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CHOLECYSTECTOMY.

By DR. E. A. PRAEGER, NANAIMO, B.C.

E. D., æt. 68 years, a widowed lady with good family history, was first seen by me six years and a half ago, when she fractured three ribs of the left side. About five years ago was attended by me for hepatic colic, which was relieved after the passage of gallstones. Enjoyed fair health till the commencement of the year, since when she had occasional attacks of pain in the region of the gall-bladder, always attended with vomiting.

About three months ago became jaundiced, suffered from incessant vomiting, and had great pain in the right hypochondrium. She was under continual medical supervision from that time till this date (Dec. 6th, 1889), when I was summoned by telegraph to Victoria to see her in consultation. The treatment up to this time had been confined to an endeavor to check the vomiting, which had resisted almost every anti-emetic in the pharmacopœia, and had now resolved itself into free administration of cocaine and morphia and peptonised injections per rectum, nothing being given by the mouth but ice and champagne. For weeks vomiting had been incessant, the fluid ejected being sometimes of a dark bilious character, at others a thick glairy mucus. No coffee grounds, no blood.

Examination.—Patient very emaciated; conjunctivæ and skin tinged with bile; urine loaded with bile. Pressure over stomach caused no pain. Liver dulness normal. Two inches below the ninth costal cartilage and to the right of the external

border of the right rectus muscle there was a slight upheaval of the abdominal wall. Palpation revealed the existence of a well-defined pear-shaped tumor, giving the sensation of deep fluctuation, which was very dull on percussion, while slight pressure caused severe pain and vomiting.

It was evident that the patient was suffering from toxæmia due to retention of bile, and that the tumor was a distended gall-bladder. The administration of phosphate of sodium for a few days was recommended, and it was further suggested that if relief were not afforded within that time, the urgency of the symptoms, together with the existence of a tumor, rendered an exploratory incision not only justifiable, but expedient, in order that the gall-bladder might be dealt with surgically if found necessary. The question of operation was mentioned to the patient, whose sufferings were so acute that she readily expressed her willingness to submit.

Jan. 14th, 1890.—I saw no more of the case until to-day, when I was again summoned by telegram, asking me to be prepared to operate. On my arrival I was told that for several days the patient had complained of pain over the upper part of the abdomen; that on the previous night there was a very great swelling, with redness of the integument to the right of the rectus muscle, reaching as low as the umbilicus; and that no bile had been vomited for some days, although vomiting had been incessant and uncontrollable by cocaine and morphia. This swelling had been manipulated for the purpose of examination, and by the time I arrived it had almost disappeared and vomiting of bilious fluid had again taken place. There was, however, a great increase of pain over the upper part of the abdomen. Owing to the relief (?) which had taken place (*i. e.*, the disappearance of the tumor) the weight of opinion was unfavorable to operation, especially as it was considered a case of malignant disease of the stomach.

Jan. 26th.—There having been no amelioration of the symptoms, and the patient having urgently requested operation, I was again sent for. The patient had lost ground, and as I found her sleeping soundly in consequence of a subcutaneous injection of

three-fourths of a grain of morphia, I was rather unwilling to operate, but did so at the strong request of her relatives.

Operation, 3 p.m.—A very small quantity of ether was required to produce anaesthesia. An incision about two inches in length was made through the abdominal wall, parallel with the outer border of the rectus, immediately over the gall-bladder, which was found enormously distended, bent on itself like a retort, and bound by adhesions to the under surface of the liver and pylorus. The cystic duct was felt for, and being also bound by adhesions, was somewhat difficult to recognize with the finger. It was found blocked with calculi, which were dislodged and pushed back into the fundus. The duct was included between two ligatures, and the gall-bladder having been carefully freed from its attachments was gradually pulled out through the incision, the abdomen being packed with sponges to guard against rupture and escape of its contents. The duct was then cut through. A couple of fingers were then passed towards the stomach, which was found adherent to the abdominal wall. The toilet having been carefully performed, the wound was closed with silkworm gut sutures and covered with borated cotton. The patient was then returned to bed, with plenty of hot-water bottles. There was very slight (if any) shock, the pulse (104) being rather stronger than before operation. 10 p.m.—Patient had slept more or less all the afternoon, only asking once or twice for a small piece of ice. Temperature normal; pulse 104; very drowsy.

