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THE  
MONTREAL MEDICAL JOURNAL.

VOL. XVIII.

FEBRUARY, 1890.

No. 8.

Original Communications.

APPENDICITIS—LAPAROTOMY—RECOVERY.

BY FRANCIS J. SHEPHERD, M.D.,  
Surgeon to the Montreal General Hospital.

WITH REMARKS ON CASE BY DR. R. L. MACDONNELL.

The following notes of the case have been furnished me by Dr. R. L. MacDonnell, under whose care the patient was up to the time of operation:—

“ Julia B., æt. 20, was admitted into the medical wards of the Montreal General Hospital on September 13th, 1889, complaining of severe pain in the abdomen. For the last twelve months she has frequently suffered from occasional pain and tenderness in the right iliac region, but the first really severe attack which resembled the present one occurred five months ago, and was very severe. She remained in bed for three weeks, and thought that recovery was complete, but after being up three weeks a second attack occurred, which was more severe than the first. She was taken to the Notre Dame Hospital, where she remained some three or four weeks, leaving the institution some time in June. Since then she has never been free from some degree of pain in the right iliac fossa. The present attack began nine days ago. She awoke in the night with a very severe pain in the right side of the abdomen, which was almost immediately followed by vomiting. The pain next day was more intense. Five days before entering hospital she had a severe rigor. She was under treatment evidently by opium until day of admission.

At the time of visit she presented the following appearance: A strong, muscular girl, with bright complexion; dorsal decubitus; legs drawn up; face pinched and expressive of the greatest suffering; great tenderness and pain over right iliac fossa, which extends towards the right breast and up the back of the chest; pulse 120, small and hard; respirations hurried and shallow (30); temperature, morning  $99.4^{\circ}$ , evening  $100.8^{\circ}$ . The bowels have not moved for several days. On admission an enema had been administered, opium was given, and fomentations applied.

Next day the condition was much worse. Pain and tenderness general over the whole abdomen. Dr. Shepherd was now called in."

I saw the patient, at Dr. MacDonnell's request, at mid-day, September 14th, 1889. She was suffering from well-marked symptoms of appendicitis. We both decided it was a case for operation, and without further loss of time the patient was put under ether. On examination, no tumor could be made out in the right iliac fossa, but there was a distinct sense of resistance. After thoroughly cleansing the abdominal walls, an incision was made in the right iliac region some four inches in length. The incision made was the usual curved one, the centre being a little internal to the anterior superior spinous process of the ilium. After cutting through the abdominal wall, the peritoneum could not be distinguished, but a mass of inflammatory tissue and omentum appeared; this was carefully pulled aside, and in doing so a small stinking abscess containing a few drachms of pus was evacuated. The appendix was now searched for, and was somewhat difficult to find. The first structures that came into view were some coils of small intestine and the right Fallopian tube. After some little search, which was complicated by the condition of the parts, the appendix was found, somewhat larger than normal, coiled up beneath the cæcum and imbedded in a mass of inflammatory tissue. Cautiously separating it preparatory to applying a ligature, an abscess behind the cæcum containing several ounces of stinking pus was evacuated, a portion of which escaped into the general peritoneal cavity. On

examining the appendix, quite close to its junction with the cæcum a gangrenous ulcer was seen, which almost severed the appendix from the bowel. The appendix was with difficulty ligated above the ulcer, a piece of the cæcum being pinched up to make the ligature hold; it was then removed at the site of the ulcer. The cavity of the peritoneum was now washed out with boiled water and the wound closed, except at the lower end, through which was introduced a large rubber tube to the bottom of the abscess cavity. Dressing consisted of iodoform and cotton wool, held in place by a couple of strips of rubber plaster.

After the operation the patient had a very restless night, with considerable vomiting and pain. Next day the dressings were changed, being soaked through with the oozing of a bloody serum, and also some bloody serum was withdrawn from the wound by means of a syringe having a piece of tubing attached. Two days after the operation the bowels moved freely. At the end of a week patient was doing well, had very little pain, and no rise of temperature. The discharge from the wound had a distinctly foecal odor, and was yet in some quantity. The stitches were taken out, and near where the drainage tube was the wound gaped considerably, so it was packed with sticky iodoform gauze from the bottom.

From this time the case progressed favorably, a slough the size of a five-cent piece coming away at the end of the second week. The patient was placed on plain full diet at the end of the fourth week, and was then seized with severe colicky pains without rise of temperature. On enquiry it was found that she was constipated, so salines were ordered, but these not relieving the pain she was placed on milk diet, which in a couple of days restored her to her normal condition. Patient was discharged from hospital on the 4th of November; she still had a small sinus at the site of the drainage-tube. I saw her on Wednesday, December 18th, and she had then been back to her work for three weeks; she looked strong and fat, and said she had not the slightest pain. There was still a small shallow sinus at the lower end of the abdominal wound.

In laparotomy for appendicitis the lateral incision is much the

most convenient, especially in cases where the diagnosis is as plain as in the one just related ; besides being the most suitable for examining the condition of the cæcum and appendix, the lateral incision is much the most favorable for after drainage. Some surgeons advise that in excision of the appendix the peritoneum should be dissected away and sewed over the end of the cut tube. I see no special advantage in this procedure, and, besides, it is only practicable in a few cases ; when the peritoneum is so altered by inflammatory action, as is usually the case, no such plan could be carried out. In this case the appendix was removed so close up to the cæcum that even if the peritoneum had been normal a flap of it could not have been removed. Omental grafting, as recommended by Dr. Senn in wounds of the intestines, might be a useful and practicable proceeding. The situation of the ulcer in this case was unusual ; it is generally situated at some distance from the cæcal junction, most frequently near the apex. No concretion was found.

This case was successful because early operation was performed and symptoms of general peritonitis were not waited for. In fact, to treat such cases on the expectant plan is obsolete and bad surgery ; a very few may get well, but the great majority will perish, and perish rapidly. Again, this case, from its history of repeated previous attacks and its not very rapid course, was one which was eminently favorable to operation. Where the appendix is curled up beneath the cæcum, the diseased area is usually separated from the general peritoneal cavity by a boundary of inflammatory tissue, and this is the time operation should be undertaken. Should the disease go on, the abscess may either present in the iliac fossa, rupture into the peritoneal cavity, or, if the pus be pent up, it may cause death by septicæmia. The cases which have a previous history of attacks of appendicitis should be operated on without hesitation early ; the danger of early operation is not great, and the patient is permanently relieved from a condition which will, sooner or later, cause his death. Such cases are advised to be operated on between the attacks and the appendix removed. Mr. Treves of London and Dr. McBurney of New York have

successfully operated in such cases. These cases differ much from those others where the appendix hangs freely over the brim of the pelvis and perforation occurs almost without previous warning, and is not preceded by a limiting inflammation. In such cases there is a sudden lighting up of a general peritonitis of a most virulent type, which in spite of any operation rapidly proceeds to a fatal termination. I have operated on several such cases always with the same result. Death has not been averted by the operation, but pain and vomiting have been relieved.

There is no doubt in my mind that the degree and virulence of the inflammation of the peritoneum caused by perforation of the appendix varies considerably in different cases, depending on the condition of the individual and the quality of the poisonous matter extruded from the perforated appendix. I believe in some cases operation, even if performed at a very early stage, would be of no avail. Those cases where an abscess has burst into the peritoneal cavity, unless operation be *immediately* performed, are always fatal. A general suppurative peritonitis is lighted up—no amount of washing will cleanse the many nooks and corners of the peritoneal cavity from its infective material.

*Remarks by Dr. MacDonnell.*—Did the prognosis warrant an operation so formidable as laparotomy? (1) There were three distinct attacks of pain in the right iliac region, each worse than the preceding one. (2) The suddenness of the onset is characteristic of disease of the appendix. Sudden, severe abdominal pain was present in 216 out of 287 cases collected by Dr. Fitz of Boston (84½ per cent.) (3) In the intervals between the attacks of acute pain the patient still suffered, though not severely. It would therefore be unlikely that even if the present acute symptoms were to pass off she would regain her health. (4) The symptoms pointed to a change from a local to a general peritonitis, though after operation there were no indications of general peritonitis observed. Appendicular peritonitis has a special tendency to become general, and when general the result is almost invariably fatal. I therefore felt that in handing my patient over to the surgeons I was giving her the best chance for life which circumstances afforded.

## Retrospect Department.

### QUARTERLY RETROSPECT OF MEDICINE.

By R. L. MACDONNELL, M.D.,

Professor of Clinical Medicine in McGill University; Physician to Montreal General Hospital.

#### DISEASES OF THE LUNGS.

*On the Treatment of Pneumonia by the Ice bag.*—Dr. Lees, in a paper read before the Harveian Society on 17th October, claims beneficial results from this mode of treatment, and cites the history of eighteen cases of pneumonia in which he had given the method full trial. When a treatment for a disease so self-limiting as pneumonia is advocated, one cannot help feeling critical and called upon to look closely into the evidence in favor of the new agent. There are eighteen cases cited. Two of these can be dismissed at once, since the writer of the paper acknowledges that the icebag was not beneficial. In two other cases the diagnosis is doubtful. A child aged 3 years (son of Dr. Lees) has “catarrh for two or three days, when he rapidly became acutely ill; the temperature ran up to  $104^{\circ}$ , the breathing was very rapid, and his lips began to look a little dusky. Just the faintest impairment of resonance was to be detected at the base of one lung.” This is very slight evidence on which to base a diagnosis of pneumonia, but the next case is even more doubtful. “A boy, aged 4, has a week’s catarrh and a sudden temperature of  $104.5^{\circ}$ ; pulse 140; respiration 50, occasionally interrupted by a short cough; a shade of loss of resonance at the left base below the angle of the scapula. At this spot, and also at the corresponding spot on the other side of the chest, inspiration was a little harsh and attended by a little r  le, and expiration was too plain.” They may have been pneumonias, but when a plan of treatment is advocated, the first and most important question is whether the patient really had the disease which was said to be cured. Of the other fourteen patients none were old and none of them had an alcoholic history, and with the exception of cases 11, 14 and 15, all were of the kind that would do well under any kind of treatment. Take, for example case 3, a

schoolboy aged 16. On the fourth day the temperature was  $104^{\circ}$  with "moderate consolidation at the right base. On the fifth day the temperature fell. Certainly it has fallen to the lot of many practitioners to have witnessed a crisis on the fifth day even without icebag treatment.

Granting that the application of the icebag lowers temperature it is yet an open question whether it is beneficial to lower temperature. In pneumonia it is not the fever that kills, and if the patient be young and free from depressing influences, and if the extent of lung involved be not extensive, then certainly the depression of the temperature by cold will not lower the mortality rate.

Dr. Goodhart had also used the icebag in eighteen cases. A good result was obtained in eight. In seven it was doubtful if the treatment had had any effect whatever, while in three cases symptoms of collapse were produced of a new temporary nature. He thought that there was no danger in the treatment, such collapse as might occur being easily detected.

Dr. Sturges pointed out that Dr. Lees cases were all young, and the mortality in these was very small. He doubted if the evidence was yet sufficient for us to say that we arrested pneumonia, and recalled the brilliant statistics of Hughes Bennett, who had reported over one hundred cases, some of them in elderly persons, with but five deaths. He doubted also if it was, as a rule, a great good to shorten the pneumonia.

*The Non-tubercular and Non-cardiac Hæmoptysis of Elderly Persons.*—Sir Andrew Clark read a most instructive paper at the Medical Society of London on the 21st October, selecting as his subject the occurrence of hæmoptysis in elderly persons who were at the time and who remained afterwards free from signs either of pulmonary tuberculosis or of structural disease of the heart. A case which occurred in the London Hospital drew Sir Andrew's attention to a form of hæmoptysis which was probably due to a condition of the arteries. The autopsy revealed no cause for the hæmoptysis, but by means of the microscope two important facts were brought to light. The first that the seat of the hemorrhage was in the neighborhood of certain em-



physematous patches, the second that the minute vessels in those which were for the most part terminal arteries were always diseased. And, finally, it appeared in the highest degree probable that there existed a direct casual relationship between the condition of the blood-vessel, the emphysema, and the hemorrhage. For wherever there was an emphysematous patch there was a diseased artery; wherever the artery was much diseased the capillaries and venous radicles were also affected; and generally, though not always, where the terminal artery was obstructed and degenerating, there was adjacent hemorrhage. "I inferred that the initial visible movement in the malady had been some minute structural change in a terminal branch of the pulmonary or of the bronchial artery, and in consequence of this there had been brought about a more or less complete obstruction of the supply of blood through the territory involved; that following this there arose degeneration of the capillaries and venous radicles determining a true atrophic emphysema, and that the integrity of the blood-vessels being thus impaired, the formation of thrombi or recurrent condition of pressure had brought about the hemorrhage which ended in death."

What was the intimate nature of the structural vascular changes? The importance of the case lies in the primitive dynamic changes which gave the structural alterations form and meaning. "When I endeavored to determine the significance of these changes, and for this purpose studied the life history of the case—when I saw that the patient had been for years an arthritic, that he had suffered on many occasions from many of the constitutional manifestations of this diathesis, and that the structural changes in the pulmonary blood-vessels were akin in character to those which are found in the diseased articulations, I permitted myself to conclude that the malady was of an arthritic nature, and that I had seen and dealt with a case of what might be called, without serious scientific impropriety, 'arthritic hæmoptysis.'"

The second case occurred in a stout man of 50, who was rheumatic, fat, short-breathed, eczematous and indolent. There was bronchial catarrh, but no circulatory derangement. Death

from hæmoptysis. Here, again, were found the emphysematous patches, the diseased blood-vessels, and the extravasated blood. The source of the fatal hemorrhage lay in the diseased blood-vessels. Probably the disease was of an arthritic nature, and pardonably enough one might say, here is another case of arthritic hæmoptysis. "Since 1875 I have seen in persons over 50 some twenty cases of hæmoptysis of the kind which I have now described," The cases thus related have led Sir Andrew Clark to substitute for the treatment, commonly thought orthodox, a light and rather dry diet, a sparing use of liquids, the discontinuance of the use of ice, a calomel pill at bedtime, followed by a saline cathartic, and an alkaline mixture between meals twice in the day. The propositions framed from the results of Sir Andrew Clark's enquiries are as follows :

1. That there occurs in elderly persons free from ordinary disease of the heart and lungs a form of hæmoptysis arising out of minute structural alterations in the terminal blood-vessels of the lung.

2. That these vascular alterations occur in persons of the arthritic diathesis, resemble the vascular alterations found in osteo-arthritic articulations, and are themselves of an arthritic nature.

3. That although sometimes leading to a fatal issue, this variety of hæmoptysis usually subsides without the supervention of any coarse anatomical lesion of either the heart or the lungs.

4. That when present, this variety of hemorrhage is aggravated or maintained by the frequent administration of large doses of strong astringents, and by an unrestricted indulgence in liquids to allay the thirst which the astringents create.

5. That the treatment which appears at present to be most successful in this variety of hæmoptysis consists in diet and quiet, in the restricted use of liquids, and the stilling of cough ; in calomel and salines, in the use of alkalies, with iodide of potassium, and in frequently renewed counter-irritation.

#### ANEURYSM OF THE AORTA.

An interesting discussion of this important subject took place

at the meeting of the Medical Society of London, on the 9th December, 1889, Dr. Theodore Williams in the chair.

Dr. Douglas Powell introduced the discussion and said that the object of the meeting was to elicit the experience of the Fellows in the diagnosis and treatment of aneurysm. It was specially urged that the true clinical features of aneurysm were alone—with very rare exceptions—yielded by the sacculated form of the disease, and that both in regard to prognosis and treatment the so-called fusiform aneurysm was totally different. The aneurysmal sac was necessarily an enlarging tumor, producing (1) pressure phenomena, and (2) cardio-vascular phenomena. In enlargement of the vessel without sacculation pressure phenomena were insignificant or absent, the cardio-vascular phenomena very marked. Pressure signs were of the first importance in the diagnosis of aneurysm, and to imperfect recognition of this fact and the attachment of too great a value to circulatory phenomena were attributable most errors in diagnosis, and illustrative cases were related. The value of the laryngoscope as an aid to diagnosis and of the sphygmograph as a recording instrument were emphasized.

Dr. Broadbent agreed that the pressure signs were more important for diagnostic purposes than the disturbances of the circulation, with this qualification that the pressure signs depended upon the situation of the aneurysm. In aneurysm of the ascending aorta, the tumor might attain a considerable size and yet produce very little pressure upon neighboring parts, owing to the natural mobility of the vessels. To hear a murmur was rather the exception than the rule. The "diastolic shock," either audible or perceptible to the hand, was one of the most valuable of signs. Fusiform aneurysm is not amenable to any treatment; the only thing was to lower the pressure, enjoining rest, but not with the idea of promoting anything like a cure. He had nothing to add to the Tuffnell treatment, but his own experience with the iodide of potash was that it very strikingly promoted consolidation within the sac. He had many times found that consolidation had followed the administration of the iodide, which virtually had the same effect as the Tuffnell treatment, running off the fluid

by the kidneys and so inspissating the blood. He only resorted to bleeding when there was pain, but the relief was then very striking. Dr. Sibson's plan of treatment by the use of ergot unquestionably diminished the size of the tumor, though this was certainly not due to any specific action on muscular fibre in the sac wall, since he had never been able to discover any there.

