could not be accounted for at the time, but which the *post-mortem* made clear. He sliced the brain, getting nothing abnormal till the pons was reached. Here, to the left of the median line, was found a spot of softening the size of a pea, due, no doubt, to a piece of fibrin from the aorta or a little plate becoming separated and carried till lodged there.

Malignant Disease of the Uterus.—DR. HOWARD exhibited this for Dr. Armstrong. The cervix was gone; all the remaining tissues were involved, as were also the parts about the bladder. Both ureters were enormously dilated, from being blocked at the lower end. The pelvis also were greatly distended. There were no signs of peritonitis.

DR. ARMSTRONG said he saw the patient first in the beginning of January. Was sent for on account of excessive metrorrhagia. The case was easily diagnosed, and the chloride of zinc paste applied. A slough formed and came away. She got about till April 1st, when he was again sent for to stop another hemorrhage. The paste was again applied. He was sent for a third time for this trouble last Wednesday, but on arriving she was dead. A late symptom was incontinence of urine from the infiltration about the neck of the bladder and urethra. For the last five or six days no urine came away. She never suffered much. The patient's sister had just recently died of the same disease.

DR. MCCONNELL then read a paper on "Cholera and the Comma Bacillus." After introducing the subject, he stated that all epidemics of cholera have their origin in the region about the delta of the Ganges, in India; and the course pursued by those which have reached this country has usually been

northwestward through Afghanistan and Persia, over the Caucasus, or along the Caspian to Russia; thence through Northern Europe to England and across the Atlantic. The epidemic which threatens us this year is taking a shorter route. It left its seat about 1880, prevailed in Arabia in 1881 and 1882, ravaged Egypt in 1883 and France in 1884,—and this year it is epidemic in Spain, and should England be visited the probability of its being conveyed to this country will be great. The natural history, character, etc., of the bacteriaceæ were then briefly sketched. Bacteria were first discovered in 1683 by Leewenhock, a Dutch microscopist, but the knowledge we now possess has been gained chiefly by investigations made during the last twenty years. The names of those prominent in this field of science were then given. Bacteria had been discovered associated with the following affections, and have, in some, been satisfactorily demonstrated as being the cause:—Anthrax, septicæmia, pyæmia, osteo-myelitis, malignant œdema, erysipelas, glanders, relapsing fever, typhoid fever, variola, cow-pox and sheep-pox, measles, diphtheria, malarial fevers, syphilis, gonorrhœa, endocarditis, croupous pneumonia, pertussis, trachoma, pterygium, tuberculosis and some others,—and recently Pasteur has discovered a micro-organism in hydrophobia, and by attenuating the germs and inoculating dogs with them has rendered the latter insusceptible to the influence of the most potent rabid virus. Reference was then made to the work of those who had during the past forty years made search for the cholera germ, and the arguments in favor of the germ theory of this and other infectious diseases were given. The work of Dr. Koch was then referred to in detail. The character of the comma bacilli, their peculiarities of development and the influence of drugs upon them given, and their occurring only in the intestinal canal, and contents mentioned. The experiments of Drs. Reitsch and Nicati, who successfully inoculated animals with the comma bacillus, was subsequently confirmed by Dr. Koch. The fact that Drs. Finkler and Prior of Bonn, and Drs. Klein and Gibbes of London, found comma-shaped bacilli in sporadic cholera and dysentery, and that they

were found in stale cheese by Deneke and in the saliva by Muhler and Lewis, was met by Dr. Koch and his followers by insisting that morphological criteria alone are not sufficient to show that the bacilli are identical. Their physiological characters must be similar; under cultivation the mode of vegetation and the colonies, etc., of the above are quite different from the cholera bacillus, hence they are distinct species. The bacillus said to have been found in the blood by MM. Strauss and Roux, Dr. Koch pointed out, were the "blood plates" often found in some febrile diseases. He (Dr. McC.) thought the report of Drs. Klein and Gibbes, of the English Cholera Commission, rather confirmed Koch's discovery than otherwise. They found the comma bacillus in all cases, but looked upon others as *post-mortem* occurrences. They also found straight bacilli, but Mr. Watson Cheyne, in the discussion which followed their report to the Royal Medical and Chirurgical Society, stated that they were at one time straight, then curved and sometimes spiral, but whatever its morphological change is, it invariably exhibits the same actions and characters under cultivation. The detection and cultivation of the comma bacillus would enable us to recognize the earliest cases of cholera or an incipient epidemic. In regard to treatment, the fact that the bacilli do not develop in acid media or below 60° F. would support the advocates of acids and cold as treatment, although opium must still be the sheet-anchor. As the bacilli are destroyed by drying, dry heat would form the best disinfectant. The inoculations by Dr. Ferran in Spain were then referred to. He (Dr. McC.) said, as the bacilli had been found in the intestines only, not in the blood, and one attack of cholera did not usually protect from subsequent ones, it would be interesting to learn the method adopted and what measure of protection is afforded.