Shortly after my visit, contrary to my desire, another large dose of morphia was given subcutaneously, the patient dying at $\frac{1}{2}$ A.M. without awaking.

Jan. 27th.—An autopsy was made at mid-day, eight hours after death. There had been no oozing from any of the separated adhesions and the abdominal cavity was clean and dry. The liver was of a pale yellowish-gray color. Section of the right lobe showed nothing abnormal to the naked eye, but the left appeared somewhat mottled, with patches of yellowish-white, apparently fatty. There had been some recent localized peritonitis, the anterior surface of the stomach being attached by

numerous recent adhesions to the abdominal wall. On opening the stomach it was found to contain about two ounces of a dirty, yellowish-brown liquid. The mucous membrane was highly congested, and there were a few ecchymosed patches. No ulceration; no tumor. All traces of inflammation were confined to the gastro-hepatic region. All the other abdominal organs were healthy.

Specimen.—The gall-bladder, when removed from the abdomen, measured seven inches in length, and contained from six to eight ounces of fluid, its walls being distended to their utmost capacity. Unfortunately I placed it for a few days in undiluted alcohol, which caused it to shrink considerably and its walls to appear thicker. The fluid contents (bile) passed through and mixed with the spirit. Calculi can be felt in the fundus, the blood-vessels of which are very much larger than normal, and, altogether, it shows signs of great congestion.

Remarks.—It is unfortunate that operation was so long delayed, for even had it disproved the diagnosis of distended gall-bladder, an exploratory incision, made under aseptic precautions, would have done little, if any harm. While laying claim to no personal experience in the surgery of the gall-bladder, I submit that the symptoms not only justified, but made an exploration imperative. I started with the intention of performing cholecystotomy, but abandoned this in favor of extirpation, for the following reasons: There were no adhesions between the fundus and the abdominal wall, while it was firmly bound to the liver and pylorus, and this, together with signs of a localized peritonitis, made it appear to me probable or possible that there had been a leakage of biliary fluid from some part of the neck of the gall-bladder, while its extreme flexion on itself appeared to preclude the possibility of thorough drainage; moreover, the walls were so thin, by reason of hyper-distension, that it occurred to me it was not wise to risk suturing them to the wound. While, unfortunately, the result adds to the mortality of an operation which will probably soon cease to be regarded as a "surgical audacity," I cannot help remarking that a rather too free use of morphia was probably an important factor in the untoward termination, and that

to get good results the operator should have full charge of and take the entire responsibility of the after treatment.

I desire to record my indebtedness to Staff-Surgeon Fitzgerald, R.N. (in charge of the Royal Naval Hospital, Esquimalt), and to Dr. Davis of Nanaimo, for their valuable advice and assistance.

CASES IN PRACTICE.

BY EDWARD EVANS, M.D., LACROSSE, WIS.

Case I.—VOMITING OF PREGNANCY CURED BY LOCAL TREATMENT OF CERVIX.

Mrs. S., aged 27, healthy; good personal and family history; six weeks pregnant, fourth pregnancy. Vomiting for past six weeks, getting worse all the time. Appetite fair, but vomits all food; vomits during night if she sits up in bed. Treated during past six weeks without benefit by two or more physicians. There seems to be no evidence of any gastric lesion. Bowels costive. Heart, lungs and urine normal. Uterus anteverted. There is flexion of the cervix, which is large and abnormally hard, with a slight left laceration; the os red, eroded and tender. I applied Arg. Nit. (g. xl. to oz.) to os and cervix, and put in a boroglyceride tampon. This stopped vomiting for ten hours, when she had a fright, which produced symptoms of abortion (pain and hemorrhage); these were overcome by rest and opium. After a few days, on vomiting recurring, the treatment with arg. nit. and tampon was repeated (in all four times), and in the course of ten days vomiting had ceased and she went safely to full term. During first pregnancy she vomited the whole nine months; in second, vomiting stopped by local treatment in third month; aborted in third pregnancy.