Dr. Bristowe confined his remarks to treatment, in which he said that he was somewhat of a pessimist. Post-mortem appearances pointed to the fact that the permanently cured cases—*i.e.*, thoroughly filled up with clot—were cases in which aneurysm had not been suspected, and in which the patient had been bed-ridden and dying for weeks of something else. He was rather in favor of the Tuffnell treatment, but he had no faith in the treatment by wire or by galvano puncture. He had never witnessed any benefit from the iodide of potash treatment.

#### INFLAMMATION OF THE VERMIFORM APPENDIX.

The subject of operative interference in appendix disease was under discussion at the Surgical Society of New York on the 13th November last. Dr. McBurney, who read the paper of the evening, began by stating that his belief that inflammatory affections of the vermiform appendix gave rise to a considerable number of the so-called pericæcal inflammations is now accepted in every part of the medical and surgical worlds, although one still reads of perityphlitis and paratyphlitis, and of intra-peritoneal and extra-peritoneal abscesses. Every case of inflammation of the appendix is sooner or later accompanied by inflammation of the neighboring peritoneum, either on the cæcum, or mesentery, or ileum, etc., but if from the whole list of acute inflammatory affections occurring in the right iliac fossa we set aside those originating in the appendix, how many shall we have left? Very rarely will occur a perforation of the cæcum by ulcer or foreign body, giving rise to a local peritonitis at this point, and traumas from without may accomplish the same result. For all of such causes as compared with inflammations of the appendix, the proportion is as one in one hundred. The observations of the operation table and of the dead-house do not support the idea,

by a single instance, that localized peritonitis or perityphlitis arise from impaction of fæces in the cæcum. "I must therefore prefer to use the term inflammation of the appendix or appendicitis, and give up, once and for all, the terms perityphlitis, paratyphlitis, extra-peritoneal abscess, etc., as misleading, and not valuable except in explanation of secondary pathological processes. All abscesses originating in inflammation of the appendix are intra-peritoneal. Inflammatory adhesions which glue together the adjacent coils of intestine prevent the contents of the abscess from flowing into the pelvis or among the intestinal folds. At every point the pus is bounded by peritoneum.

When the operation is done at an early stage of the disease there is no difficulty in demonstrating that the collection of pus is intra-peritoneal. In all the cases observed there was acute peritonitis—usually a plastic peritonitis of greater or less extent—always involving the cæcum and generally the adjacent intestinal coils and abdominal walls. In one case the omentum was quite extensively involved, partly enveloping the appendix. In no case was the appendix more than lightly attached by adhesion to the peritoneum, covering the iliac muscles, and in none was extra-peritoneal inflammation observed, excepting sometimes in the anterior abdominal wall. In most cases some pus was found more or less confined by adhesions within a limited area, and in one absolutely no adhesion of any kind existed, though the appendix was perforated by concretion, and very foul pus filled the pelvis and ran freely upwards beside the colon.

The pathological conditions of the appendix, as compared with the symptoms, most positively show that one cannot with accuracy determine from the symptoms the extent and severity of the disease.

Pain to a greater or less extent is always present in all cases of appendicitis, but many a mistake has been made, and a golden opportunity lost, by looking for pain in the iliac fossa, and an absence of pain in other parts of the abdomen. In the first few hours of the attack the abdominal pain is general, but after that period it becomes more and more evident that the chief seat of pain is in the right iliac fossa, and the general pain then usually subsides.

The epigastric region is frequently the point first complained of. One patient, who died on the third day from violent septic peritonitis from perforation, complained of comparatively little pain even when the iliac fossa was firmly compressed. The exact locality of the greatest sensitiveness to pressure has seemed to me to be usually one of importance. "Whatever may be the position of the healthy appendix as found in the dead-house—and I am well aware that its position, when uninflamed, varies greatly—I have found in all of my operations that it lay either thickened, shortened or adherent, very close to its point of attachment to the cæcum. This must in early stages of the disease determine the seat of greatest pain on pressure. And I believe that in every case the seat of greatest pain, determined by the pressure of one finger, has been very exactly between an inch and a half and two inches from the anterior spinous process of the ilium on a straight line drawn from that process to the umbilicus. This may appear to be an affectation of accuracy, but so far as my experience goes the observation is correct."

Chill and vomiting are frequent, but so often absent as to be in no sense of much diagnostic value. Fever is always present, but in a different degree, and is of value in diagnosis as excluding non-inflammatory pains. Rigidity of the abdominal muscles, generally much more marked on the affected side than on the other, is a constant and valuable sign.

Tympanites varies greatly, and its degree measures the severity of the diseased process. When the gut has been found during the operation to be over-distended, the portion so affected has been the large intestine.

Tumor has been detected in most instances at an early stage, but the composition of this tumor, as shown during operation, has varied greatly. In one case the tumor consisted of the distended unruptured appendix, which was partly wrapped in an inflamed and thickened omentum. In another it was formed of a mass of intestinal coils, swollen and glued together by recent plastic exudation. Ether constitutes a valuable aid to diagnosis, for with it some tumor can invariably be detected. The pulse during the onset of appendicitis is usually rapid and irritable.

The patient prefers to have the right thigh elevated, and objects to its over-extension.

The diagnosis of the seat of the disease is not so difficult to make as that of the stage to which the morbid process has gone.

There is much misapprehension as to the symptoms produced by perforation of the appendix. In the early stage no accurate diagnosis can be made as to whether the appendix is perforated or not, excepting in those cases where comparatively mild cases *suddenly* become much aggravated. Perforation often occurs with but few symptoms at the very beginning of the disease, but being preceded by the formation of more or less plastic adhesion of the appendix. No sudden increase in the severity of the disease occurs at all.

The histories of eleven cases of operation, seven of which resulted in recovery, are reported.

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### QUARTERLY RETROSPECT OF GYNÆCOLOGY.

By T. JOHNSON-ALLOWAY, M.D.,

Instructor in Gynæcology, McGill University; Assistant Surgeon to the Montreal General Hospital; Gynæcologist to the Montreal Dispensary.

At a recent meeting of the British Gynæcological Society, Dr. Bantock showed a specimen of a soft fibroid which had developed in the anterior segment of the uterus, between it and the bladder. On exposing the tumor it was seen to be loosely covered with peritoneum, and he at once proceeded to shell it out. That was easily done until he got quite close to the base, and there he had some difficulty in separating it from the bladder. Before proceeding further he applied an elastic ligature around the base of the tumor. When he had completed the separation he found he had opened into a cavity which was lined with mucous membrane. He was rather puzzled at first to know what this cavity was, but he got his assistant to put his finger into the vagina, and then he discovered that they communicated. Before beginning the operation he had introduced a silver catheter into the bladder, and found that it went below the loop of the elastic ligature, showing that it was very intimately connected with the base of the tumor. When he had separated it he came upon

the body of the uterus, which was connected with the lower and back part of the mass. The great difficulty was to avoid the bladder, and it was only by putting in the catheter and putting the pins almost through the raw surface and pulling it back that he managed to escape injuring that organ.

During a recent discussion on uterine fibroids, Mr. Tait said that a discussion had been opened for eighteen months past on the subject, yet no one had shown a single case cured by electrolysis. He had by chance seen a lady lately who had returned from Paris, where she had been under this treatment for a term of three months, had had 35 applications, of which 31 were done under anæsthesia, at a cost of £300, yet to-day, Mr. Tait said, she was in a worse plight than ever, and was anxious to be relieved by some other method.

Dr. A. V. Macan (President) said, during the discussion on fibroids, that the question really seemed to be, What are the indications for operation in cases of fibroid? It was a complicated question, and one not very easy to settle. The great thing was to be as guarded as possible. He thought therefore that the possibility of enucleating these tumors ought to be more borne in mind. One's judgment, of course, depended largely upon what one's success had been in the past. He himself had tried the intra-peritoneal method, and he had lost nearly all his patients, but the extra-peritoneal method was much simpler. He said that if they could remove a tumor from the uterus and sew up the cavity from which the tumor was taken, and then return it all to the abdomen, the wound would not be greater than in an ordinary cæsarian section. He thought that this would be a great improvement. He thought that the tumor between the uterus and the bladder might have been enucleated and the uterus saved, and also without removal of the appendages.

Dr. R. T. Smith said he had removed a large fibroid a fortnight ago. In that case electrolysis had been tried during a period of three months without the slightest benefit. He said he was quite willing to give new methods a trial, but his experience of electrolysis was that it did not yield good results.

Dr. Edis showed a so-called mole. It looked like a polypus



protruding from the os. The clinical history was interesting. The patient was a married woman, 35 years of age, who had been suffering from severe menorrhagia on and off since January last, flooding for ten days or a fortnight towards the latter end of June, when the loss was profuse. In July, all sanguineous discharge ceased until the first week in September; then she began to flood again. She went on flooding until she was quite blanched and anæmic, when she was sent to the Chelsea Hospital for Women. He had examined her, and he found the mass protruding from the external os. He removed it by means of a pair of forceps, taking care that there was nothing left behind. Since then the patient had been well, and there had been no return of the hemorrhage. He observed that there was no doubt as to its being the product of conception. There had been a certain amount of hemorrhage into the tissues, and it was a very good specimen of what used to be called a mole. Had the patient been examined in the first instance this might have been removed, and she would have been relieved at once. The patient had a miscarriage early in the year, and that was the starting-point of the hemorrhage. Then the bleeding ceased in the first week in July and there was no return until the first week in September, an interval of two months. The question in his mind was as to whether this was not the ovum which should have been extruded at the beginning of the year. He suggested that the temporary cessation of the hemorrhage might have been due to the partial extrusion of the mass from the cavity of the uterus into the cervix.

The reviewer has had to operate upon many occasions in a similar manner for the relief of such cases as described by Dr. Edis. And it proves the necessity of making a vaginal examination in every case showing a history of such nature. The principle of administering drugs to control the hemorrhage cannot be too strongly condemned. Prolonged invalidism is insured, loss of health on the part of the patient, and reputation on the part of the attending physician. The question invariably asked by the patient, Why could not this operation have been done before? has to be met evasively. It is therefore a good rule to

follow, that in recurrent uterine hemorrhage following a suspected abortion, an examination should be made and the uterine cavity properly explored.

*Gynæcological Specialism.*—An interesting paper read by Dr. Thomas M. Dolan before the British Gynæcological Society recently on the above subject excited some discussion. The part Dr. Bantock took in the discussion was certainly interesting.

Dr. Bantock said he could not agree with Dr. Dolan in his condemnation of the treatment of displacements of the uterus by pessaries, although Dr. Dolan was supported in his opinion by some of the ablest gynæcologists in England and America. Dr. Bantock admitted that he had not written in his book much about the dynamics of pessaries. Such a statement is also an admission that Dr. Bantock's knowledge of the dynamics of pessaries is somewhat imperfect, and renders his opinion on such matters therefore of little value. He observed that Dr. Dolan seemed to favor some of the more risky operations, such as shortening of the round ligaments (Alexander's operation). He said he had never yet seen a case in which he felt justified in performing so serious an operation, and that it was very evident the round ligaments had nothing whatever to do with the position of the uterus. Expressions of this kind coming from Dr. Bantock only cause us on this side of the water to gently smile. Dr. Bantock has written a book on pessaries and he fears the round ligament operation will render this work one of "labor lost." This is very English and we must therefore overlook it. It must be acknowledged that of all methods of treatment to which a woman with uterine disease is subjected, the wearing of a pessary is probably the most distasteful to her. She is ever alluding to the "unpleasant thing" and asking how long she will have to wear it. The quiet, silent and submissive bearing of the husband when he is informed that his wife has had an instrument inserted to support her displaced womb must not be lost sight of in its moral bearing. From my experience in Alexander's operation (now some twenty-five cases) the method is going to be eminently successful and the pessary must cease to be applied as a permanent support. To illustrate further the absurd length to which the

application of pessaries are carried in England, Dr. W. H. Fenton of London relates the case of a large fibro-cystic myoma of the uterus, reaching to the umbilicus and filling completely the false pelvis, which he removed by hysterectomy. Dr. Fenton states that at the consultation of his hospital colleagues prior to the operation, among other palliative measures suggested, one gentleman strongly urged the application of a pessary,—*shades of the immortal Hodge!*

Dr. Bantock gave, at a recent meeting of the British Gynaecological Society, a table of 238 cases of completed ovariectomy with 163 cases already reported, making a total of 400 cases. These operations were performed without the aid of antiseptics in about half the number. He says that for his hands, instruments and sponges he uses plain water. He takes no precaution to sterilize it by boiling. He regards water considered fit for household purposes also fit to be used in any surgical operation. He washes his hands with soap and water, using nail-brush and pen-knife to clean his nails. He has no belief in the hurtfulness of "germs," and were it not for other inconveniences he would leave his wounds exposed to the air without dressing as he does breast and perineum cases. His results have been as follows:—First hundred ovariectomies under Listerian method he lost nineteen cases; second hundred, gradually abandoning Listerian method, he lost fourteen cases; third hundred, all performed with plain water, he lost eight cases; fourth hundred, mortality reduced to four cases. Dr. Bantock goes exhaustively into details, considering (1) washing out the peritoneum, (2) treatment of the pedicle, (3) opium, (4) general after-treatment, and (5) peritonitis. He mentions Dr. Polaillon's case of death following washing out of the peritoneum with a weak solution of carbolic acid in warm water, and without doubt shows that death was due to carbolic acid poisoning. He points out that during the first minutes of flushing there is a large quantity of fluid absorbed, and that this is especially the case when the water is mixed with common salt in about the proportion of seven parts to one thousand,—the process then becomes "a true indirect transfusion."

Gill Wylie of New York has taken advantage of this process and found that large quantities of hot water in the peritoneal cavity had the tendency to lessen shock due to loss of blood.

Dr. Bantock states that he has washed out the peritoneum in more than one-half of his last one hundred cases. He uses plain hot water cooled down to the proper temperature by adding water from the tap. In speaking of the treatment of the pedicle, he says that since 1875 he has used the ligature exclusively. He, however, soon found a difficulty in its application. He lost his nineteenth case by the slipping of the outer edge of the pedicle—that edge which consists of two folds of peritoneum with its contained vessels. He now secures this outer fold by a separate ligature before transfixing for the main ligatures. Dr. Bantock chiefly uses the figure of eight knot. But when the pedicle is very thick he uses several double ligatures, as many sometimes as eight or nine. In such cases as these, however, he devised the method of first compressing the pedicle with powerful pairs of forceps. He thus succeeded in reducing the size of the pedicle to one half its size at the place where the ligature was applied.

(3) *Opium*.—Dr. Bantock says that it was about the same time that he resorted to flushing the peritoneum that he discontinued the use of opium. He relates the case of one of his patients who, ten minutes after receiving a hypodermic injection of one-sixth of a grain of morphia, died. He was so impressed with the unfortunate occurrence that he gradually reduced the dose until within a very short time he gave up the use of opium in any form after operations. He found that without opium there was less discomfort and sickness the next day and the condition of the patient altogether better. So that from the beginning of 1885 he had been obliged to give opium only in three cases. And he makes the remark that coincident with his giving up the use of opium his mortality has fallen to 4 per cent. Dr. Bantock draws attention to the admitted fact that opium is a poison in cases of chronic Bright's disease, and that it may have been the cause of death in many unsuspected cases. Opium not only diminishes the peristaltic action of the intestines, but it also diminishes the secretion. It is in this way that injury takes

place, and it is here where saline purgatives do good. Opium locks up the secretion ; salines increase it and drain the peritoneal cavity.

*General After-treatment — Vomiting.*—He finds from experience that the best way to arrest sickness is to keep the stomach quiet by not putting anything into it. On this account he prefers operating in the morning when the stomach is empty after the long fast. If there should be vomiting, a few ounces of hot water will generally suffice to clear out the stomach, and there will be no more trouble. When, however, the stomach contains bile decomposed by its acid contents, then a few grains of carbonate of soda added to the hot water will be an advantage. It may be mentioned here that Dr. Bantock thinks, after an experience of thirty years, that chloroform is the best anæsthetic we possess. This sentiment we can understand in an Englishman who is prejudiced against ether and does not mind a death or two from the anæsthetic. Dr. Bantock may say that he has not had a death from chloroform, but we know that it is a matter of common occurrence to see recorded deaths from its administration in the London hospitals. And we doubt much if we could, in this country, find a coroner who would be willing to tolerate any such unpardonable waste of life.

*Thirst.*—Dr. Bantock strongly opposes the giving of ice to patients to allay the thirst following an operation, and mentions the fact that all Arctic explorers avoid ice if they wish to avoid suffering from thirst. Rinsing the mouth with hot water gives great relief, and instances the fact that a cup of hot tea is more lasting in its refreshing effects in hot weather than a cold drink. It is because of its warmth and consequent absence of reaction.