DR. WILKINS said that five or six weeks ago Prof. Billings brought him a test-tube containing the Asiatic cholera germs in a beef-tea and gelatine solution, also one with the cholera morbus germs. From the shaking they received both were liquified, so that their peculiar and very different behaviours

could not be observed. The cholera morbus preparation was very foetid, the other much less so.

DR. KENNEDY suggested that, as the men about copper works were known to be rarely attacked with cholera, the salts of copper should be tried as a remedy.

DR. HY. HOWARD had seen three epidemics—one in Ireland and two in Canada. Each epidemic appeared to be less severe than the previous one. The salts of copper had been used in all these epidemics, but were not found of more benefit than other astringents.

DR. A. L. SMITH asked if during the last epidemic in this city the water reservoir was then at the head of Elizabeth street, and was the water pumped up to it from the river opposite to the city.

DR. KENNEDY said it was.

DR. HY. HOWARD said that 42 years ago the reservoir was a large wooden vat at the corner of Notre Dame and Bonsecours streets, the water being pumped into this from the long wharf. It was supplied by wooden pipes. There were then no water-closets in the houses.

DR. TRENHOLME said that if cholera came, he intended giving his patients large quantities of water along with spirits and camphor.

DR. R. J. B. HOWARD said he had recently heard a discussion as to its treatment in London. Application of hot water to the back and abdomen, and hot alcoholic drinks with diluted sulphuric acid were strongly recommended. Enemata of carbolic acid, corrosive sublimate and nitrate of silver were said also to be of great service.

DR. REED said that more than likely it was the acid fumes about copper works which preserved the workmen from attacks of cholera.

Stated Meeting, June 12th, 1885.

E. H. TRENHOLME, M.D., 2ND VICE-PRESIDENT, IN THE CHAIR.

Cancer of Rectum with Secondary Affection of Stomach.—

DR. R. J. B. HOWARD exhibited the stomach and intestines of a

patient who had recently died at the Montreal General Hospital. The history of the case is as follows: James W., aged 63, had for some time had pain referred to bladder, and was sent into the hospital under Dr. Fenwick, on suspicion of having stone in the bladder. In December, 1884, he began to suffer pain over pubes, slight and limited in area, increased on lying down. This pain increased steadily in intensity, and in April last patient gave up work on this account. At this time there was frequent micturition, both day and night, but urine presented nothing unusual. He now began to lose flesh rapidly. Some three weeks before admission he had some retching, and on three occasions vomited. On admission into the hospital June 2, '85, the above symptoms were present. It was found that the stream during micturition was sometimes arrested, and that the act was attended by pain. No stone was detected in the bladder, and as the urine contained some pus, and his prostate was enlarged, he was put on treatment for cystitis. Nothing was discovered when examining prostate per rectum, except the enlargement of that gland. Two days later he had an alarming attack of collapse, and recovering from this, symptoms of pneumonia appeared, of which disease he died on June 9th. Before this a hard tumor was detected in the epigastrium, which was believed to be malignant disease of the pylorus, or possibly the liver. The man was much emaciated, and had a very cachectic appearance.

Necropsy.—Pneumonia of left lung and œdema. In abdomen all the glands in omentum were enlarged, some the size of a walnut, hard and firm. The gastro-colic omentum was puckered up and contained a large nodular mass. Ascending colon bent on itself, and held down by a large mass of new growth, which appeared to originate in the glands of the meso-colon. Sigmoid flexure turned up and fixed to transverse colon by another nodule of cancerous tissue, and lower down, opposite the third lumbar vertebra, adhered to a large mass formed between the layers of the mesentery. The abdominal viscera were removed *en masse*, and on further dissection an ulcerated surface the size of a man's

* Since this report, a microscopic examination of the primary nodule shows this to have been of the nature of true scirrhus and not epithelioma.