Case II.—TYPHOID FEVER RELAPSE—PNEUMONIA OF RIGHT BASE IN PRIMARY ATTACK AND RELAPSE—RECOVERY, FOLLOWED BY SLIGHT PARESIS.

M. F., aged 30, farmer, entered St. Francis Hospital Oct. 9th, 1889, with a history of being very sick for the past eight days, though going about part of the time, and coming in eight

miles to-day. He has severe headache and diarrhoea, great prostration, some delirium, insomnia and anorexia. Pulse 90; respiration 25; temperature $104\frac{1}{2}^{\circ}\text{F}$. He was put on milk diet, and cold sponge-baths and ice-cap when needed. His case ran the ordinary course of severe typhoid till the thirteenth day of illness, when he had a severe chill, quickened respirations, and physical signs of pneumonia of right base. He was now very ill for five days, when the temperature fell to normal. The lung rapidly cleared up, and he gradually mended (the temperature not going over 102°), till Nov. 3rd, when his temperature was normal for six days, and he was sitting up for the first time. On this date he had a chill, followed by a temperature of $105\frac{1}{2}^{\circ}$. He had a return of all the symptoms except diarrhoea, and had a very abundant crop of typhoid spots, which in the primary attack were sparse. He became extremely weak and emaciated, had incontinence of urine, and hypostatic congestion of each base. On Nov. 18th, after a slight chill the previous night, the temperature, which had been high and erratic, though last few days falling, rose to 103° , and he again had typical pneumonia of right base, with dulness, blowing breathing, and rusty expectoration, with crisis on the fourth day. Though now greatly emaciated, weak bodily and mentally, and with bad bed-sores, he rapidly improved, and on Dec. 11th he was able to sit up, had good appetite, and lungs were entirely recovered. His speech is slow and hesitating, words and ideas are called up slowly, and, two months later, he still suffers from awkwardness and weakness of lower extremities, and slight exertion causes great fatigue and rather severe pain in lumbar region and lower extremities, as well as increased weakness in the latter, but is slowly getting well.*

Case III.—HÆMATURIA.

On March 20th, 1890, I opened a subperiosteal abscess over left mastoid, produced by a slight blow three weeks previous. There was about half a drachm of pus. It had given severe

* See paper by Dr. Geo. Ross, this Journal, Feb. 1889, "On Some Forms of Paralysis after Typhoid Fever."

pain for the past few days, caused a good deal of swelling of face and glands, and a fever going on as high as 101.5° . I gave about a drachm of chloroform. The patient was a girl 3 years old and very healthy. In a few hours after the operation she suffered from great frequency of micturition, which continued for thirty-six hours and then abated slowly. The mother noticed the urine looked dark-red, as if containing blood. It continued so for four days, when she called my attention to it, and said it had not been so previous to operation. The child apparently suffered little, complaining once of some pain in back. Had no fever, but was sleeping and eating well, and evidently much relieved by opening of abscess. Urine evidently contained much blood, acid; specific gravity 1015. Boiling and nitric acid gave quite a large deposit. Under the microscope there were numerous red blood corpuscles and a few white, but no epithelium or tube casts. The blood seemed persisting under a treatment of warm bathing, free evacuation of bowels, rest and low diet, so I gave a mixture of gallic acid and ergot, and in a few days it had entirely disappeared. (What caused the blood in urine?)

Retrospect Department.

QUARTERLY RETROSPECT OF SURGERY.