*Peritonitis.*—Dr. Bantock says peritonitis originates from causes originating within the cavity and without. The drainage tube has done much to obviate the former, and as the latter is due to irritating matters in the digestive tract, he stops all food by the mouth and gives rectal enemata of beef-tea. He is opposed to saline purgatives, the method of Tait and Greig Smith, and says that where they say it does good they cannot prove their case.

In conclusion, Dr. Bantock gives an epitomy table of the 238 cases, which is very interesting to study.

*Peritonitis due to the Passage of the Constant Current in a Patient with Double Salpingitis.* (By M. TERRIER, in *Bull. Med.*)—A year since the author was called to a woman in whom the presence of abdominal tumors could be made out, which, after some hesitation, were diagnosed to be uterine fibromata. M. Terrier, however, doubted the accuracy of this diagnosis, and, acting in the belief that it was a case of double salpingitis, warned the patient that only an operation would relieve her. Disregarding his advice she resorted to the electrical treatment, which promptly determined a severe attack of acute peritonitis. The patient, however, survived, but the salpingitis had obviously increased in size, and the matting of the intestines could be felt in one spot through the abdominal parietes.

*Vaginal Hysterectomy.*—Dr. R. C. Dudley of Chicago recommends that the grooves in the forceps blades should run parallel with the blade and not across it. In this way the forceps will be less likely to slip. He has never left the forceps on the broad ligaments longer than seventy-two hours, and often removes them in twenty-four hours. He advises that the forceps hold the ligament in the vagina so that the peritoneal cavity will rapidly close and obviate the danger of infection from necrosed tissue. Vaginal injections should be begun on removal of the forceps or about the fourth day.

In regard to injections, the reviewer used creolin ( $\frac{1}{2}$  per cent.) solution recently after a case of vaginal hysterectomy with most satisfactory results. It is a powerful deodorizer and perfectly harmless.

Dr. Dudley relates an interesting case of *Removal of a Uterine Myoma by a combined Vaginal and Abdominal Operation.* He began in the vagina by dividing the capsule of the tumor and removing piecemeal as much of the growth as possible for the period of an hour. He then opened the abdomen and removed the remainder of the tumor, also by enucleation. He then stitched the capsule to the abdominal wound and passed a glass drainage tube into the empty capsule through the abdominal wound.

Drainage went on very well until the vaginal end of the capsule closed, when the temperature rose to 103.5°. The closed end of capsule was opened by forcing a flexible sound through it. Perfect drainage was now instituted between the abdominal wound and the vagina by means of a rubber tube. The patient recovered. This operation must have been a somewhat interesting one to the surgeon, but it seems odd that he did not see the necessity of carrying a *through* drainage between the vagina and abdominal wound.

*Non-retention of Urine in Infancy, Girls and Women.*—Dr. H. Marion Sims of New York writes an interesting article in the *Amer. Jour of Obstet.*, giving his experience of the treatment of cases of this nature by the gradual dilatation of the bladder with water pressure. Dr. Sims says the disease he alludes to is the gradual contraction of the walls of the bladder due to a hypertrophy of the muscular coat and the consequent reduction of its holding capacity to little or nothing. He uses an ordinary Davidson's syringe and silver catheter. The injections are continued every day, each day getting a little more than the day before. He carries out this practice daily until the bladder can retain from eight to thirteen ounces of fluid without pain. And he generally accomplishes this in two or three months. The treatment is somewhat tedious and painful, but is certainly effective. The reviewer has had some experience in the method, and is pleased with the results obtained, so far, in some very intractable cases to other methods of treatment.

Dr. Hall of Cincinnati, O., read a paper before the American Association of Obstetrics and Gynæcology upon *Some Points in the Diagnosis of Pyosalpinx*. The author believes the importance played in the production of suffering by this disease has not received the attention which it merits. The general practitioner sees and treats the great majority of these cases before they are seen by the operator, and if it is hoped or expected to afford relief to a great number of suffering women all over the land the subject of diagnosis must be better understood than at present. The importance of septic infection in the production of inflammatory disease of the uterine appendages is the cause

of this disease in a large percentage of cases. Repeated attacks of acute exacerbations from perhaps trivial causes finally produce complete closure of the ends of the tubes. As a consequence, the normal secretions of the tubes soon become pathological, and by repeated attacks of inflammation may become changed into pus, producing the typical pyosalpinx. The speaker is convinced that this affection frequently follows puerperal diseases and gonorrhœal infection, but does not consider these the most common causes of the disease. He believes pyosalpinx to be contracted in two different ways: (*a*) By a chronic process, causing dropsy of the tube, which, by repeated attacks of inflammation, is changed to pus; (*b*) it may be rapidly produced by an acute process following gonorrhœa and puerperal diseases. A history of almost constant suffering for years, directed to a certain locality, perhaps originating in an attack of pelvic or abdominal inflammation, connected or not with parturition. To this may be added sterility, and we have a most important aid to a correct diagnosis in the history of the case. Diseased appendages can usually be recognized by a vaginal examination, yet this is not always possible. In most cases it is difficult, and in many impossible, to make out the exact disease of the appendages except in cases of pyosalpinx. We usually have an irregular ovoid tumor, showing swellings and contractions not found in any other pelvic tumor but tubal collections. This tumor is generally of small size; it may be in the retro-uterine space extending toward the pelvic brim on the one side, with a second tumor on the other side higher up; or it may be distinctly felt as a narrow furrow, which is occasioned by a portion of the uterine end of the tube remaining undistended by pus, while the distal end of the tube is enlarged to form the tumor. This furrow is not so plainly felt in those cases where there is a periodical discharge of the pus through the tube into the uterine cavity. This is a very valuable sign to help in making a diagnosis. If we have all the other symptoms of pyosalpinx with a history to confirm them, where we can feel the enlarged tube before a discharge of pus from the uterus, and immediately after the discharge has occurred we find that the tube has collapsed, then we have proof



positive of the existence of pyosalpinx. If the previous history of the case be carefully learned and given due weight and consideration, the author believes the diagnosis is not so difficult as usually thought. The uterus is more or less fixed and misplaced. In the majority of cases seen by him there has been pain during defecation—particularly where the tumor occupied the retro-uterine space. Most cases gave a history of dyspareunia. If pain has long been a prominent symptom and it is evident the tube contains pus, the case must be looked upon as serious and demanding prompt relief. Delays are dangerous, as the bursting of the tube may cause fatal peritonitis, and escape should be afforded the offending pus by removal of the tube.

*Ruptured Pyosalpinx.*—At a meeting of the New York State Medical Association Dr. C. S. Wood of New York related an interesting case. The case well illustrated the difficulties sometimes encountered in diagnosis. The patient was an unmarried woman, aged 28, who had been in good health, except at times pains were present in the lower part of the abdomen. In May last Dr. Wood was called, and found her suffering from abdominal pain, slight fever, and gastric disturbance. A cathartic was administered, which acted the following day. The pain became greater in the pelvic region, especially in the region of the cæcum, where was present indistinct hardness. The tumor in this region increased in size, and Dr. Wood became convinced the case was one of perityphlitic abscess. She was getting along well until after some days she was awakened in the night by "sickness of the stomach," had a severe chill, and partial collapse. The induration in the iliac region was found to be softer and less prominent. Projective vomiting of watery fluid took place when she was turned on her side for examination. The temperature was 103.5F., pulse 140. Being satisfied of rupture of a perityphlitic abscess, Dr. Wylie was called in consultation, laparotomy was performed, and they were surprised to find no evidence of inflammation or tumor in the immediate region of the cæcum; instead, there was an effusion of lymph over a large surface, matting together of pelvic viscera, and rupture of a pyosalpinx on the right side, which had been mistaken for a peri-

typhlitic abscess. The sac and ovary were removed. The ovary on the left side being cystic, it was also removed. The patient recovered within four weeks. He afterwards learned that she had, five years previously, brought on an abortion, which might account for the attacks of pelvic pain.

*Ligatures and Sutures : what material shall be used.*—Dr. Cushing of San Francisco read a paper before the American Association of Obstetrics and Gynæcology, Sept. 1889, on ligatures and sutures. Dr. Cushing seems favorably impressed with the use of catgut for tying the pedicles in ovariectomy and oöphorectomy. The reviewer has never used this material for such a purpose and never will. It must be unreliable from the difficulty of its being made sufficiently tight, and from the fact that the knot will open when moistened. The necessity for absolute security in the matter of pedicles is of too great importance to play with catgut. The material is rapidly disappearing from surgery altogether, as it cannot be made aseptic—boiling being inadmissible in its case,—and from the fact that we do not want any better material than properly prepared silk or silkworm gut. We need have no fear of the pedicle becoming infected if we take proper precautions in the preparation of the material. The method the reviewer adopts is as follows : First wash in warm running water with soap, then place in sulphuric ether for two days, then boil for three hours in filtered water ; the silk is then carefully wound on glass bobbins according to size and put away wrapped in towelling carefully made aseptic previously. When required for use it is again boiled just before the operation and carried directly from the gas-jet into the operating room and used from the vessel. The silkworm gut is prepared in the same way. It is the best ligature in cervix and perineum operations and for closing the abdomen after section. When a patient requires to return to her home in two or three weeks, it is advisable to use catgut in the cervix and silkworm gut in the perineum when the double operation is done at the same sitting. But if time is of no object to her, the silkworm gut can be removed from the cervix months after the removal of the perineal. And it has this advantage, that when the husband knows there are

more stitches there which have yet to be removed, he will not be likely to interfere with the perineum until it has become strong and lost its sensitiveness. The employment of shot to fasten the silkworm gut is very objectionable. The method unnecessarily prolongs the operation and the shot always cut into the tissues and interfere materially with union. The plain, rapidly-tied double knot is by far the best, and if the ends of the gut are not cut too short they give no trouble. Dr. Cushing speaks of fistulæ being caused by silk ligatures and the drainage tube. Suppuration at the pedicle and a fistulous tract being established is more likely to be due to unclean ligatures and the employment of too large a tube; also omitting to thoroughly wash out the peritoneal cavity with warm water in such cases where pus or large quantity of blood escaped; also a surgically unclean and careless nurse may infect the tube-fluid and give rise to trouble. Homan's smallest sized tube is large enough for the majority of cases. It fits in easily between the sutures, and a few hours after its removal the wound is closed.

*Physical and Mental Changes after Removal of Ovaries or Uterus.*—Dr. Glævecke of Kiel has lately published a paper in the *Archiv für Gynækologie* on this subject. According to this author the changes usually met with were those observed at the menopause (*Berlin Cor. Medical Press*). Menstruation permanently ceased immediately or shortly after the operation of removal in 88 per cent. of the cases. In the remainder it was less frequent and more scanty. Practically, no vicarious menstruation was observed. Menstrual molimina were observed in 30 per cent. In the time between the periods the familiar characteristic disturbances were observed—hot flushes, perspiration and faintness. He looks upon them as disturbances of the vasomotor system, in consequence of the cessation of the ovarian function; an observation, by the bye, that does not throw much light on the subject. He does not remark the very long continuance of this most uncomfortable condition in many of the cases—four and five years. In four cases out of a total of forty-three, palpitation and headache came on: in one, nausea coming on several times a day; in another, vomiting; in one, diarrhœa;

in one, acne of the face lasting over a year, and in two, increasing weakness of intellect. Atrophy of the internal genitals was a consequence of the operation. In twenty-three cases in which the operation was performed for myoma uteri, distinct shrinking took place in the tumors in 90 per cent. In 42 per cent. of the cases a distinct increase in weight, due to deposit of fat, was observed.

Dr. Lusk of New York reports in the *New York Medical Journal*, Oct. 19th, 1889, two very interesting cases of *Ruptured Tubal Pregnancy*, in which he performed laparotomy. One recovered, and one died on the eighth day of Bright's disease. The first case was 19 years of age; had passed two periods, then a metrostaxis. Next day was seized with cramp, faintness, nausea and vomiting. Similar attacks occurred daily during the following ten days. On the tenth day the pains became very severe, the patient suddenly became exsanguinated, and syncope ensued, lasting about twenty minutes. She now became chilly, nausea and vomiting constant, pulse 140, and abdominal pains ceased. She was removed to hospital, but allowed twenty-four hours to obtain reaction before operation. When the abdomen was opened two quarts of blood-clot were turned out. The left tube opening into a sac, was brought to the surface, ligatured and removed, and the pedicle dropped. The right tube and ovary being healthy, were left untouched. Abdominal cavity irrigated with Thiersch's solution, drainage tube, and closed. The patient left hospital in the fourth week quite well.

The second case was 36 years of age; had not menstruated for six weeks, and without warning was seized with a violent attack of pain, followed by blanching of the surface and syncope, from which she did not recover for some hours. In this case there were no antecedent symptoms—*i.e.*, no colic, no sanguinolent discharge, nor expulsion of decidua. The day following the attack she was removed to hospital, and laparotomy performed that afternoon. The cavity was found filled with clots, and the left tube found ruptured on its posterior surface above the folds of the broad ligament. The rupture was caused by a four weeks

ovum, and the villi were beautifully apparent through the rent. The patient had persistent albuminuria up to the operation, and died of uræmia on the eighth day.

These two cases illustrate the ordinary history of tubal pregnancy. In both, without antecedent symptoms, at an early period of gestation rupture with hemorrhage takes place; in the one instance the blood primarily making its way between the folds of the broad ligament, in the other pouring suddenly, without check, directly into the peritoneal cavity. They are simply additions to the long list already furnished by Mr. Lawson Tait upon which he has based his scheme of ectopic gestations. In Mr. Tait's belief, all cases of extra-uterine pregnancy are *ab initio* of tubal origin. When the ovum develops in the free part of the tube, rupture, he holds, occurs at or before the fourteenth week. If rupture occurs at once into the abdominal cavity, death ensues from hemorrhage, or, later, from suppuration of the sac and peritonitis; if rupture takes place in the lower portion of the tube between the folds of the broad ligament, the ovum may develop to full term; may die and be absorbed as an extra-peritoneal hæmatocele; may suppurate and be discharged at or near the navel, or through the bladder, the vagina, or intestinal tract; may remain quiescent as a lithopædion; or may become an abdominal pregnancy by secondary rupture. In the tubo-uterine form death occurs from intra-peritoneal rupture before the fifth month. Mr. Tait denies the possibility of a primary abdominal pregnancy. The ovarian form he regards as possible but not proved. There is no question as to the utility of Mr. Tait's scheme. It is based upon his exceptional personal experience and has received substantial support from the observations of others. It has stimulated active inquiry, and has given proper direction to pathological study; but the subject of ectopic pregnancy is still too new to make it possible for any scheme to be regarded as a finality.

*Rupture of the Uterus; Supra-Vaginal Amputation; Recovery.*—Dr. Henry C. Coe of New York reports a remarkable case of this desperate accident followed by laparotomy and recovery. (*New York Medical Record*, Nov. 2, 1889.) The

patient was 23 years of age, and lived in a dirty, small tenement house. She had been under an anæsthetic for three hours, and over two hours had elapsed since the rupture had taken place. The head of the child occupied the left iliac fossa, and the body of the uterus, in tetanic contraction, lay over to the right side of the abdomen. The patient was in a state of collapse, with rapid, feeble pulse. Prolonged attempts with the forceps had been tried, and eventually version, to extract the child. Dr. Coe performed laparotomy at once. After turning out a quantity of blood-clots he found a rent extending upward from the cervix through the left broad ligament and the lower uterine segment. The head of the child lay in the left iliac fossa, outside of the uterus, being grasped by the edges of the tear. The uterus was turned out of the cavity, the cervix constricted by a piece of rubber tubing from a fountain syringe, and the child extracted through the rent. The uterus, ovaries and tubes were excised and the bleeding vessels secured. The torn peritoneum was sewn with continuous catgut suture, the cavity washed out with warm water, and the stump secured in the wound with knitting needles. No drainage-tube was used. From the second day after the operation free catharsis was maintained and the ice-bag to avert peritonitis. On the fourth day Dr. Coe replaced the rubber tubing by the *serre-nœud*, and removed the entire mass at the end of a week, packing the cavity with iodoform gauze. The patient during her convalescence evidently became septicæmic, judging from the subsequent history of the case, and the reviewer thinks that this condition might probably have been avoided had Dr. Coe employed drainage. The suppurating hæmatocele in the left broad ligament which Dr. Coe speaks of obtained an outlet through the rent which fortunately existed in the cervix at that side, or by some other route. And we would advise Dr. Coe in future cases to, above all things, secure good drainage before closing up the abdomen. In cases of this nature drainage is of vital importance on account of the severe injury to tissue which must be followed by extensive necrotic areas. The carrying out of details of the operation, the distressing disadvantages under which it was performed, the fertility of thought

and decisive action displayed under such circumstances by Dr. Coe reflects much credit upon that gentleman, and he well deserved the successful result of his endeavors.