palm was found occupying the posterior aspect of the lesser curvature of the stomach, and its wall was slightly infiltrated; the pancreas was also involved in this growth. In several other places the walls of the bowel were the seat of similar new growths, usually attacking them from without, and starting from between the layers of the mesentery. All the mesenteric and retro-peritoneal glands were enlarged, firm, and evidently the seat of the same new growth. On the anterior wall of the rectum, corresponding to a mass the size of a bantam's egg, seated in wall of rectum and adherent to the bladder just above the prostate was an ulcer the size of a ten-cent piece, having raised, rolled ridges, and a somewhat depressed base. The ulcer was about four inches from anus, and no enlarged glands were found below this. Veins of prostatic plexus filled with old clot. Arteries normal. Bladder normal, with exception of enlarged prostate.

Dr. R. J. B. H. remarked that this was another of those cases where there was extensive disease of the stomach without symptoms. The original disease, without doubt, commenced in the rectum, and extended upwards to the stomach through the glands. He also said that it is most unusual for malignant disease of the rectum to spread so rapidly, and from so slight a local affection to become general carcinoma. The symptoms caused by moderate enlargement of the prostate were more prominent than those caused by the extensive malignant disease.

Case of Tetany.—DR. STEWART read a paper on this case and exhibited the patient. (*See page 27.*)

In the discussion which followed the reading of the paper,

DR. GEO. ROSS said he would like to ask Dr. Stewart the mode of death in the fatal cases he had seen. The disease is such a rare one in this country that he had seen but few cases.

DR. HENRY HOWARD, after alluding to the various disorders of the nervous system allied to tetany, said that in his opinion a more complete anatomical and physiological knowledge of the nervous system is necessary before the exact cause of these cases can be positively known; but he thought that some irritation or inflammation of the vaso-motor nervous system may account for this disease. He had strong hopes that in the near future, with

the many workers and varied means of research, the cause of diseases such as cancer, tetany, etc., will be found, and when recognized early, that they may be successfully treated.

DR. GODFREY had seen several cases of tetany, or a disease like it, during the last fifteen years.

DR. SHEPHERD asked why it is that tetany is so much more common on the continent of Europe than in America or England, epidemics of the disease being unknown in either place, and whether tetany is more common in the dark races, as is tetanus.

DR. R. J. B. HOWARD said it was remarkable that two such different diseases as myxœdema and tetany should occur so commonly after extirpation of the thyroid gland. They occur in animals as well as man. He suggested that, where possible, the isthmus only of the thyroid should be removed, as in the 150 experiments of removal of the isthmus, performed on animals by Victor Horsley, none suffered from tetany.

DR. WILKINS said that although he had never had a case of tetany, he was much interested in the disease, and thought it probably due to irritation of the peripheral nerves, as these cases always follow diarrhœa, removal of the thyroid, or some other lesion.

DR. STEWART, in reply, said that in the fatal cases he had seen there was spastic contraction of the respiratory muscles and bronchitis. He could not tell the reason of the frequency of the disease in Europe; of course, removal of the thyroid is a very common operation there, and this would account for some of the cases, but not the epidemic form. He had seen 60 to 70 cases in the General Hospital at Vienna at one time. So frequently did this disease follow extirpation of the thyroid, that Billroth had given up operating for bronchocele, except in cases where the tumors endangered life. He was not aware of the disease being known in the West Indies, or that it is more frequent in the negro race. As to the theories advanced to explain its nature, he thought that advanced by Weiss of Vienna the most probable. Weiss looks upon the origin of the trouble as due to irritation of the sympathetic, waves of dilatation and contraction being alternately set up.

Ureometry.—DR. REED showed Doremus' ureometer, and illustrated the method of using it. This apparatus is very simple, consisting of one piece only—a bent tube of glass, one arm of which is graduated to represent grains per ounce of urea. The peculiarity of the instrument lies in the fact that a measured quantity of the urine to be tested is projected, by means of a nipple pipette, beyond the bend of the tube, previously filled with the usual hypobromite solution. Dr. Reed had tested it with a solution of pure urea, and found the readings correct. The price of the instrument is two dollars, and of each test under three cents. Specific gravity beads, as supplied by Parke, Davis & Co., for estimating the density of urine, were also shown and recommended, as being more convenient, simple and portable than the usual urinometers.