BY FRANCIS J. SHEPHERD, M.D., C.M., M.R.C.S., ENG. .

Surgeon to the Montreal General Hospital; Professor of Anatomy and Lecturer on Operative Surgery, McGill University.

Tuberculosis of the Bladder.—This affection is by no means so rare as is supposed, and is one of the frequent causes of these obscure diseases of the bladder which do not yield to ordinary treatment. Of course the difficulty of diagnosis is often great, and other organs, as the kidney, are frequently involved, and thus the ailment in the bladder is masked. Of late years this disease has attracted much attention, and Guyon of Paris has successfully treated this affection by cystotomy and cauterization of the tubercular ulcer.

In the *N. Y. Medical Record* for May 3rd, 1890, is an interesting paper by Dr. Alex. W. Stein on "*Tuberculosis of the Bladder.*" He states that this affection is more frequent in the male than the female. According to Erns only one case out of twenty-five occurred in a female. The immunity of the bladder in the female is due no doubt to the more perfect separation of the reproductive and urinary organs. In the male the disease usually extends by continuity from the reproductive to the urinary organs. All ages are affected, but is more often seen in middle life. There is much difference of opinion as to whether the bladder is primarily or secondarily involved. Dr. Stein says that he believes micro-organisms can extend to the bladder from the prostate or kidney, but he is sceptical about these organisms extending higher—that is, from the bladder to the kidney. Socin reports cases of tuberculosis of the urethra and prostate lasting for years without involving the bladder.

Dr. Stein says the diagnosis of tubercular disease is often made with extreme difficulty; if there is no obstructive disease of the urinary outlet, no renal derangement or other exciting cause for the vesical irritability or hæmaturia, and other organs are affected with tubercle (the lungs, testes, etc.), then there is strong presumptive evidence that we have a case of tubercular

cystitis. Absence of bacilli is not convincing proof of the non-existence of the disease. The progress of the disease is very slow, sometimes lasting for fifteen or twenty years, and may often be latent, extensive disease occurring without any symptoms referable to the bladder at all. Again, we may have disease of the kidneys and no disease of the bladder, and yet vesical irritability is the most prominent symptom.

As a rule, when the lesions are in the neck of the bladder, the pain is acute and lancinating, and referred to the glans penis at the end of micturition; frequent and painful micturition or a sense of discomfort attending the act are symptoms seen sooner or later in these cases. In some cases there may be incontinence, in others spasms are noticed with sudden stoppage of the stream. This may lead to retention of urine from spasmodic contraction of the sphincter. Tuberculosis involving the orifice of one of the ureters may cause obstruction sufficient to produce dilatation of the ureter and hydronephrosis of that side. The urine is at first acid and cloudy, the turbidity being due to mucus and pus; it may become ammoniacal and decidedly viscid, shreds of tissue and blood corpuscles are seen, etc. The ulceration may be coated over with phosphates and give the idea of calculus. Hæmaturia is a prominent symptom, and may be an initial symptom, before even frequent micturition. Still, again, it may be absent during the whole course of the disease. The blood is seen at the end of micturition, and is usually but a few drops; coagulæ are rarely passed. It may disappear and reappear. All the symptoms of tubercular disease of the bladder are subject to exacerbations before softening and ulceration takes place, and bladder irritability is not a prominent symptom, but as soon as ulceration begins, rapid destruction of the mucous surface takes place and the symptoms become well pronounced.

For treatment, Dr. Stein says irrigation of the bladder can only wash out the products of inflammation and thus retard the progress of the case; instruments irritate. In fact there is but little to be done in these cases except to perform perineal section or suprapubic cystotomy, so as to give the bladder as little to do as possible. The results of operative interference have not been

very encouraging, the disease returning after a few months. Guyon and Reverdin curette and cauterize the bladder, whilst Bardenheuer and Shatz excise the entire mucous membrane.