This operation has now been performed fourteen times, with nine deaths and five recoveries. It is known as Prevôt's operation, being first performed by Prevôt of Moscow.

*Iodoform Gauze in Post-partum Hemorrhage.*—Dr. O. Piering, assistant in Prof. Schauta's obstetric clinic in Prague, has published his experience in the employment of Dürrssen's plan of plugging the uterus with iodoform gauze for post-partum hemorrhage due to an atonic condition of the organ. Dürrssen recommends that, when post-partum hemorrhage comes on, the bladder should be emptied and forcible friction, intra-uterine irrigation with hot or cold water, and hypodermatics of ergotin employed; that if the hemorrhage still continues, the cavity of the uterus should be filled with iodoform gauze, the irritation produced by this setting up active and permanent contraction. The method has, according to Dürrssen, the advantages of great certainty, complete harmlessness and facility in its performance. Olshausen, Veit and Tehling, however, say that the contraction set up is not always permanent, and that the method is not so free from danger as Dürrssen believes. In consequence of these conflicting views, Dr. Piering resolved to give the method a trial, and he has recently detailed several cases in which it was employed with complete success. In no case was harm done by it. He advises that resort to the plug should not be too long delayed, and prophesies an important future for iodoform gauze in post-partum hemorrhage.—*Lancet*, Nov. 9, 1889.

The reviewer would caution against this method of treatment in cases of post-partum hemorrhage, the after consequences might be more serious than the immediate danger from the hemorrhage.

*Adenomata (Erosions) of Os Uteri in Macaque Monkeys.*—At a meeting of the Pathological Society of London, held Dec. 3rd, 1889, Messrs. Bland Sutton and Gordon Brodie made the following communication: For some time past they had been accumulating material for an investigation of cancer, especially in connection with the uterus. It appeared that uterine cancer,

though so terribly common in the human female, was scarcely known in other mammals, and was hardly known to veterinary surgeons. This induced them to commence the investigation by a study of the cervix uteri in monkeys in order to ascertain if any anatomical conditions existed favoring the development of cancer in the human female. A few years ago one of them exhibited before the Society a series of specimens, which demonstrated that monkeys (macaques and baboons) which were living in confinement in this country were liable to uterine flexions. Subsequently evidence was given before the Gynæcological Society that macaques and baboons menstruated after the same fashion as human females. The inquiry was followed up, and it was found that the menstrual period in these monkeys was very variable. In some it lasted a longer time than in others, whilst now and then a monkey appeared in an almost chronic state of menstruation. In many the menstrual period was followed by profuse leucorrhœa. Normally, the discharge of blood would last from one to two days, but the redness of the less hairy parts persisted as long as a week. The average interval between each menstrual period was difficult to fix with accuracy, as it varied from a month to six weeks, or even longer. It was a safe inference when a monkey menstruated two, three, or even four times a month, each attack lasting three or more days, followed by leucorrhœa, that it was a case of metrorrhagia. During the past summer a macaque was particularly watched. The metrorrhagia and leucorrhœa became so profuse as to render it unfit for exhibition, and, being of small money value, the monkey was killed. The uterus was removed before the parts had lost their tissue life. The uterus was acutely retroflexed, the cervix greatly enlarged, the os patulous, and a florid-looking mass projected from it, identical in appearance with what it was the fashion to call in gynæcology an erosion. After hardening the parts, sections were prepared for the microscope in such a way as to include the parts about the os externum, the cervical canal, and portio vaginalis. Under a low power the mass protruding from the os, as well as a polypoid mass some distance up the canal, resembled a cervical adenoma, and was in structure identical with the glandular tissue



held to be characteristic of erosions in women, the acini being apparently lined by columnar epithelium. Many of the most typical acini were filled with a singular apparently homogeneous material. Under higher powers and with careful illumination the supposed columnar cells were seen to be club-shaped, and, in favorable sections, the supposed glandular crypts turned out to be rosettes fringed with clubs characteristic of actinomycetes. The clubs varied somewhat in shape; many of them fringed the rosettes with the greatest regularity. In other places they appeared in "banana-like bunches," especially when stained with fuchsin. The clubs which surrounded the rosettes stained with difficulty. In some places a cluster of clubs had been cut transversely; in such, a characteristic mosaic was produced. They could not detect the filaments, but this was owing to their want of skill in staining methods; but numbers of granular bodies presented themselves in various parts of the section. Thus far the microscopic characters were consonant with actinomycosis. On critically examining the centre of the rosettes some rounded bodies were seen, mostly in association with clumps of epithelioid-looking cells. These, when examined, turned out to be cysticerci with heads and necks retracted. Whether their presence in the midst of the rosettes was accidental or otherwise would require further elucidation. As far as they had examined the sections these cysticerci appeared to stand in some causative relation to the rosettes. Although they wished at first to limit this preliminary statement to facts connected with monkeys, they could not refrain from observing that they had detected similar appearances in erosions from the human cervix uteri, and in a case of cancer of the cervix. They mentioned that Dr. John Williams, in his *Lectures on Cancer of the Uterus*, plate xiv, fig. 1, had depicted as appearing, under a high power, cancer cells; but they thought that these columnar cells were identical with their clubs, and that the peculiar clump of cells in his drawing was identical with that seen in their monkeys in association with the cysticerci. Again, in Mr. Harrison Cripps's beautiful drawings, which illustrated his paper on "Adenoid Cancer of the Rectum" in vol. xxxii of their *Transactions*, they found accurately-delineated rosettes and clubs

of great beauty. Many of these exquisite drawings, representing the microscopic character of rectal cancer, represented equally the lesions found in monkeys and the erosions of women. They thought it right to mention these things to show how wide a field was opened up in regard to cancer of the uterus and alimentary canal, and hoped thus to incite the Society to help in the investigation by appointing a committee to carry it out.—*B. M. Jour.*

*The Abuse of Uterine Treatment through Mistaken Diagnosis*, by Wm. Goodell, M.D., is the title of a lengthy paper appearing in the *Medical News* of Dec. 7th, 1889. All hail to the Gladstone of medical politics!!! One patriarch when in power puts all the landlord-killing rascals of Ireland in jail on bread and water. When out of power he pats them on the head, saying, "My poor fellows, I was altogether wrong; take some bon-bons now and I'll cry out against your being punished any more." This is bad enough in politics, but we have now arisen a veritable Gladstone in medicine. During his active lifetime he incised, split and sewed up more cervices than any man living. He taught us how and under what circumstances to do such operations. Quoted hundreds of cases without mortality (116 cases of trachelorrhaphy without a death). Set us all agoing with scissors, tenaculum and divulsor, like Henry Bennet and the speculum—caustic romance. When, lo! and behold, presto——!! Father Time appears upon the scene. Give me, sir, that scissors, tenaculum and divulsor, they do not become you now. Tell the poor cervix you have been wrong all this time—(do not be particular as regards time, say a quarter of a century)—and say that you will henceforth cry out against its being punished any more. "Oh my prophetic soul!" What a theme for Hamlet to soliloquize upon. To attempt to discuss in detail Dr. Goodell's paper in this criticism is out of the question. We do not require to look at the title page to recognize the author. It is the same theme which has occupied his attention so much of late years. Everything that female flesh is heir to comes from over-education or nerve exhaustion, and they must enter his private hospital to be cured. Dr. Goodell does not tell us how these nerve exhaustion patients,

and what percentage of those who come under his care, are cured. We have heard of some who returned to their homes in the same condition as when they entered the doctor's sanitarium plus the disappointment. Probably these were a part of the seven Dr. Goodell speaks of as being under treatment in his private hospital.

Dr. Goodell's paper will undoubtedly command a wide acceptance. It will relieve the physician's mind. He can now cure his nerve-exhausted lady patients without any trouble, and his young ladies with pale faces, by taking them from school. We must remark however here, that Dr. Goodell stands alone when associated in opinion with such men as Thomas, Chadwick, Mitchell, Starr, and Putnam upon the subject of the influence of higher education upon the sexual system and general nutrition of females. All of these authorities are, without exception, agreed that advanced education improves the health of young females working at colleges, and the reasoning upon which they base their opinion is certainly more logical and more in accordance with our experience.\*

Dr. Goodell is a most elegant writer and an easy and fluent speaker. He has done exceptionally good service in the ranks of his specialty. He has built up a noble edifice of scientific gynæcology, and all we ask of him now is, that, since it has been decreed that he build no more, he will not ignobly attempt to pull the whole structure down in anger, lest some one else to come, should occupy and continue to add to it. *Pax vobiscum.*

*The Physiological Resistance of the Peritoneum to Infection.*  
—In the past year hardly a more interesting series of experiments has been made in the interest of surgical pathology than those of Rinne (*Archiv für klinische Chirurgie*). Practically and clinically it has been demonstrated that the peritoneal cavity under certain unknown circumstances has the power of taking care of a vast amount of filth. It remained for Rinne to harmonize observed clinical facts with *à priori* deductions. He found that large quantities of septic material and pure cultures of pyogenic bacteria were absorbed, although injected daily into

\* Medical News, Dec. 14, 1889.

the peritoneal cavity of animals, provided that the peritoneal surfaces were uninjured. The injections produced only mild symptoms in direct proportion to the quantity of septic material used, and in no case was there more than a moderate rise of temperature. The results were very different when there were coincident defects in the peritoneum, exposing the subperitoneal connective tissue to infection. Then there invariably appeared progressive suppurative peritonitis going out from the infected connective tissue, which usually terminated fatally. The practical import of these experiments can hardly be overestimated. They explain why the escape of pus into the peritoneal cavity from the rupture of a pyosalpinx is not necessarily fatal if the tube is promptly extirpated and the wound and stump properly treated. They point out that the incision is the point of greatest danger in all abdominal operations, and they would indicate that too much care cannot be taken in coaptating the peritoneal edges of the wound. They explain why the removal of abdominal tumors is so much more dangerous after adhesions have taken place, because the resulting denuded places offer less resistance to the invasion of septic bacteria. They explain the success of those operators who disregard the dictations of scientific bacteriology, and also the recovery of patients after abdominal section by horned animals. They teach us to consider cautiously the evidence presented by the statistics of operators, and await the demonstration of more exact methods as to the import of their results. They warn us that clinical evidence is inadequate to overthrow the deductions of experimental physiology and pathology, and that our time is provided with methods of precision which are yet imperfectly improved. They beckon the ambitious into fields of activity and thought far less crowded, though more promising than the operating room and the dead-house. The resisting and absorptive power of the peritoneum is beyond that of any other serous cavity. This is as we should expect. The peritoneal surfaces are only a line distant from the most filthy and prolific culture-medium about the body. It is connected with this seething and turbulent mass by the most active absorbent lymph-channels. Doubtless it is frequently invaded by

septic bacteria from the intestinal contents. From these frequent invasions an immunity has been developed which has been perpetuated and transmitted by the working of the ordinarily recognized laws of evolution. Again, we are taught to consider the causes which determine the localization of infection as more important than the quantity and quality of infective material. Doubtless traumatism is one of the most important of these causes, but we must not forget that the depression of the general temperature of the body, the interference with nutrition, and general *malaise*, frequently observed after operations, are factors which may speak for the life or death of our patient. Not only should the abdominal section be made with the greatest attention to cleanliness, but the peritoneal edges must be accurately coaptated, the operation must be done with the greatest celerity and delicacy, and depressing influences of starvation, over-medication, and deprivations of every kind must be avoided if we would eliminate all those causes which determine the localization of that infection, which is still the greatest danger the operator has to meet.

*Surgical Operations for the Repair of Ruptured Perineums*, by A. B. Carpenter, M.D., Cleveland, O.—The above is the title of a paper appearing in the *N. Y. Medical Record* of Nov. 16, 1889. Dr. Carpenter says he is an advocate of the old denudation methods, and protests against Dr. Barnes of London for declaring in favor of Tait's flap-splitting operations. Dr. Carpenter argues that if Dr. Barnes failed to obtain good results from the denudation plan of operating it must have been the fault of the operator and not the method. This line of argument is simply absurd; every surgeon knows about the failure, difficulty and danger to which the denudation method is liable. The reviewer has seen too many cases go the round of the New York hospitals in order to obtain a successful closure of a ruptured perineum, and be abandoned in the end as incurable. He has seen such men as Thomas, Emmet and others declare that they did not hope for success in such and such a case, as they had operated several times before, and each attempt became more difficult and less hopeful. The late Dr. Jas. B. Hunter assured

the reviewer, upon the occasion of a visit to him, that two (or three) cases died in the New York State Woman's Hospital within a few weeks, and that the autopsy showed extensive purulent infiltration of the connective tissue of the pelvis. Many other American surgeons have lost cases after the denudation operation, and it was not at all uncommon for the Germans also to meet with disaster. It may be asked, Why should the denudation method be so uncertain and dangerous? The principal reasons are: The uncertainty of freshening and the frequency in which "islands" are left containing pus in their folds; the length of time taken for the performance of the operation, which means prolonged exposure of the wound; and the utter impossibility of closing the wound so as to completely exclude the discharges coming from above and thereby infecting it. Let us on all of these points compare the flap-splitting method, and it will not require much intelligence to see the great advantage of this latter operation. Dr. Carpenter speaks of having an assistant on each side of him with retractors, another to thread the needle, another to administer the anæsthetic, supplemented by a nurse. This army is certainly a formidable array to carry out so simple a procedure.

Dr. Carpenter allows his suture (silk) to remain *in situ* twelve to eighteen days. Why not a year? They cannot possibly perform any fixation function after the sixth or eighth day, and if left longer will only cause suppuration and cutting, followed by scar tissue—the very condition we wish to avoid. Let us now look at Tait's flap-splitting method. There cannot possibly be left any "islands" to infect the wound. The freshening of the tissue can be carried just as high as in any of the denudation methods. No assistant is required but the anæsthetiser and nurse. Time, from drawing of blood until patient is comfortably placed in bed again about two minutes and a half, at outside, three minutes. Here we have *comparatively* no exposure of wound. It is impossible for discharges from above to enter the wound and infect it. There is no pain from the sutures, and the results have been better in the experience of men who have tried all methods. We have not heard of a single case of *accident* resulting from the

flap-splitting method, and its great advantages, safety and superiority over all other methods will be maintained by all impartial observers. We are afraid Dr. Carpenter has been advancing somewhat after the fashion of the crab, when we consider that he still remains partial to silk ligatures, vaginal injections and denudation methods in perineal operations.

## RETROSPECT ON THE PROPHYLAXIS OF TUBERCULOSIS.

BY WYATT JOHNSTON, M.D.,  
Demonstrator of Pathology, McGill University.

During the last two or three years the question of preventing tuberculosis has received much attention from various government and local sanitary boards throughout the world. For the most part the numerous committees which have reported on the subject seem to regard the flesh and milk of tuberculous animals as a very common cause of tuberculosis in man, and the measures they advise chiefly refer to eliminating this source of danger. The literature of the subject has become so extensive as to prevent its being given here in any detail; but the action taken in regard to preventive measures is of great practical interest. A special committee of the Dominion Parliament appointed in 1888 to consider this question have published a small blue-book bearing the date of April 17th, 1889. (Report of the Sub-committee on Tuberculosis in Cattle and its Communicability to Man. Ottawa, Government Printing Bureau. 1889.)

The committee sent circulars addressed to physicians, veterinary surgeons and farmers, enclosing printed forms of questions asking, *inter alia*, for their individual experience as to the frequency of cases of tuberculosis among men and animals, and especially as to their personal knowledge of any cases of the disease being directly communicated from animals to human beings. Answers received from 215 physicians, 42 veterinary surgeons, and 134 farmers contained chiefly negative information. Very few physicians report having met with actual cases being so communicated. The committee think that this failure of the profession and public of Canada to detect cases of infection is

caused by defective information as to its contagious nature. They think it desirable that information on this head should be widely circulated, and hope that during the present session such special legislation as is expedient may be enacted. They recommend that any imported cattle showing signs of tuberculosis be refused admission to the country, and advocate the establishment of a system of observing and recording vital statistics throughout the Dominion. Summaries of reports on the same subject by the Privy Council of Great Britain, a special committee of the Legislature of the State of Maine, and by the Hatch Experimental Station of Massachusetts are appended.

With regard to the prevention of tuberculosis in cattle, the measures now being carried out in France (on the recommendation of the Congress on Tuberculosis of 1888), Germany, Great Britain, etc., viz., the confiscation of meat of tuberculous animals, the sanitary supervision of dairies, and the prevention of breeding from tuberculous stock, will no doubt diminish the prevalence of tuberculosis among the domesticated animals very considerably in the course of the next few years.

With regard to the prevention of tuberculosis in man, however, the case is more complicated, the simple and effective measures of segregation, slaughtering, etc., not being admissible.