Buckwheat Flour in Diabetes.—Dr. A. M. Duncan, of Hamler, Ohio, writes that Dr. Alvord, a retired practitioner of that place, who is a sufferer from glycosuria, finds more relief from a diet of pure buckwheat flour cakes than from anything else. While he adheres to this food the urine becomes nearly normal in quantity and quality, there is no gastric distress, and the pain in the eyes—nearly destroyed by chronic iritis—is markedly relieved. On resuming the use of wheat bread and other starchy foods the symptoms become aggravated, to be again relieved upon a return to buckwheat.—*Medical Record.*

Cocaine in Chronic Pharyngitis.—Dr. Jahn recommends the following formula for the relief of the cough and vomiting of chronic pharyngitis :

R.—Cocaine	. . . . .	gr. iss.
Glycerine	. . . . .	fʒ iv.
Aquæ distillatæ	. . . . .	fʒ x ʒ ij.
Acidi carbolici	. . . . .	gr. ʒ.—M.

S.—Apply morning and evening with a suitable brush.—*Gazette Médicale de Paris*, March 14, 1885.

CANADA

Medical and Surgical Journal.

MONTREAL, AUG., 1885.

THE NORTH-WEST CAMPAIGN.

The Riel Rebellion being over, the camps broken up, and the troops having returned to their homes, we may glance at a few of the features of the campaign of interest from a medical standpoint. When the call came in March to send volunteers to Qu'Appelle and west and north of this locality, it was fully expected by all not acquainted with the country that the casualties from sickness would be great. The majority of these men, it was said, are from the cities: they follow principally sedentary occupations: they are accustomed to be well fed and well housed, and are not inured to fatigue and loss of rest. On the march they will probably be ill fed, will sleep upon the ground, will undergo much fatigue and often be obliged to forego many of the accustomed hours of rest. The result will surely be disastrous, and many will be prostrated by sickness. These anticipations, however, did not prove to be correct. Considering that there were between 4,000 and 5,000 men actively engaged in the field, the number who were at any time off duty from sickness was extremely small, not more indeed than might have been looked for amongst any similar number of persons surrounded with the ordinary comforts of civilized life. The only serious cases were a few attacks of pneumonia (some unfortunately fatal) and a few of acute rheumatism, none of which were severe, and all quickly recovered from. Of affections of the digestive system (diarrhoea, dysentery, and the like) there was an entire absence; all which is the more remarkable when we consider that, for a long time, the meat ration con-

sisted entirely of canned corned beef, and that the bread was of a very inferior quality. It need hardly be said to any of our Canadian readers that malaria and its effects do not exist in that country. Typhoid fever was not observed, but at some of the camps a peculiar form of febrile attack (irregularly intermitting in character) has been described by the medical officers; but the cases were few, and quickly convalesced without much treatment. With these exceptions the health of the men appears to have been excellent, and, more than this, it was a matter of common remark that young striplings were seen to rapidly improve, and gain weight and strength under the invigorating influence of the air of the prairies. The tonic and strengthening properties of a residence in this north-western country has long been commented upon by those familiar with the districts in question, and certainly the remarkable immunity from illness of all kinds enjoyed by our soldiers, even when suffering from the adverse influences inseparable from hurried marches in an ill-equipped condition, tends fully to confirm their observations.

With reference to the rations served to the men, and especially to General Middleton's column, as already stated, for weeks together canned corn beef from Chicago formed the staple article. Any one acquainted with this food will tell you that a man with a good stomach can devour it without special objection for a few days, but that after this it becomes very distasteful, and finally he loathes and abhors it, and cannot be induced to swallow it till driven by the pangs of gnawing hunger. It is self-evident that fresh meat should be provided whenever this is possible, and it is a point on which the chief medical officers should insist in every case, except it be absolutely impracticable to procure it. There has probably been more grumbling over the canned beef than over any other matter connected with the whole conduct of the war. Why were not cattle for supplies driven behind the column, to be slaughtered as occasion required? This means of rationing the troops was suggested before they even left Qu'Appelle, but the suggestion was not approved of.