There seems to be a general impression that the lessening of tuberculosis among animals, and the regulations dealing with the food and milk of animals affected with tuberculosis even in a slight degree, will be followed by a corresponding reduction in human tuberculosis. The probability of human tuberculosis being derived chiefly through infection from tuberculous meat and milk seems to be very largely accepted. The fact that animals can be experimentally infected in this manner has been proved over and over again. The conditions, however, do not appear to be similar to those attending human tuberculosis. The latency of the disease in man, its prevalency at a period of life when milk is not extensively used as a food, is not in accordance with the theory of infection by food.

Dr. George Cornet of Berlin published, in November 1888 (*Zeitschrift für Hygiene*, Bd. 5), an extensive series of experi-



ments covering two years, and dealing with the distribution of the tubercle bacillus outside the body. The methods he adopted consisted of intra-peritoneal inoculations in guineapigs.

Dr. Cornet investigated two sets of localities. First, those which were presumably constantly contaminated by the virus, viz., the dwelling-houses of phthisical persons, the phthisical wards of general hospitals, insane asylums, and a room in which inhalation experiments in tuberculosis were being constantly made upon animals. Secondly, the localities which were presumably only occasionally exposed to contamination by the presence of tuberculous persons, such as prisons, polyclinics and public buildings, streets, etc.

The air of these localities was first investigated. A number of experiments in which large volumes of air were filtered through sand, and an emulsion made from this was tested with regard to its infectiousness, gave entirely negative results, even in the localities most likely to contain contaminated air, *e.g.*, in phthisical wards, which had just been swept and the bed linen shaken. It was inferred that the danger of infection in this manner was not very great. The dust collected from these localities similarly tested gave very positive and uniform results. Of a total of 392 animals tested by 147 samples of dust, 59 animals became tuberculous (of 196 which died of septicæmia we may infer that a like proportion would have become tuberculous had they lived).

The experiments were so carefully performed as to preclude the possibility of any cases of spontaneous tuberculosis being included among the positive results. These positive results were all obtained with the dust from the phthisical wards, insane asylums, and the houses of private patients suffering from tuberculosis. In the prisons, though the dust was taken from the immediate neighborhood of prisoners suffering from tuberculosis, the results were negative.

Dr. Cornet was led to regard the sputum as the direct source since recent investigators have failed to find bacteria of any kind in expired air. A special inquiry as to the habits of the private patient with regard to the disposal of sputum showed that all the positive results of inoculations were obtained where the patient

expectorated either in a handkerchief or upon the floor. In the cases where these practices were excluded, the dust in no case produced tuberculosis in the animals.

Experiments in disinfecting sputum showed this to be extremely difficult, and in experiments with instruments employed in laryngeal examinations the particles of mucus adhering to the mirror still remained infectious, even after being left in 2 per 1000 sublimate solution or 5 per cent. carbolic acid. The bed linen was also proved highly infectious. A number of bed feathers infected with sputum were marked, mixed with other feathers, and sent to factories where bed feathers were supposed to be disinfected and cleaned. These feathers, after the disinfection had been performed, were found to be capable of infecting guineapigs.

Dr. Cornet concludes by recommending a system of prophylaxis based on his observations. He contends that the infection is to be dreaded from the sputum, as well as from the consumption of tuberculous meat and milk. He regards the sputum of living patients, and the linen, etc., of those just dead, as the chief source of contamination. While indoors, the patient shall, under no circumstances, expectorate anywhere except in a proper spittoon capable of being readily cleansed, and preferably provided with a cover. The handkerchief should not be used for receiving the sputum, except in case of a sudden attack of coughing where it is unavoidable. In all cases the handkerchief or any other linen possibly contaminated should be disinfected by boiling, and washed apart from that of any of the other members of the family. The table utensils used by patients should be washed with hot water before being employed by others.

The bed linen in fatal cases should be disinfected as thoroughly as in cases of smallpox. The patient should be instructed not to put to his mouth anything such as pipes, toys, etc., likely to be put into the mouths of others. The operation of kissing (when necessary) is to be performed antiseptically, so to speak, and upon some portion of the physiognomy (forehead or cheek) where infection is not likely.

Considering the difficulty attending the disinfection of sputum,

he does not consider it practicable to insist on its disinfection, but prefers to insist on scrupulous regularity in its removal, and in the frequent emptying of the spittoons. In fact, the essential element of his prophylaxis might be summed up in the four words occasionally seen across the line—

PLEASE USE THE SPITTOONS !

The possibilities of avoiding infection by care in disposing of the infecting material may be judged from the fact that the dust beside the bench where Dr. Cornet had been working continuously for two years with tuberculous material was found incapable of producing tuberculosis.

Dr. Cornet has, at the request of the Prussian Government, drawn up a report of the prophylactic measures he considers necessary. This report has been favorably received, and the Government intend to test, as far as possible, the efficacy of these simple measures of personal hygiene, especially in garrisons, prisons, insane asylums, and other cases where the effects can be carefully studied and recorded by statistics.

At the request of the Bavarian Government, Prof. Bollinger of Munich has reported to the Bavarian Sanitary Council as to the advisability of adopting sanitary measures founded upon the results of Cornet's investigations. Prof. Bollinger, while not disputing the importance of the results, considers that the view taken of the hereditary and more especially the acquired disposition to tuberculosis is too one-sided. He recommends the carrying out of an investigation designed to settle the question as to whether the disposition of the patient or the mere presence of the contagion is the point of greater importance in keeping up tuberculosis. The fact that the enormous mortality from tuberculosis prevailing in German prisons, averaging 18 to 60 per cent., and ranging in some cases as high as 95 per cent. of the total annual mortality, he considers due to the bad hygienic arrangement of these institutions, producing such a condition of mind and body in the prisoners as tends to develop latent tuberculosis, or to render them susceptible to infection in forms which they could withstand in good health. On his recommendation the Bavarian Government are going to try the experiment of

repeatedly cleansing and disinfecting the prisons, removing every case of tuberculosis, proved or suspected, at once. If, under these circumstances, the hygienic condition in the prison remains otherwise unimproved, the mortality from tuberculosis should greatly decrease or disappear, he would consider the predominating influence of actual contagion over predisposition to be established.

Dr. Bollinger's experiments, published within the last two years by himself and his pupils (*Muenchener Med. Wochenschrift*, No. 29, 1888, and Nos. 34, 40 and 43, 1889), have shown that the milk of tuberculous cows is capable of producing tuberculosis by intra-peritoneal injection in 50 per cent. of the cases. The dilution of this milk with 40 parts of milk of healthy animals rendered it harmless. Samples of milk purchased on the market were not found to produce infection. The mixed milk of dairies is therefore less likely to infect children than the milk of single animals. Inoculations made with the juice of raw meat in animals with moderate degrees of tuberculosis gave negative results. Inoculations from the juice obtained from the psoas muscles in cases of advanced phthisis in human subjects proved successful in 15 out of 18 experiments made in 9 cases.

The discrepancy between the results in these last two series of cases is probably due to the fact that the tuberculosis was less advanced in the cases of the cattle. It is also probable that the power of the tissues to destroy the tuberculous virus becomes greatly diminished during the last stages of exhausting diseases. A comparison with the flesh of patients dying from some extraneous cause in comparatively early stages of phthisis would be interesting.

## Reviews and Notices of Books.

**Hunterian Lectures on the Morbid Anatomy, Pathology, and Treatment of Hernia.** By CHARLES B. LOCKWOOD, F.R.C.S. Thirty-six illustrations. London: H. K. Lewis.

In these lectures Mr. Lockwood gives the result of investigations made to ascertain the part the peritoneum and suspensory apparatus bears in the pathology of hernia. It is well known that there are two schools of pathologists in regard to hernia, one school believing that the fault lies in the abdominal walls and the other that it is in the attaching membranes of the intestines, the abdominal walls playing a secondary part. That the hernia is a disease, not an accident—a pathological condition, not a merely mechanical lesion; that, in fact, the fault is in the peritoneum. Mr. Lockwood has shown that although it is hard to estimate the share which the length of the mesentery has in the causation of hernia, it may, at any rate, be conceded that those in whom the mesentery is long are more predisposed to hernia than those in whom it is short. Even this latter statement, however, is not always correct, as cases are related of acquired herniæ with short mesenteries. Again, others with very long mesenteries never have hernia.

Prolapse of the mesentery, according to Mr. Lockwood, is a predisposing cause of hernia, not an effect. It would be idle, in the small space that could be afforded us here, to discuss this subject, but we can only say that the careful and painstaking manner in which these lectures have been prepared is deserving of the greatest praise. We recommend every surgeon interested in hernia to carefully peruse this work; he will not only be entertained, but much instructed. Appended is a table giving details of the measurement of 100 subjects without hernial sacs or herniæ. In this table the height and length of the mesenteries are given, and also the amount of downward excision of the intestines. We should have liked to have seen a summing up of results at the end, as it is difficult, without reading care-

fully the whole work, to find out what exactly were the results obtained by the author. An index would much aid the enquirer in search of information on particular points.

**The National Medical Dictionary.** Including English, French, German, Italian and Latin Technical Terms used in Medicine and the Collateral Sciences, and a Series of Tables of Useful Data. By JOHN S. BILLINGS, A.M., M.D., LL.D., Edin. and Harv., D.C.L., Oxon. With the collaboration of W. O. Atwater, M.D., Frank Baker, M.D., S. M. Burnett, M.D., W. T. Councilman, M.D., James M. Flint, M.D., J. A. Kidder, M.D., William Lee, M.D., R. Lorini, M.D., Washington Matthews, M.D., C. S. Minot, M.D., and H. C. Yarrow, M.D. In two volumes. Vol. I., A to J. Vol. II., K to Z. Philadelphia: Lea Brothers & Co. 1890.

This truly great work gives a short and clear definition of every medical term in current use in English, French, German and Italian medical literature, together with the Latin medical terminology of all these languages. To give a general idea of the importance and magnitude of this work, it is only necessary to mention that the total number of words and phrases defined is upwards of 84,000, of which 25,496 are Latin, 9,158 French, 16,708 German, and 6,514 Italian. This does not include French, German and Italian synonyms given only in connection with English or Latin primers. In addition to the definition of the medical terms, we have a series of tables, including a table of doses, of poisons and their antidotes, of the inch and metre system of numbering spectacles, of thermometric scales, size of the foetus at different stages, size and weight of the different organs, and tables showing the metritine value of food and materials.

No medical man interested in the progress of his profession can afford to be without this valuable aid. The distinguished editor in chief deserves well of his professional brethren for having in his multiplicity of duties taken the time and trouble for the preparation of a work which has no equal in the English or any other language.

The publishers have produced a work after their best style, and we hope their enterprise will be as successful as it deserves to be.

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### Society Proceedings.

#### MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

*Stated Meeting, Nov. 29th, 1889.*

G. E. ARMSTRONG, M.D., PRESIDENT, IN THE CHAIR.

*Missed Abortion.*—DR. G. T. ROSS read a paper on this subject, a full report of which appeared in the January number of this JOURNAL.

*Discussion.*—DR. TRENHOLME said that missed abortion was very liable to occur in patients of a weak constitution, and this also explains the retention of the foetus in utero, there being absence of vitality in the membranes, and the uterus requires living structures in contact with it in order to bring about contraction.

DR. ALLOWAY said that unquestionably syphilis and child-bearing act as chief factors in the production of missed abortion. He would like to ask Dr. Ross how he explained the rise in temperature twelve days after clearing out the uterus?

DR. F. W. CAMPBELL remarked that he had frequently had cases where the foetus was decomposed without the health of the patient suffering in the least. That missed abortion does take place in other than debilitated or syphilitic subjects.

DR. McCONNELL cited a case in which this had occurred, the patient being very robust and had not suffered from syphilis.

DR. ROSS, in reply, said that the rise in temperature was attributable to mismanagement on the part of the nurse. In these cases, if ergot be used, then the os must be widely dilated, otherwise pain and distress are brought about without any beneficial after result. He thought with Duncan that mitral disease had a marked influence upon the life of the foetus.

DR. JOHNSTON showed for Dr. Springle in this connection an ovum with foetus and membranes entire. There was cystic and

fatty degeneration of the chorion and a marked cicatricial contraction of the umbilical cord. The history gave date of abortion at fourteen weeks, but the foetus showed a development apparently of only eight weeks, which had evidently been dead some little time. He thought, in most cases of abortion, the expulsion of the ovum did not take place till some time after the death of the foetus. The cessation of symptoms of pregnancy probably were connected rather with changes in the membranes than in the foetus itself.

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*Stated Meeting, December 12th, 1889.*

G. E. ARMSTRONG, M.D., PRESIDENT, IN THE CHAIR.

*Cystic Myoma of the Uterus.*—DR. WM. GARDNER exhibited a specimen of a cystic myoma of the uterus and related the case. The patient was unmarried, aged 41, and began twenty-two years ago to suffer from menorrhagia. This continued to be profuse till about five years ago, when it diminished, and for a few months before operation (on 16th November last) it had almost ceased. The tumor was first noticed ten years ago. Its growth, at first slowly, became much more rapid in the last year. Pain was considerable. The abdomen measured 41 inches and was distended by a large partly fluctuating and partly solid tumor. The patient was extremely anæmic and pallid, with lemon-colored skin. There were no adhesions. Sixteen pounds weight of a yellow transparent fluid were let out by the trocar from a cavity with anterior wall a quarter of an inch thick. The coagulated in a few minutes after exposure to the air. The broad ligaments were tied off to permit the wire of the clamp to be applied low enough over the cervix. Bantock's Welta metal clamp, wire and transfixing pins were used, and the stump of the cervix uteri brought out at the lower angle of the wound. The solid part of the tumor was a multiple myoma. The cavity of the uterus was enlarged. The large cavity whence the fluid was evacuated presented bands crossing from one side to the other. The whole weighed 38 lbs. During the first week there was some high temperature; otherwise recovery had been uneventful, and now (16th Dec.) the patient sits up and is well.



*Discussion.*—DR. ALLOWAY said the specimen was interesting on account of its extreme rarity. These so-called cysts did not contain a true cyst-wall, but are simply lymphoid spaces. Skeene had applied Kœberle's sœrre nœud without pins; the pedicle slipped and disappeared without any bad after result, thus demonstrating how the pins can slip and not be followed by any hemorrhage.

DR. SMITH said a case similar to that of Skeene had occurred in his own practice and with a like happy result.

DR. JOHNSTON asked Dr. Gardner how he concluded as to the nature of the tumor? Multilocular cysts of the uterus are almost unknown. Corneil had seen a sebaceous cyst of the uterus which he considered unique.

DR. GARDNER, in reply, said he had not formed any exact idea as to its being a true cyst; he had not looked upon this as a true cyst, but as dilated lymph spaces. In the after treatment of these cases he cut the constricting wire as early as two days, thus preventing sloughing downwards, and the danger of dropping in of the stump is thus avoided. The dressings were simple, namely, absorbent cotton, the object being to mummify the stump.

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*Stated Meeting, December 27th, 1889.*

G. E. ARMSTRONG, M.D., PRESIDENT, IN THE CHAIR.

Dr. C. O. Brown was elected a member.

*Hemorrhage into the Ovaries.*—DR. ARMSTRONG exhibited the ovaries of a patient of whom he gave the following history: She had menstruated regularly up to the time of her marriage on May 16th last. On June 14th she was seized with sudden severe abdominal pain and faintness. Menstruation appeared later and continued regularly since that time, but all the time she suffered severe pain on walking, appetite failed, and latterly she had to take to her bed for the greater part of the day. On examination, a partly fluctuating, partly solid mass about the size of an orange was found behind the uterus. Both ovaries were removed through the abdominal incision; one contained a large hemorrhage into the substance, while a second hemor-

rhage was found outside, surrounded by a dense capsule; the other ovary was cystic. No definite traces of chorionic villi were found.

*Case of Polyuria with Nervous Symptoms.*—DR. STEWART exhibited a man, aged 40, who for the last five years has been troubled with polyuria. For a period of three months during the present year the average quantity of urine passed was upwards of 100 ounces in the twenty-four hours. The patient also presents the following nervous symptoms: There is (1) paresis of the respiratory branches of the left facial nerve; (2) atrophy of the left half (anterior part) of the tongue; and (3) paresis of the left half of the palate. No affection of taste or common sensation in the affected parts.

DR. WM. GARDNER asked if there was any known cause for polyuria otherwise than diabetes, and mentioned a case in whom, two weeks after the removal of an ovarian tumor, polyuria to the extent of 150 ounces a day was developed; no sugar; appetite was enormous and thirst very great. These symptoms gradually subsided.

DR. HINGSTON found polyuria not infrequent after the removal of ovarian tumors, and regarded it with satisfaction.

DR. STEWART replied that in such cases it was probably due more to mechanical causes than to nervous influences.

*Removal of Calculi.*—DR. HINGSTON exhibited three calculi from a man 68 years of age. He had suffered from all the symptoms of stone in the bladder and an enlarged prostate, but even after repeated examinations no click was detected. Lithotomy was performed, and even on introducing the finger no stone was felt. Curved forceps were introduced, and by them three smooth, round calculi were removed. Another singular feature of the case was that after the operation not a single drop of urine came from the wound and he could retain his water for many hours. A catheter was used every six hours. The patient made a complete recovery.