As regards the medical department generally, we need only

say that all reports which have reached us go to show that this branch of the service proved itself as fairly efficient as any other, and quite as much so as was compatible with the hurried manner in which surgeons were despatched on the service. Those of our militia surgeons who found themselves with the battalions which were engaged in the various fights proved themselves fearless of danger in the performance of their duties, untiring in their attention to the wounded and skilful in their management of the casualties of the battlefield. The hospital staff did excellent service. Although ten days only was allowed for the work, yet after the fight at Batoche there was ready at Saskatoon a hospital of more than 75 beds to receive all the wounded sent there. The patients had excellent wooden cots, abundance of bedding, etc., and were well supplied with food of the best quality, the surrounding farmers bringing in eggs, milk, potatoes, etc., daily. The whole was under the personal supervision of the Deputy Surgeon-General, ably assisted by leading members of the hospital staff. A sufficient supply of dressers and skilled nurses was always on hand. All modern surgical appliances and requirements for the careful and antiseptic dressing of wounds was within reach, and competent authorities have expressed themselves surprised at finding such completeness of detail and care in management in such a distant spot. Dr. Boyd, for instance, who came in charge of the English medical fund, has spoken very highly on these points and on the general management of the Medical Department as he saw it during his recent visit. The transport of the wounded by boat from Saskatoon to Winnipeg was also skilfully planned and successfully carried out.

Credit is due to Dr. Bergin, the Surgeon-General, and to Dr. Roddick, Deputy Surgeon-General and chief medical officer in the field, as well as to the Hon. Dr. Sullivan, Purveyor-General to the Medical Department, for the satisfaction which the management of the department has so generally given.

We hope, at an early date, to be able to give some further details concerning the nature and treatment of some of the more interesting cases.

THE TREATMENT OF ALBUMINURIA.

The treatment of albuminuria *per se* is seldom attempted by physicians. How different is the case with other prominent symptoms, as dropsy, anæmia, or jaundice. Here it is the rule to treat the symptom and not the cause of it, while in albuminuria the contrary is the practice—we treat the cause and not the effect. The principal reason for these differences in practice is the fact that the former are marked subjective conditions which arrest the attention of the patient and his friends, while the latter being entirely objective, we are not urged to interfere. In jaundice, dropsy and anæmia, we are very frequently unable to discover the cause. In albuminuria, on the other hand, the diagnosis of the seat and nature of the cause is not difficult to make out. In the former, therefore, we are frequently compelled, for want of definite knowledge, to treat symptomatically, while in the latter we direct our measures to the removal (when possible) of the original lesion.

In albuminuria depending on retardation of the venous return from the kidneys, the removal of the obstruction to the circulation is quickly followed by the disappearance of the albuminuria. As the most common cause of this form of loss of albumen is cardiac failure, digitalis is therefore our best agent to employ for its removal.

Pyrexial albuminuria requires no treatment, as it disappears after the temperature has become normal. The albuminuria of anæmia, and that form due to neurotic disorders, also quickly disappears on the removal of the cause.

In the albuminuria due to disease of the kidney, this symptom becomes only of marked importance when it is the only one present for a long period, indicating the nature of the lesion with which we have to do.

Some physicians look upon the actual loss of albumen as serious when long continued in cases of chronic nephritis. They consider it a great drain on the system. Senator has lately pointed out that this loss, at most, cannot exceed half an ounce in the twenty-four hours. He shows that in cases of chronic catarrh of the bladder more than this quantity of albumen is

daily lost for many months, and yet nobody thinks the loss a dangerous one or takes any means to directly diminish it. Senator says the presence of albumen in the urine in any of the different forms of chronic nephritis is no reason for feeding patients with substances rich in albuminous ingredients. In his experience, the use of such diet increases the albumen in the urine, and greatly adds to the dangers of uræmic intoxication.

There is great significance in the experience obtained by Bruce and Sparks in the treatment of a phthisical patient who was also suffering from chronic albuminuria. They fed him largely on eggs, without any marked change in the quantity of albumen excreted; but shortly after confining him to strictly vegetable diets, the albumen entirely disappeared from the urine.

Penzoldt has found that on feeding a dog who had chronic albuminuria with a meat diet, there was marked increase in the amount of albumen when compared with that eliminated when the animal was under a bread diet.

It follows from the above observations that when we are treating albuminuria as a symptom, we should diminish, as much as possible, diet rich in albuminous materials. Milk diet, carbohydrates, fatty and gelatinous substances should be chiefly relied on. Next in importance to diet in the treatment of albuminuria is the subject of muscular rest. It is a well-established fact that violent exercise is sufficient to bring on albuminuria. It is a clinical fact also that patients with chronic albuminuria excrete more albumen after active exercise than they do while at rest. The avoidance of cold baths and mental inquietude are also important points to be taken into consideration.