*A Case of Appendicitis.*—DRS. MACDONNELL and SHEPHERD related the case. (*See page 561.*)

## Correspondence.

*To the Editors of THE MONTREAL MEDICAL JOURNAL.*

SIRS,—The spirit of opposition to Provincial Boards, spoken of by Dr. Osler in his letter in your December issue, is not dead; on the contrary it is particularly lively, and though my good friend regrets to see it, yet it is none the less present, and that, too, amongst men whose age is on the near side of the forties. Eighteen months ago, at the annual introductory lecture at McGill College, heretical opinions about Boards, somewhat similar to mine, were expressed, so that in my misguided course I have at least one companion.

Dr. Osler has misunderstood me, probably, because my meaning was not made sufficiently clear. I would not do away with state supervision, but I would do away with the necessity of obtaining a separate license to practice for each province. Canada is one country, and a legally qualified Canadian graduate should be allowed to practice in any part of it. Imagine the city of London, whose population is about equal to that of the Dominion of Canada, divided into a number of parishes, each with an examining board, so that a man who was qualified for one part would have to be examined before he could practice in another, and imagine how unjust it would be were the practitioners of one parish enabled by the legislature to club together and make laws to keep qualified men from practising in their district. And, after all, this is what is going on in Canada.

I would like to ask Dr. Osler (1) whether the Boards are elevating the standard of medicine in demanding so many didactic lectures; (2) whether he defends the action of licensing boards in exacting from candidates a large money tax, such as the \$100 fee in British Columbia, and whether this tax is not exacted more with the object of protecting the profession from competition than of protecting the public from uneducated practitioners; (3) whether he is not aware that quacks and charlatans still flourish, and that bands of them, protected by a license of one of the boards, visit all the cities and towns of the Dominion; (4) whether he is not aware that the reforms men-

tioned in his letter, the compulsory four years, the additional summer session, the grading of courses, did not all originate with the schools and not with the boards.

If Dr. Osler will be good enough to answer these questions he will confer a favor upon a grateful old pupil, and, moreover, he will thus aid in directing public opinion to the educational reforms so urgently needed in our profession.

Yours very truly,

R. L. MACDONNELL.

December 26th, 1889.

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THE JOHNS HOPKINS HOSPITAL,  
BALTIMORE, Jan. 2nd, 1890.

*To the Editors of THE MONTREAL MEDICAL JOURNAL.*

SIRS,—I entirely sympathize with Dr. MacDonnell in his desire for a Dominion Medical Board, but he has only to read the reports of the Canadian Medical Association on this question to see that it is an impossibility in the present constitution of the country. However much we may regret it, each Province must continue to regulate its own affairs in medicine. When the curricula and the examinations are uniform in all, reciprocity between the Provinces may be feasible, and to this we may hopefully look forward.

As to the questions which Dr. MacDonnell asks, let me reply to them in order.

1. I do not think the Boards are elevating the standard of medicine in demanding so many lectures, but it must not be forgotten that the schools have, until recently, been wedded to the old plan. I do not know a Canadian Faculty in which five years ago it would have been possible to carry out a scheme of graded education. In how many is it possible to-day? Now that a four years curriculum is the rule and the option of a year with the physician is no longer enforced, the Boards and Colleges could easily unite in a scheme of instruction on advanced modern lines. The teaching in each year should be separate, courses of lectures should not be repeated, and laboratory and tutorial work should take the place of much of the didactic teaching.

To carry out this plan effectively, the fees would have to be increased in order to pay for additional instructors.

2. Yes, I think the Boards have a perfect right to protect the public by exacting a money tax.

3. Surely Dr. MacDonnell is aware that prior to the establishment of the Boards the country swarmed with irregulars of all sorts. The Thompsonians and Eclectics were in every town. Where are they now in Canada? Beyond question, the sole reason why the cities and towns are not filled with herbalists, quacks and professional sharks of all kinds, is the wholesome restraints of the Boards. To hold them responsible for the loose practices of their licentiates seems rather hard. The universities themselves are not without black sheep. "Good wombs have borne bad sons."

I willingly allow that the schools have often taken the initiative in reforms, and it should be the duty of school-men, who are members of the Board, to have these good changes adopted. Of this I am quite sure, that the various Medical Boards would accept with pleasure, and adopt without hesitation, a uniform plan such as could be arranged in a conference of representatives of the leading schools.

In conclusion, I would repeat that the Boards have done splendid service for the profession and for the public in the Canadian Provinces. They form permanent organizations which are not likely to be disturbed, and it is of the utmost importance that the Colleges work harmoniously with them.

Yours very truly,

WM. OSLER.

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## REPORT OF CASE OF PARTRIDGE POISONING.

*To the Editors of THE MONTREAL MEDICAL JOURNAL.*

SIRS,—On the evening of January 1st, of this year, while spending my vacation at Bedford, N.S., I was called in haste to see Mr. M., of that place, who, the messenger said, had been poisoned by eating partridge for his supper.

I went at once to the hotel and found Mr. M., the proprietor, a strong man, about 35 years of age, semi-comatose, cold and

pulseless at wrist, heart beating about 30 per minute and very weak, pupils reacted feebly to light, patient muttering incoherently. Mrs. M. informed me that her husband had eaten the back of a partridge for his supper, and in about two hours was seized with severe pains in epigastric region, accompanied by diarrhoea and dizziness. Mustard and water was administered, and vomiting was induced; how much he vomited I could not ascertain.

I at once gave apomorphia 1-10th of a grain hypodermically, and ordered hot bottles, brandy, and a mustard plaster. Gave large doses of brandy by mouth, which were followed by 60 minims hypodermically, whenever vomiting began—*i.e.*, in about five minutes. It was very difficult to get patient to take the brandy by the mouth, as his mental condition was so bad; this fact and the state of the heart induced me to give more brandy hypodermically. I injected in all 180 minims of brandy in this manner. The mustard I placed over the left chest. The first time I got the pulse at the wrist it was beating 36 to the minute, thready and easily compressed. In about one hour after I saw Mr. M.; he was much improved; pulse 48, still thready, however; and said he felt better. I gave more brandy by mouth and told patient to try and sleep, which, on account of the quantity of brandy he had taken (nearly a whole bottle), he did not find difficult. I left at the end of another hour, patient sleeping, pulse 60, quite strong and full. The only complaint on following day was soreness in left arm, owing to hypodermic needle.

Being "only a student," I will not comment on this case as to causes of poisoning, etc., etc., but will say that, in my opinion, had I not had a hypodermic syringe patient would have had a very narrow escape, if he would have escaped at all.

F. G. CORBIN, 4th Year, McGill.

## Selections.

### TETANY.\*

BY JAMES STEWART, M.D.,

Professor of Pharmacology and Therapeutics, McGill University.

Very few observations have been published in America on the extremely interesting disease commonly known as *tetany*. Drs. Henry Hun of Albany, Carpenter of Pottsville, Lyman of Chicago and J. Lewis Smith of New York have each reported one or more cases. It has been my fortune to have observed a large number of cases in Vienna during the winter of 1883 and 1884, and to have had under observation during the past three years a case which presents many points of exceptional interest. I will first give a brief description of the clinical course of this case.

The patient is a male, aged 39. His complaints when he first came under observation were *diarrhœa* and "spasms of the face, arms and legs." He has been troubled with *diarrhœa* for ten years, and with spasms of an intermittent character for the past eight years. During the late American civil war he served as a private soldier in a number of the Virginia campaigns. During this period he had several attacks of malarial fever, and for a period of eighteen months he suffered from a mild form of chronic *diarrhœa*. He never had either syphilis or rheumatism, and never drank to excess. The family history is unimportant.

The patient is tall, emaciated and anæmic, with an anxious, careworn expression. For the past eight years he has been troubled with the attacks of tetany. Usually the first subjective symptom of their appearance is double vision. Then the thumbs become strongly adducted and opposed, while the fingers are adducted and semiflexed. These contractions gradually increase in severity day by day up to about the tenth day, when they somewhat suddenly begin to decline, and the parts become normal twenty-four hours after.

When the attacks are what he calls severe, the adductors of the upper arm become involved, bringing the arms crossed in front of the chest, with the forearms semiflexed. For some hours

\* Read before the Association of American Physicians, Washington, Sept. 18, 1889.

before and during the whole period of tetany he has a disagreeable feeling of numbness in his fingers. The dorsum of the hands swell and they are extremely painful. The pain is especially severe when an attempt is made to straighten the contracted muscles. The muscles of the face are also frequently the seat of contractions, the upper lip being usually drawn to the left and upward, and the lower to the right and downward. The facial muscles are also the seat of fibrillary twitchings during the period of tetany. The muscular contractions only occasionally affect the muscles of the lower extremities. When affected, the feet and toes are in a state of plantar flexion, the feet being turned inward and the thighs adducted.

The galvanic irritability of the nerves is found to be greatly exaggerated during the period of tetany. The following may be taken as an average result :

	NORMAL PERIOD.	TETANY PERIOD.
Facial, . . .	3.00 m.a.	0.25 m.a.
Radial, . . .	5.00 "	1.00 "
Median, . . .	4.25 "	0.50 "
Ulnar, . . .	3.50 "	0.50 "

During the period of tetany usually galvanization of either facial produced lively contractions on closing the kathode with a measurement of not more than 0.25 of m.a., while after the attack passed away it was necessary to employ 3 m.a. to induce a similar contraction. An anode opening tetanus is readily induced by a strength usually not exceeding 3 m.a. A strength of current necessary to induce a contraction during the quiescent period was sufficient in the tetany period to cause a distinct tetanic contraction. There were never noticed any signs of the reaction of degeneration, the KSZ. being always found more marked than the AOZ.

The difference between the reaction to faradization of the muscles during the normal and tetany periods is not very marked. In fact, the interossei require a much stronger current to induce their contraction during their tetany state than after it has passed away. This is no doubt owing to the œdematous tissues increasing the resistance. The mechanical irritability of the muscles



when in a state of tetany is greatly exaggerated. The same holds true of the nerves innervating the affected muscles. Pressure on the vessels does not appear to increase the intensity of the muscular contractions. The muscles, although flabby, are in a fairly nourished condition.

During the period of tetany the knee-jerk is greatly exaggerated, but after it has passed it is always difficult, and at times impossible, to induce contraction of either quadriceps, when the patellar tendons are percussed. The same holds true of the biceps and triceps reflexes. There is nothing definite to be made out in regard to any of the superficial reflexes.

Vasomotor phenomena are frequently noticed. Mention has already been made of the swelling of the back of the hands. Herpetic eruptions on the fingers are occasionally seen also. The tongue is constantly found in a raw-looking state.

During the intervals of freedom from the attacks, he suffers from diarrhoea, which moderates when the tetany makes its appearance. The stools are copious, semi-fluid, frothy, and look like pea-soup. The abdomen is usually distended. During the attacks the urine has a high specific gravity from an excess of urea. It contains also a great excess of indican. It is free, however, from both albumin and sugar. Jaundice frequently is present; there is no other evidence, however, of disease of the liver. The spleen is normal in size. An examination of the blood reveals nothing abnormal. No evidence of any thoracic disease.

About one year after this patient came under observation the following additional symptoms were noticed:

A complaint, not only during the attacks, but also in the intervals, of general numbness. There is noticed a difficulty in speech. He is able to articulate well, but on attempting to answer a question, it takes him some time to do so, and when he begins to speak, especially if any thinking is necessary, the speech is slow. The œdema, which was formerly confined to the back of the hands, is now more or less general, but is especially marked in the face. There is no pitting of the tissues, however. There is no trace of the thyroid gland. The anæmia has also increased in intensity.

These symptoms resemble closely those of myxœdema. Against that assumption we have the fact that there has been no progress whatever during the past two years, and this is hardly compatible with what is known to be the clinical course of myxœdema. At one time it appeared as if we were going to have a myxœdema engrafted on a tetany. The case is undoubtedly one of tetany, but whether we have, in addition, myxœdema or not, time alone will tell.

Steinheim, in 1830, was the first to give a true clinical description of tetany. Corvisart, in 1852, was the first to propose the name by which it is now universally known. It is, however, mainly to the observations of Trousseau, Erb, N. Weiss, and others that we have been made acquainted with many of the more important features of this remarkable disease.

There are three distinct forms of this disease—forms which differ, in the causes that give them origin, in their course, and in their prognosis, but little in the clinical pictures which they present. By far the most common variety of this disease is what is known as rheumatic or epidemic tetany. On the continent of Europe, especially in Paris and Vienna, distinct epidemics occur. In Vienna hardly a winter passes without such an occurrence. In the winters of 1883 and 1884 a very severe epidemic occurred in the latter city.

The course of the disease when it occurs as an epidemic, is acute—usually not lasting over two or three weeks—fatal cases being very exceptional. Extensive epidemics occurred in Paris in the years 1855 and 1876. In England and America no epidemics of this disease have been described.

A second variety of tetany, which is more chronic, is due to either chronic diarrhœa, prolonged lactation, or other debilitating influences. Except in being more chronic, this form differs but little from the epidemic variety. Recovery nearly always occurs.

A third form of tetany follows the removal of enlarged thyroid glands. A very considerable number of cases of tetany following this operation are now on record. Up to May, 1883, Billroth performed 78 operations for the removal of enlarged thyroids, and in 13 tetany followed in the course of a few days; 6 of these

13 cases proved fatal. Two of the fatal cases ran a course of upward of one year, while the remaining 4 terminated within two weeks.

There is a very marked difference between the course of tetany following extirpation of the thyroid and that due to debilitating and epidemic influences. The former is a much severer type, being frequently fatal, while the latter is seldom or never fatal. A fourth variety of tetany is also distinguished by its fatal tendency. I refer to that which occurs in cases of dilatation of the stomach. Kussmaul, Gerhardt, Dujardin-Beaumez, Müller, and others have reported such cases. Müller has collected eight cases of tetany occurring during the course of dilatation of the stomach, with a mortality of 66 per cent. Judging from these statistics, tetany due to this cause is even more fatal than that arising from removal of the thyroid gland. I have purposely excluded the consideration of what is commonly called infantile tetany, as it appears to me that true tetany is an exceptionally rare disease in infancy. If we are to include, as many observers do, all cases of carpo-pedal contractions under the name of tetany, the disease is much more frequent among children than adults. Clinically there is a marked difference, however, between the carpo-pedal contractions so frequently seen in conjunction with laryngismus and tetany.

1. The tetany of adult life is essentially an intermittent disease, while in the so-called tetany of infant life the contractions are permanent until recovery takes place. They may be more intense at one time than another, but they never completely disappear.

2. The carpo-pedal contractions of infancy appear in a very considerable number of cases to be due to cerebral causes, as eclampsia is a very frequent complication. There is no doubt that true cases of tetany do occur in childhood; what I wish to lay stress on is, that they are very rare, and that it is an error to say that every case in which we have carpo-pedal contractions is a case of tetany.

#### EXPERIMENTAL TETANY IN ANIMALS.

When the thyroid gland is removed from cats and dogs, a

series of symptoms set in in a few days, to which the name of experimental tetany has been applied. The first symptom usually noticed is a peculiar appearance of the eyes, due to a pushing forward of the membrana nictitans on the inner and under surface of the bulb, from tetanic contraction of the internal eye muscles. Simultaneous with this contraction of the eye muscles, there appear fibrillary tremors of the muscles of the extremities and face, and occasionally of the tongue. In some cases these tremors are so marked that it is impossible for the animal to stand erect, at other times they are so weak that it is with difficulty that they can be perceived. In addition to the fibrillary tremors, there is tetanic contraction of the muscles of the extremities. The muscular phenomena described alternate with periods when the animal remains quiet. The respirations are frequent and superficial; the temperature is not increased.

In most animals, after the eighth day, a suppurative catarrh of the conjunctiva sets in, which finally leads to implication of the cornea and its perforation. The death of the animal soon follows, either suddenly from tetanic contraction of the glottis or diaphragm, or more slowly from exhaustion.

In a very large number of thyroid removals in dogs, Fuhr was unable to find any constant changes in the internal organs. Neither the brain nor spinal cord presented any marked changes. The tissues in the neighborhood of the thyroid gland were carefully examined and were found normal.

Exceptionally, a dog may live after complete removal of the thyroid gland. Rabbits, on the other hand, usually recover from the operation, although liable to be affected by the muscular contractions. Man appears to stand midway between these two classes of animals, so far as his power of withstanding the removal of the thyroid is concerned.

The symptoms detailed as following the removal of the thyroid in the lower animals bear a striking resemblance to tetany as it appears in man; that they are essentially the same disease is extremely probable. A valuable proof of their identity has been pointed out by Schwartz. In all his cases—six in number—he found that both the galvanic and faradic reactions were greatly

increased. The reaction of the peroneal nerve to galvanism was so marked that he often found muscular contraction induced by a strength of current not measurable by our ordinary clinical galvanometers; AOTe. and Ks.Te. were readily brought out by a very weak current.

Of the many different forms of cramps that affect the muscles in man, tetany is the only one in which there is a marked increase in the electric irritability of the nerves, with the possible exception of Asiatic cholera. Its presence, then, is of great diagnostic importance, and leaves little room for doubt that the muscular contractions which follow the removal of the thyroid in animals are of the same nature as those which follow a similar operation in man, and also similar to the same disease that occurs epidemically, and from the other causes already mentioned.

*The Morbid Anatomy of Tetany.*—In the few cases where a histological examination of the nervous structures has been obtained after death, no lesions to account for the symptoms present during life could be discovered.

The slight changes described by Weiss as having been found by him in the cervical cord are considered by all later observers as negative, a few swollen ganglion cells being the only abnormality described by this observer. Langhans found a periarteritis and periphlebitis in the white commissure and anterior horns of the cervical and lumbar enlargements in a woman who died at the age of 48, after having suffered for some time from tetany. Similar vessel-changes are, however, not infrequent at this age, and, therefore, cannot be taken as in any way distinctive of tetany. Schultze and Beyer have each had in several cases opportunities for making a thorough examination after death of the central and peripheral nervous system, and with negative results in every case.

We may therefore conclude that, as far as we know at present, there are no anatomical lesions in cases of tetany. The same is true of the tetany induced in animals by removal of the thyroid gland. Judging from the clinical course of the disease, these negative results are what we would naturally expect.

Before discussing the probable nature of the disease, it will be in place to glance at the present expressed opinions as to

the cause of the experimental tetany of animals after removal of the thyroid glands. With but very few exceptions, every recent experimenter in this field has arrived at the conclusion that the tetany is directly brought about by the removal of the gland itself, and that it has nothing whatever to do with injury of the nerves in the neighborhood. The very recent experiments of Fuhr, Weil and Schultze establish this, I think, beyond doubt. An interesting experiment performed by Fuhr shows that simple irritation itself does not bring about any of the symptoms of tetany. He injected a hypodermatic syringe of a 10 per cent. solution of nitrate of silver between the gland and its capsule; severe and extensive inflammation of the gland and neighboring structures followed, but at no time were there present any fibrillary tremors, muscular contractions, or other symptoms indicative of tetany.

It is a well-established fact that the removal of one gland does not bring about tetany, but if, after the wound is completely healed, the remaining gland is removed, the symptoms of tetany quickly develop, and we then have the usual lethal course as seen when the two glands are removed at the same time. Weil has also shown that if a portion of each gland is removed the result is negative, while the usual symptoms quickly make their appearance when the glands are completely removed.

I think there can be no other conclusion after the consideration of the above facts, than that the cause of tetany in animals is due directly to the removal of the thyroid glands. And no other conclusion is tenable in regard to the tetany which follows extirpation of the thyroid in man.

As the removal of the thyroid glands, both in man and animals, brings about a certain train of nervous symptoms, it follows that these glands have some important relations to the nutrition of the nervous system: whether this function consists in the removal from the blood of matters which would be injurious to the nervous system if allowed to circulate, it is difficult to determine. Experiments performed by Ewald of Strasbourg lend great probability to this view. He injected a number of dogs with the freshly expressed juice from the thyroid glands of healthy dogs, and invariably found that the animals became soporose and cataleptic.

To explain how causes seemingly so diverse in their operation, as rheumatic influences, diarrhœa, pregnancy, lactation, and removal of the thyroid glands, can induce similar symptoms is very difficult. The active cause in the case reported is no doubt in some way due to the diarrhœa; but is the disease induced through impoverishment of the nerve centres, or through the peripheral irritation, or from the absorption of putrid products?

It appears reasonable to conclude that in all cases of tetany we have to do essentially with an unstable condition of the nervous system, a condition which readily reacts to slight peripheral influences. In the great majority of cases the disease is connected with some directly debilitating cause.

No doubt peripheral irritation is an active factor in a considerable proportion of cases. Müller reports two cases of tetany occurring in simple dilatation of the stomach, and where, after death, this organ was found to be twisted on its axis.

I am unable to advance any facts as lending probability to the view that tetany is brought about by the absorption of the products of putrid decomposition.

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**The Disposal of the Sputa in Phthisis.**—(Ed. *Boston Med. and Surg. Journal*, Oct. 31.)—There is now general agreement as to the danger of communication of phthisis by the inhalation of the dried products of expectoration. Experiments on animals compelled to inhale sputa-dust have demonstrated this; such experiments were formerly made by Tappanier, and have recently been made by Cornet. This experimenter also claims to have determined a curious fact by collecting the dust and debris from wards in which phthisical patients were confined, and inoculating those products in animals. Of 21 phthisical wards, 15, or two-thirds, contained the tuberculous virus. The patients were in the habit of spitting upon their handkerchiefs, as well as into spittoons. But in a third of the wards no infectious material was found in the air or on the walls; and this immunity was attributed, not only to the presence of spittoons, but also to the precautions enforced to prevent expectoration upon the handkerchiefs or cloths, and the pains taken to promote general asepsis and cleanliness.

Often repeated analyses have proved that the sputa of phthisical persons in very many instances contain Koch's bacillus, and are therefore likely to convey contagion to the predisposed. The chain of evidence seems to be sufficiently complete.

It would seem, then, that the requirement insisted upon by the French Commission—that the constant use of spittoons should be obligatory on the phthisical, and that they should not be allowed to expectorate on the floor, on carpets or mats, or even, except under peculiar circumstances, on cloths or handkerchiefs—should be enforced, both in hospital and private practice. In advanced



cases of phthisis it may not be possible for patients to use spittoons, and they may be obliged to expectorate on pieces of cloth or toilet paper ; these should be immediately burned.

It is advised that phthisical patients in their daily walks ought to be enjoined not to spit on the ground, on the sidewalk, etc. ; this requirement will be difficult of execution unless such patients be provided with a portable spittoon which they are willing to use in public. Spittoons may be placed in all public rooms, in corridors, closets, about places of promenade, and kept partly filled with water, never with sawdust, ashes, or any other dry material.

Spittoons should not be emptied into privies or water-closets, or upon the soil, but into the fire ; or they may be dealt with as Hassal advises in the *Lancet* : " A covered vessel of suitable size, and provided with a rod, should be partially filled with a strong bichloride of mercury solution, and into this the contents of the spittoons should be daily emptied, until it becomes necessary to dispose of the accumulated and now harmless sputa, which may then safely be done by means of the closet or soil. The use of the stirrer is necessary, in order to break up the sputa and allow of the effective action of the germicide."

The sanitarily-ideal apartments furnished to consumptive patients are to have no curtains, carpets or hangings ; and where mats are required, they should be of some non-absorbent material, as rubber cloth. Such patients should be required to sleep alone, and their clothing and bedding should be kept entirely apart from that of other lodgers. Frequent boiling and cleansing of bed-linen and underclothing should be enjoined. When a phthisical patient has vacated a room, or has died, the same cleansing and disinfectant measures should be carried out as after a case of an ordinary infectious disease, as scarlet fever or diphtheria.

All these precautionary measures are simple corollaries from facts which have been obtained the past few years as to the parasitic nature of tuberculosis and the contagiousness of phthisical sputa. Their enforcement ought to diminish the extension of tuberculosis, but would scarcely increase the content and comfort of the great army of the phthisical.—*Epitome*, Dec. 1889.

**Puerperal Fever, a Possible Source of Contagion.**—Mr. R. D. Pedley, F.R.C.S. (Edin.), and L.D.S., Dental Surgeon to the Evelina Hospital for Sick Children, Southwark, contributes to the *Lancet* of Dec. 21st, 1889, a paper which is well worthy the attention of those who are engaged in obstetric practice. He writes:—"Is it possible for a medical practitioner or a nurse whose mouth is in an unhealthy condition to be the means of developing in a patient puerperal fever or any of the local manifestations of septic poisoning, such as pelvic cellulitis or pelvic peritonitis? This question has many times presented itself since reading as a student a case mentioned by Dr. Playfair in Vol. II of *The Science and Practice of Midwifery*, of a medical man who, suffering from chronic ozæna, had to relinquish practice on account of the numerous deaths from puerperal fever among his patients. I have not been able to answer the above question in the affirmative, but I consider there is sufficient evidence to justify a few remarks, thereby placing the matter before those who have better opportunities of forming a correct judgment. Some light may be thrown on this 'possible source of contagion' by making mention of a case recently reported in the daily press of an inquest held on the body of a woman who had died from puerperal fever. The mother of the patient—an uncertified midwife—had been the means of spreading this terrible disease. Dr. Talbot, in evidence, stated that 'he had attended her for a piece of dead bone in the mouth, and if she had been fingering it, that might account for the outbreak.' This, of course, is an extreme case. Probably the woman was suffering from syphilitic necrosis, and that her mouth was in a very bad condition, also that her acquaintance with antiseptics was practically *nil*. Most mouths are rendered foul by carious teeth, and there can be very little doubt that medical men and nurses are as liable to suffer from carious teeth as their patients, and find, as a rule, far less opportunity of seeking attention.

"The condition I refer to is generally brought about as follows: A tooth is attacked by caries. If neglected this makes its way into the tooth until the pulp chamber is reached, and the nerve

is exposed. After a variable amount of pain the nerve dies, and becomes putrid right up to the apex of the fang. A small amount of septic matter escapes through the apical foramen, and sets up an acute alveolar abscess. At this stage, if the tooth is extracted, the trouble is ended; but if the pus is let out beneath the lip, or makes its way through the thin alveolar plate, the swelling disappears after a day or two and a sinus remains, from which matter is constantly discharged in small quantities. In dental language it becomes a chronic alveolar abscess. The tooth is practically a piece of dead bone; with this difference, that through its centre is a narrow channel in which rests the remains of a putrid nerve. It is quite common to find several teeth in a similar condition, sometimes cut down level with the gum, having received no further treatment than careful concealment by artificial teeth. Beyond the fact that an occasional swelling takes place in the alveolar plate, and a very disagreeable taste is present, the owner may go on for years with very little discomfort. Is it unreasonable to suppose that a very intelligent nurse (having several teeth such as we have described) may seek to relieve the pain of an aching stump by pressure of the finger; and, not being aware of any danger, convey septic matter to the body of the patient in the ordinary discharge of her duties?

“ In May and September of 1886 two cases came under my notice, of which brief notes were taken at the time:—*Case 1*—Miss —, a nurse, said she should have been before but had been attending a case of puerperal fever. Her mouth was in an unwholesome condition. Front teeth good. Not a single molar sound; all the back teeth carious. Had two alveolar abscesses in connection with upper bicuspid teeth on the right side, and one in connection with a lower molar tooth on the left side. *Case 2*—Dr. —, suffering from an acute alveolar abscess over left lateral insisor tooth in the upper jaw. Face considerably swollen. Tooth had been sore for some time; he could scarcely bite anything with comfort. Teeth generally in bad condition. Several stumps in the lower jaw on the right side and in the upper jaw on the left side. Had suffered for years; of late the

stumps had given considerable trouble. Several sinuses from which pus oozed. Would have sought better advice before, but just after tooth became troublesome had a puerperal fever case to attend to, and had been much worried. No reason to be assigned for puerperal fever; surroundings good and healthy. Good drainage.

“That pus from an alveolar abscess is necessarily septic we cannot be sure; but there are three facts worthy of notice. 1, Pus from an alveolar abscess is often of foul odor. 2, As a consequence of alveolar abscess, necrosis of a portion of the jawbone is not at all uncommon. 3, There are cases recorded of patients who have died from pyæmia and septicæmia as the result of alveolar abscess, *vide Tomes' Dental Surgery*, Salter's *Dental Pathology and Surgery*.

“It may be urged that the medical practitioner is constantly brought in contact with septic matter, and that the adoption of the necessary antiseptic precautions would exclude all possibility of such direct communications as I have suggested. This is quite likely; also that, if a source of danger is pointed out, the medical man may be trusted to do his best to avoid it. We cannot be so sure of the nurse, who necessarily is brought far more often in contact with the patient, and who, after the first few hours, has the well-being of the patient in her own hands. No medical man can be held responsible should the nurse fail to carry out his instructions; but he can, in most cases, ascertain beforehand that the nurse is not the subject of a malady, be it local or constitutional, which is likely to be a source of danger to his patient. In conclusion I would offer this brief suggestion. It is desirable that midwives and nurses should be subjected to medical inspection before attending obstetric cases.”—*Hospital Gazette*.

**On the Non-Retention of Urine in Young Girls and in Women.**—May I be permitted to make a few remarks on a paper by Dr. H. Marion Sims on the above subject published in your last September number, read by him at the March meeting of the Obstetrical

Society of New York, in which he recommends mechanical distention of the bladder in cases of incontinence of urine other than those produced by cystitis or growths in the bladder? In the paper mentioned, he remarks that at the time he treated the case related he was certain that he had struck an original idea. "In looking up the literature of the subject," he says, "I find very little mentioned in regard to such cases, and only one case could I find reported where incontinence was cured by forcible dilatation. This case was in a girl, after puberty, whom Braxton Hicks had cured by forcible dilatation with warm water, but in what quantities I could not find out." Afterwards Dr. Sims says: "I only give the above references just to show that there is no mention made of contraction and hypertrophy and its treatment by forcible dilatation, except in the one case given by Braxton Hicks."

I do not know from what imperfect source Dr. Marion Sims derived his report of the case he alludes to, but had he written to me I should have been happy to answer him and to point out that if he referred to the second volume of the *Lancet*, 1868, page 7, he would find that I had done much more. Under the head of "Two Cases of Incontinence of Urine from Earliest Childhood cured by Mechanical Dilatation," the report begins: "A cause of incontinence of urine is indicated in the following cases which is not generally recognized. The treatment which Dr. Hicks applied was very successful, and we have no doubt that the record of it will be of great service to practitioners who have patients suffering from this very troublesome condition." Then follows the first case and treatment, assisted by injections of morphia and other remedies: and then: "Dr. Hicks remarked that the constant evacuation of urine permitted by some mothers to their children allowed the bladder to become so constantly empty that after a time the muscular power of the sphincter was not sufficient to counteract the contractility of the organ. In recent cases, no doubt, this could be voluntarily overcome by adults; but in old-standing cases, although we might do much by lessening the sensibility of the bladder, yet we might proceed at once to overcome its resistance by mechani-

cal force, so that further treatment would not be required." This is well instanced by Case II, after which follows also : "Both these girls had been unfit for service from their complaint. Dr. Hicks suggested the applicability of this treatment to both sexes in cases with similar history. He thought it was possible that in some cases there were congenitally small bladders, and these possibly might be more difficult to manage." Then follows a case of contraction following cystitis, in which relief to a certain extent was obtained by dilatation, in addition to other local means, but not so satisfactorily as in the above cases.

It is a source of satisfaction to me to find that Dr. Sims confirms my ideas and treatment by his own independent observations, and I feel sure he will, on the perusal of these remarks, award me the claim I am making of priority, as it is twenty years since my cases were published. And I think I may make another claim of priority respecting the washing-out of the bladder by various medications, for I believe that prior to my lectures on "Some Diseases of the Urethra and Bladder" (in the year previous to the report of the above-mentioned cases), *Lancet*, vol. ii, 1867, the washing-out and locally treating diseases of the bladder was not done; now it is the rule of practice, though, of course, with additions to the medicaments employed, such as boric and salicylic acid, etc.

I have also since tried distention in other cases of contraction, caused in older patients temporarily by other circumstances than cystitis and tumors, with great benefit; and have also pointed out, some years back, that in distention and washing-out of the bladder it is not necessary that the bladder should be entered, if we use an open-ended canula, passed up to but not through the sphincter, using a little more pressure on the piston. But I have also shown that generally sufficient pressure for most cases can be obtained by a rubber tube and funnel attached to the canula, the water pressure being regulated by the elevation of the funnel.—*Dr. J. Braxton Hicks in Journal of Obstetrics*, January, 1890.

THE  
Montreal Medical Journal.

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VOL. XVIII.

FEBRUARY, 1890.

No. 8.

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THE PROVINCIAL MEDICAL BOARDS.

The letters of Drs. Osler and MacDonnell, which we publish in this number, will, we hope, direct the attention of the profession in general, and the members of the Provincial Medical Boards in particular, to the weak points in our system of medical education. Dr. Osler, from his extensive experience in teaching and with teachers, is particularly well qualified to point out to us our failings. When he says that "the courses of lectures should not be repeated, and laboratory and tutorial work should take the place of much of the didactic teaching," he has uttered a truth which every teacher in our Canadian medical schools must feel the force of.

We hope the time is not far distant when these desirable reforms will become accomplished facts.

It is useless to expect a Central Examining Board for the entire Dominion, not because there is differences in the requirements of the different Provincial Boards, but owing to the innate incompatibility of the elements that go to make this "Canada of ours." If the different Provincial Boards expressed a wish to hear from the teachers and students propositions for the more effective study of our common profession, they would, we have no doubt, be quickly furnished with schemes which, if carried out, would place the Canadian medical student in a position where at least he would not be at a disadvantage as compared with his brethren elsewhere.