The above treatment is, of course, only indicated where the loss of albumen is the chief symptom of the nephritic changes. We have no medicinal agent which has a direct influence in lessening the amount of albumen filtrated through the kidneys. The alleged power of tannin containing substances to do this has not been proved. To sum up the treatment of albuminuria, there are four important points to attend to: 1st, A diminution in the amount of albumen ingested. 2nd, Rest in bed. 3rd, The avoidance of cold and cold baths. 4th, Mental quiet.

THE SMALLPOX.—There has been very considerable increase in the number of smallpox cases during the past month. In view of the threatening epidemic, the following figures may be of interest as showing the comparative immunity of the vaccinated classes of the community :—

MORTALITY FROM SMALLPOX IN THE CITY OF MONTREAL.

	<i>Total Mortality.</i>	<i>French- Canadians.</i>
1876	703	568
1877	506	431
1878	728	639
1879	472	417
1880	140	111
1881	5	4
1885 (From April to 15th July, inclusive).	44	35

The following is a report of the cases treated in the small-pox hospital from 7th April to 15th July, 1885 :—

Number of patients admitted.....	85
“ “ French-Canadians.....	57
“ “ deaths.....	28

CANADA MEDICAL ASSOCIATION.—We are greatly pleased to learn that there is every prospect of there being a highly successful meeting of this association at Chatham. Already the number and character of the papers promised completely ensures the scientific success of this important gathering. The well known energy and abilities of the profession in Chatham is a sufficient guarantee that no stone will be left unturned by them to make the meeting a general success. All regular members of the profession will, on application to Dr. Stewart, the General Secretary, be furnished with certificates entitling them to travel for a fare and a third. All the railway companies now require that members should purchase full fare tickets while travelling to the place of meeting, and for the return trip they will, at the place of meeting, be furnished with a ticket at one-third fare. The return trip must be made by the same route as travelled when going to the meeting. We would again remind our readers that the Association meets in Chatham on Wednesday and Thursday, the 2nd and 3rd of September.

OBITUARY.—We regret to announce the death of Alfred Jackson, M.D., of Quebec, on the 15th ult. Dr. Jackson was one of the oldest and most respected practitioners in Quebec. He was for many years Dean of the Medical Faculty of Laval University, and had attained the age of 75 years.

THE NEW BUILDING.—The building of the Medical Faculty of McGill University is making rapid progress. The walls and roof of the new lecture-room and the section adjoining it are complete, and the internal work is being quickly pushed forward. The remodelled dissecting-room is nearly finished, is splendidly lighted and will furnish vastly increased accommodation. It is confidently expected that all the alterations will be completed during next month.

THE INSANE IN THE UNITED STATES AND CANADA.—We learn that Dr. D. Hack Tuke is preparing for publication a book bearing the above title, which will appear in about a month. It will contain, besides the complete papers on the subject compiled during his visit to this country last year, an interesting account of early lunacy practice in the United States and a description of the development of the study of mental diseases in the Union. We feel sure that many—both lay and medical—will look with interest for a book from this well-known writer, for all will remember the awakening that followed his powerful exposition of the glaring faults of the antiquated system followed in this provincé. When in receipt of the volume we shall be glad to draw attention to its contents more at length.

—The recent meeting of the American Ophthalmological Association, held in the Pequot House, New London, Conn., was perhaps the most successful in the annals of the Association both in the matter of numerical attendance and in the number and quality of the papers presented. Upwards of forty members took part in the proceedings, and papers were read and discussed embracing nearly the entire range of ophthalmology. Before adjourning, the meeting showed in an emphatic manner the feeling of its members towards the new committee of the pro-

posed International Medical Congress by passing a resolution almost unanimously advising all members of the American Ophthalmological Association not to act with the new committee.

Personal.

At the July examination of the College of Physicians in Ireland, Dr. R. H. Arthur (McGill, '85) obtained the licenses of the College in both medicine and midwifery.

Dr. Bell has been relieved from hospital duties, and is at present on a visit to the Waldron Rancho, near the Rocky Mountains.

Dr. Palmer Howard has returned from a month's vacation, part of which was spent on the salmon rivers. The Doctor proved himself as apt at throwing a fly as at making a diagnosis.

Prof. Osler is, we believe, at present in Toronto, and will, after spending some weeks in Ontario, attend the annual meeting of the Canada Medical Association, of which he is President-elect.

Dr. Roddick, Deputy Surgeon-General, has returned from the North-West, having provided for the remaining wounded in the General Hospital at Winnipeg. His health is much improved by the campaign, and he speaks highly of the country.

Dr. Boyd, who came from England in charge of the fund collected for the Medical Department by the Princess Louise, passed through here on the 1st instant on his way home. He was much gratified by what he saw, and speaks in the highest terms of the care which he found bestowed upon the wounded and the comforts with which they were surrounded. The fund was found of great service in assisting many who had suffered severe losses, and furnishing them with the means of securing some extra conveniences and appliances.

Medical Items.

SMALL-POX OR CHICKEN-POX.—The authorities of Long Island City, it is said, are likely to have a suit for damages to defend. It is alleged that they ordered the removal of a man who seemed to have small-pox to the hospital on North Brother Island, where it was discovered that he was only suffering from chicken-pox. He was kept in the hospital eleven days.

THE MOST POPULAR MEDICINES.—Last month we published a table compiled by an American writer showing the comparative proportion in which twelve of the leading medicines had been ordered in 1,000 prescriptions which had been taken at random. It was shown that quinine was ordered 238 times, opium 136, nux vomica 130, iron 123, while iodine, mercury, bismuth and bromine are altogether at 59 and 60 times. In June 1868, we published an article by Mr. W. Willmott on "Medicine," in which a somewhat similar investigation is recorded. Mr. Willmott had analysed 1,000 prescriptions, but he did not give the details in a form which admits of exact comparison. He, however, found that quinine was far ahead of any other single medicine ordered, but, classifying all remedies in their natural groups, he found mercury prominently at the top, then potash, bark, opium and iron. He found that out of the 768 simple and compound medicaments of the Pharmacopœia, only 485 occurred at all in these 1,000 prescriptions, while three-fourths of these were not prescribed 10 times in the 1,000. —*Chemist and Druggist.*

DANIEL'S MEDICAL JOURNAL.—If progress in medicine in the United States is to be estimated by the number of new medical journals springing up there almost daily, then indeed have our neighbors reason to be proud. The latest bantling is that bearing the above title, and it hails from Austin, Texas. Now Texas was one of the territories left out in the cold by the original committee, having no representation on the staff of the International Congress; and Texas couldn't stand this, and, asserting her rights at the New Orleans meeting of the Ameri-

can Medical Association, assisted in turning things topsy-turvey. A Daniel seems "come to judgment," and he belabors those who overlooked the claims of his section in what we suppose is right good Texan style. He modestly quotes the opinion of one of his friends who considers him the coming "Mephistopheles of Medical Journalism." The magazine is not very diabolical in outward garb, but, of a deep red color, bears the symbolical star of Texas, shedding rays of light in all directions, whilst some juvenile winged spirits dance about, as though expressing their delight at its appearance. We shall be glad to greet Mephistopheles every month, and to hear how things seem to his Satanic mind.

PEPTONIZED COD LIVER OIL MILK.—Dr. Wm. McGeachy, of Iona, Ont., states that he has used this preparation with very good results in the following cases, viz. :—1. Strumous enlargement of the glands of the neck. 2. Post-nasal catarrh, with chronic tonsillitis. 3. The sequelæ of acute diseases. As a remedy for the latter stages and subsequent results of whooping-cough in children, he considers that it excels all remedies previously tried, and that in the second class of cases mentioned it acted particularly well. It being so highly peptonized, it also acted as a good digestive agent.

—Experience, the greatest of all teachers, has demonstrated that, in a large number of cases, Cod Liver Oil is beneficial for a few weeks, that the patient improves upon it, gains flesh and strength, but, unfortunately, this improvement does not continue; right in the midst of flattering prospects the patient comes to a halt, ceases to gain weight, or otherwise improve. Physicians have experimented for years in their endeavor to overcome this objection; it has finally been accomplished by Drs. G. Overend Drewry and F. C. Bartlett of London, England, who, by means of pancreatine, have succeeded in perfectly digesting or hydrating the oil, thus giving to the profession cod liver oil in a perfectly assimilable form, overcoming the only objection to its continued use. This hydrated oil is christened HYDROLEINE, and after nearly five years of extended trial it has been extensively approved of.