### SOME PHASES OF THE INFLUENZA EPIDEMIC.

One of the most striking features of the great epidemic is its universality. It attacks all ages. It spares neither sex. It is as common in the country as in the city. The inmates of the shanty and the magnate's palace are equally its victims. When the approximate mortality returns from its direct and indirect effects come to be written up, it will no doubt be found that they are greater than from any epidemic of recent times.

### REGULATIONS AND PROGRAMME OF THE TENTH INTERNATIONAL MEDICAL CONGRESS.

1. The Tenth International Medical Congress will be opened in Berlin on Monday, August 4th, 1890, and will be closed on Saturday, August 9th.

2. The Congress shall consist of legally qualified medical men who have inscribed themselves as members and have paid for their card of membership. Other men of science who interest themselves in the work of the Congress may be admitted as extraordinary members.

Those who take part in the Congress shall pay a subscription of 20 marks (£1 stg. or \$5) on being enrolled as members. For this sum they shall receive a copy of the *Transactions* as soon as they appear. The enrolment shall take place at the beginning of the Congress. Gentlemen may, however, be enrolled as members by sending the amount of the subscription to the treasurer\* with their name, professional status and residence appended.

3. The object of the Congress is an exclusively scientific one.

4. The work of the Congress will be discharged by eighteen different sections. The members shall declare upon enrolment to which section or sections they intend more particularly to attach themselves.

5. The Committee of Organization shall, at the opening sitting of the Congress, suggest the election of a definite committee or bureau, which shall consist of a president, three vice-presidents,

\* Treasurer's address—DR. M. BARTELS, Berlin SW., Leipzigerstrasse 75. Please to enclose a visiting-card.



and of a number (as yet undetermined) of honorary presidents and secretaries.

At the first meeting of each section a president and certain number of hon. presidents shall be elected; these latter shall conduct the business of the sections in turn with the presidents.

On account of the different languages employed, a suitable number of secretaries shall be chosen from among the foreign members. The duties of the foreign secretaries shall be confined to the sittings of the Congress.

After the termination of the Congress the editing of the *Transactions* shall be carried out by a committee specially appointed for this purpose.

6. The Congress will assemble daily, either for a general meeting or for the labors of the different sections.

The general meetings will be held between 11 and 2 o'clock. Three such meetings will take place.

The time for the sittings of the various sections will be fixed by the special committee of each section, it being understood, however, that no such sittings are to take place during the hours allotted to the general meetings.

Joint sittings of two or more sections may be held, provided that the bureau of the Congress can offer suitable rooms for such sittings.

7. The general meetings shall be devoted to—(a) Transactions connected with the work and general management of the Congress; (b) Speeches and communications of general interest.

8. Addresses in the general sittings, as well as in any extraordinary meetings which may be determined upon, can only be given by those who have been specially requested by the Committee of Organization.

Proposals relative to the future management of the Congress must be announced to the Committee of Organization before July 1st, 1890. The Committee shall decide whether these proposals are suitable to be introduced for discussion.

9. In the sittings of the sections, questions and problems will be discussed which have been agreed upon by the special Committees of Organization. The communications of those appointed

by the committee to report on a subject shall form the basis of discussion. As far as time allows, other communications or proposals proceeding from members and sanctioned by the Committee of Organization may also be introduced for discussion. The bureau of each section decides as to the acceptance of such offered communications, and as to the order in which they shall come before the meeting, always provided that this point has not been already determined in the sitting itself by a decree of the section.

Scientific questions shall not be put to the vote.

10. Introductory addresses in the sections must as a rule not exceed *twenty minutes in length*. In the discussions, no more than *ten minutes* are allowed to each speaker.

11. All addresses and papers in the general and sectional meetings must be handed over to the secretaries, in writing, before the end of the sitting. The Editorial Committee shall decide whether, and to what extent, these written contributions shall be included in the printed *Transactions* of the Congress. The members who have taken part in the discussions will be requested to hand over to the secretaries, before the end of the day, in writing, the substance of their remarks.

12. The official languages of all the sittings shall be German, English and French. The regulations, the programme, and the agenda for the day will be printed in all three languages.

It will, however, be allowable to make use of other languages than the above for brief remarks, always provided that one of the members present is ready to translate the gist of such remarks into one of the official languages.

13. The acting president shall conduct the business of each meeting according to the parliamentary rules generally accepted in deliberative assemblies.

14. Medical students, and other persons, ladies and gentlemen, who are not physicians, but who take a special interest in the work of a particular sitting, may be invited by the president or be allowed to attend the sitting by special permission.

15. Communications or enquiries regarding the business of separate sections must be addressed to the managing members

thereof. All other communications and enquiries must be directed to the general secretary, DR. LASSAR, Berlin NW., 19 Karlstrasse.

### SPECIAL SECTIONS—COMMITTEES OF ORGANIZATION.

(The names which appear in small capitals are those of the managing members.)

#### 1.—ANATOMY.

Flemming, Kiel.	Kupffer, München.
Hasse, Breslau.	Merkel, Göttingen.
HERTWIG, Berlin W., Maassenstr. 34.	Schwalbe, Strassburg.
His, Leipzig.	Wiedersheim, Freiburg.
v. Kölliker, Würzburg.	

#### 2.—PHYSIOLOGY AND PHYSIOLOGICAL CHEMISTRY.

Bernstein, Halle.	Hensen, Kiel.
Biedermann, Jena.	Hüfner, Tübingen.
D <small>U</small> B <small>OIS</small> -R <small>EY</small> M <small>OND</small> , Berlin W., Neue Wilhelmstr. 15.	Hoppe-Seyler, Strassburg.
Heidenhain, Breslau.	H. Munk, Berlin.
	Voit, München.

#### 3.—GENERAL PATHOLOGY & PATHOLOGICAL ANATOMY.

Arnold, Heidelberg.	v. Recklinghausen, Strassburg.
Bollinger, München.	V <small>IR</small> CH <small>OW</small> , Berlin W., Schelling- Strasse 10.
Grawitz, Greifswald.	Weigert, Frankfurt a. M.
Heller, Kiel.	Zenker, Erlangen,
Ponfick, Breslau.	

#### 4.—PHARMACOLOGY.

Binz, Bonn.	L <small>IE</small> B <small>RE</small> I <small>C</small> H, Berlin NW., Dor- theen-Strasse 34 a.
Böhm, Leipzig.	Marmé, Göttingen.
Filehne, Breslau.	Penzoldt, Erlangen.
Jaffé, Königsberg.	Schmiedeberg, Strassburg.
Hugo Schulz, Greifswald.	

#### 5.—INTERNAL MEDICINE.

Biermer, Breslau.	Lichtheim, Königsberg.
Gerhardt, Berlin.	Liebermeister, Tübingen.
Leube, Würzburg.	Mosler, Greifswald.
L <small>EY</small> D <small>EN</small> , Berlin W., Thiergarten- Strasse 14.	Naunyn, Strassburg.
	v. Ziemssen, München.

#### 6.—DISEASES OF CHILDREN.

Baginsky, Berlin.	Ranke, München.
H <small>ENO</small> C <small>H</small> , Berlin W., Bellevuestr. 8.	Rehn, Frankfurt a. M.
Heubner, Leipzig.	Soltmann, Breslau.
Kolits, Strassburg.	Steffen, Stettin.
Krabler, Greifswald.	

## 7.—SURGERY.

- Bardeleben, Berlin.  
 v. BERGMANN, Berlin NW., Alexander Ufer 1.  
 Czerny, Heidelberg.  
 König, Göttingen.
- v. Lotzbeck, München.  
 Schede, Hamburg.  
 C. Thiersch, Leipzig.  
 Trendelenburg, Bonn.  
 Wagner, Königshütte.

## 8.—OBSTETRICS AND GYNÆCOLOGY.

- Fritsch, Breslau.  
 Gusserow, Berlin.  
 Hegar, Freiburg.  
 Hofmeyer, Würzburg.  
 Kaltenbach, Halle.
- Löhlein, Giessen.  
 MARTIN, Berlin NW., Moltke-Strasse 2.  
 Olshausen, Berlin.  
 Winckel, München.

## 9.—NEUROLOGY AND PSYCHIATRY.

- Binswanger, Jena.  
 Emminghaus, Freiburg.  
 Erb, Heidelberg.  
 Flechsig, Leipzig.  
 Fürstner, Heidelberg.
- Grashey, München.  
 Hitzig, Halle.  
 Jolly, Strassburg.  
 LAEHR, Berlin-Zehlendorf.

## 10.—OPHTHALMOLOGY.

- O. Becker, Heidelberg.  
 Eversbusch, Erlangen.  
 v. Hippel, Giessen,  
 Hirschberg, Berlin.  
 Leber, Göttingen.
- Michel, Würzburg.  
 Schmidt-Rimpler, Marburg.  
 SCHWEIGGER, Berlin NW.,  
 Roonstr. 6.  
 v. Zehender, Rostock.

## 11.—OTOLOGY.

- Bezold, München.  
 Bürkner, Göttingen.  
 Kirchner, Würzburg.  
 Kuhn, Strassburg.  
 Kessel, Jena.
- LUCAS, Berlin W., Lützowplatz 9.  
 Magnus, Königsberg.  
 Moos, Heidelberg.  
 Trautmann, Berlin.

## 12.—LARYNGOLOGY AND RHINOLOGY.

- Beschorner, Dresden.  
 B. FRANKEL, Berlin NW., Neustädtische Kirchstr. 12.  
 Gottstein, Breslau.  
 A. Hartmann, Berlin.
- Jurasz, Heidelberg.  
 H. Krause, Berlin.  
 Michael, Hamburg.  
 Schech, München.  
 M. Schmidt, Frankfurt a. M.

## 13.—DERMATOLOGY AND SYPHILIGRAPHY.

- Caspary, Königsberg.  
 Doutrelepont, Bonn.  
 Köbner, Berlin.  
 LASSAR, Berlin NW., Carlstr. 19.  
 Leuser, Leipzig.
- G. Lewin, Berlin.  
 Neisser, Breslau.  
 Unna, Hamburg.  
 Wolf, Strassburg.

## 14.—DISEASES OF THE TEETH.

BUSCH, Berlin NW., Alexander- Ufer 6.	Holländer, Halle.
Calais, Hamburg.	Miller, Berlin.
Hesse, Leipzig.	Partsch, Breslau.
Fricke, Kiel.	Sauer, Berlin.
	Weil, München.

## 15.—HYGIENE.

Flügge, Breslau.	Lehmann, Würzburg,
Gaffky, Giessen.	PISTOR, Berlin W., v. d. Heydt- strasse 13.
Graf, Elberfeld.	Wolffhügel, Göttingen.
F. Hofmann, Leipzig.	Uffelman, Rostock.
R. Koch, Berlin.	

## 16.—MEDICAL GEOGRAPHY AND CLIMATOLOGY.

(HISTORY AND STATISTICS.)

Abel, Stettin.	Guttstadt, Berlin.
Brock, Berlin.	A. HIRSCH, Berlin W., Pots- damer-Strasse 113.
Dettweiler, Falkenstein.	Lent, Köln.
Falkenstein, Lichtenfelde.	Wernich, Cöslin.
Finkelnburg, Bonn.	

## 17.—STATE MEDICINE.

Falk, Berlin.	LIMAN, Berlin SW., König- grätzerlStrasse 46 a.
Günther, Dresden.	Schwarz, Köln.
v. Hölder, Stuttgart.	Skrzeczka, Berlin.
Knauff, Heidelberg.	Ungar, Bonn.
Schönfeld, Berlin.	

## 18.—MILITARY HYGIENE.

v. Coler, Berlin.	KROCKER, Berlin W., Madge- burger Platz 3.
v. Fichte, Stuttgart.	Mohr, München.
Grasnick, Berlin.	Roth, Dresden.
Grossheim, Berlin.	Wenzel, Berlin.
Melhausen, Berlin.	

## Obituary.

—The death of Prof. Westphal, of Berlin, removes one of the ablest clinical teachers and investigators of diseases of the nervous system of the present century.

—Dr. L. H. Sayre, a son of Dr. Lewis A. Sayre, the well-known New York surgeon, was found dead in his father's reception-room on the 3rd of January. A necropsy revealed organic disease of the heart.

—We regret to have to record the death of Dr. McKercher, of Point Edward. Dr. McKercher, who graduated at McGill last year, when he obtained the final prize, had in the short space of a few months established himself in an extensive and lucrative practice.

—Through the death of Dr. H. M. McKay, of Woodstock, Western Ontario loses one of its most respected and prominent medical practitioners. Dr. McKay was an ex-president of the Ontario Medical Association, and, at the time of his death, a member of the Provincial Board of Health.

—Through the death of Sir William Gull, Bart., England has lost one of her leading physicians. He never entirely recovered from the effects of a cerebral hemorrhage which occurred about two years ago. For many years he was a physician to Guy's Hospital, where he was highly esteemed as a clinical teacher and investigator.

## Medical Items.

—Dr. Frank Ferguson, Pathologist to the New York Hospital, has been elected Professor of Pathology in the New York Post-Graduate Medical School and Hospital.

—The physicians of the State of Mississippi are, it is said, endeavoring to pass a bill through the legislature exempting them from personal taxes.

—The epidemic of influenza has had a marked effect on the consumption of beer in Germany. In Munich the daily consumption is 30,000 gallons less.

—One of the attending physicians on the late King of Portugal has sent in a bill for \$14,000 for ten visits. Another has asked \$30,000 as a solace for having visited his king eighteen times.

—After many years of weary waiting, the promoters of the B.A. Bill have succeeded in getting this measure finally passed. That such a measure should find any opposition is, to intelligent people, surprising.

—Professor Rosenthal, Lecturer on Diseases of the Nervous System in the University of Vienna, is dead. He is the author of a valuable work on "Diseases of the Nervous System," an English translation of which appeared a few years ago.

—The following resolution was passed unanimously at the last meeting of the Ottawa Medico-Chirurgical Society, held on Friday, Jan. 24th :—

Moved by Dr. Small, seconded by Dr. S. Wright, "That whereas Dr. Roome, M.P., at the last session of the Dominion Parliament, moved 'that in the opinion of this House the time has come when the Federal Government should establish a Central Department of Health, with a responsible head or deputy head, for the purpose of perfecting the collection of vital statistics, educating the public in health matters, and preventing the spread of disease'; and whereas he is prepared and

intends to again bring the motion before the House early during the present session, be it therefore resolved that the Ottawa Medico-Chirurgical Society, in meeting assembled, hereby cordially endorses Dr. Roome's action, and trusts that he may succeed in inducing the House and the Government to take such early action as will secure for the country the much needed legislation as above named."

—Dr. C. A. Stephens, of Norway Lake, Maine, desiring to verify his own researches as to the causes of failing nutrition in aging organisms, offers three cash prizes of \$175, \$125 and \$100 for the best three comparative demonstrations, by means of microscopical slides of the blood capillaries in young and in aged tissues, canine or human. By young tissues (canine) are meant tissues from animals between the ages of 1 and 3 years. By aged tissues (canine) are meant tissues from animals not less than 12 years of age. By young tissues (human) are meant tissues from subjects between the ages of 10 and 20 years. By aged tissues (human) are meant tissues from subjects not less than 65 years of age. While a preference will be given to demonstrations from human tissues, it will be possible for work in canine tissues to take the first and, indeed, all of the prizes. But of two slides equally well done in all respects, one canine the other human, the latter will be given the preference. Canine tissues should be from large animals. Twelve slides from young and twelve from aged tissues must be submitted by each competitor, together with a full description of the subjects, methods pursued, and every detail and circumstance which is likely to throw light upon or account for any peculiarity. The slides are for comparison as to the condition of capillary circulation, the young with the old, and should be in numbered pairs, or groups from the same kind of tissue. The term tissue is used in a general sense—*e.g.*, pulmonary tissue, hepatic tissue, renal tissue, osseous tissue, muscular tissue, nerve tissue, alimentary tissue, etc. No particular schedule of methods for injection or staining will be insisted upon, and no more definite directions or explanations will be given. The slides, carefully packed and boxed,



together with descriptive manuscript, can be sent by mail. It is stipulated that the demonstrations which receive the prizes shall become the property of the subscriber for publication. All others will be returned if desired. No pseudonyms required. Accompany slides in every case with (real) name and address. Unless of known reputation as a biologist, a reference is respectfully solicited. Reservation : no award will be made unless work of at least ordinary merit is submitted. This offer was made on the first day of January, 1890, and will remain open until the 20th day of August, 1890. Slides and manuscript will be examined and receipted for as soon as received. The prizes will be adjudged on the first day of October, 1890. These nominal prizes are offered less in expectation of results from the money as an agent, than in the hope that the offer may furnish a *point d'appui* for really needed work. Besides professional observers and students, there are a large number of amateur microscopists of acute vision and undoubted talent who are at present playing with microscopes, as with toys, merely to see curious or pretty things. The time has come to concentrate observation upon the one proper object of biology, viz., the renovation and prolongation of human life.