Prof. Guyon of Paris, at the last French Surgical Congress (1889), (*Annals des Mal. des Voies Urin.*, Nov. 1889,) gave the latest account of his operations performed for tubercle of the bladder in four cases. His method is to open the bladder above the pubes, to explore carefully, and to remove the tubercular patches in the mucous membrane by scraping and cauterization. One patient, aged 24, operated on in July 1885, was well in August 1889, and had gained flesh and strength. Another, a male, died two years after operation, the operation not affording relief and leaving a vesical fistula behind; at the autopsy both kidneys were the seat of tuberculous disease. The third case, with symptoms of seven months' duration, was operated on in March 1888; patient had disease of right kidney; urinated as many as one hundred times a night; patient improved until the other kidney became affected, and died in February 1889; autopsy showed both kidneys tuberculous, the right completely obliterated and destroyed, and a number of tuberculous nodules were found in the mucous membrane of the bladder. In the fourth case, a male aged 34, cystotomy was performed in Dec. 1884 for tubercular cystitis, and patient died March 25th, 1885; the whole posterior surface of the bladder showed ulcerations and granulations. The results in these cases were not very encouraging, except where the disease is early and primarily affects the bladder. This condition of the bladder is not easy to diagnose without exploratory incision.

Dr. James Bell recently had a successful case of operation for tubercular ulcer of the bladder at the Montreal General Hospital, and several months have now passed without recurrence. In my opinion the future of this operation is not brilliant, chiefly because when the bladder is diseased in the large majority of cases some other part of the genito-urinary apparatus is also affected.

At a meeting of the Clinical Society of London, held April 25th, 1890, Mr. W. H. Battle read a paper on *Tubercular*

Ulceration of the Bladder, in which suprapubic cystotomy and scraping were done (*Lancet*, May 3rd, 1890) and recovery resulted. The patient was a single girl aged 20; she had a maternal history of phthisis. For ten months she had some increased frequency of micturition, with some pain before the act, the urine had been thick and at times had contained blood. On admission to the Royal Free Hospital she was obliged to pass urine every hour and a half, and there was a feeling of fulness and aching pain, which emptying the bladder relieved; urine alkaline, specific gravity 1015, and contained many pus and epithelial cells. Five days after admission the urethra was dilated and an ulcerated surface of considerable extent felt at the base of the bladder and posteriorly, while on the right side was a pouch. The surface of the ulcerated patch was soft and vascular, with a well defined mucous margin. Various solutions were used without improvement. On April 3rd, after cystoscopic examination had demonstrated that the ulceration was as extensive as at first, the parts were scraped with the fingernail and Volkmann's spoon, and later an emulsion of iodoform was used after micturition and a couple of drachms of the emulsion left in the bladder. Other injections were also used without benefit, so on July 29th suprapubic cystotomy was performed; the ulcerated surface was well exposed and scraped with a sharp spoon, and afterwards daubed over with a solution of zinc chloride thirty grains to the ounce. A catheter was passed into the bladder and a drainage-tube into the wound. The drainage-tube was removed August 3rd and the catheter removed on the 10th. She was about on August 31st, and discharged from hospital Sept. 20th. She was seen again April 8th, 1890, and was then in good health, having been able to work since leaving the hospital. She could retain her urine for three hours, but had to get up several times during the night.

Examination of the tissue removed at the operation showed some caseous tuberculous deposit, but no bacilli were found, nor could any be discovered in the urine. Mr. Battle thought the case one of primary disease of the bladder. The paper closed by reviewing the work of Guyon, Reverdin and others in

the same field. In the discussion which followed, Mr. Heath stated that he had treated a large number of cases of ulceration of the bladder successfully in women by applying strong solutions of nitrate of silver to the raw surface *per urethram*. Mr. Hurry Fenwick doubted the correctness of the diagnosis. He said there were two distinct forms of ulceration—the tubercular and scrofulous. The former often led to a fatal termination within three years; the latter, which was solitary, remained for months and years. He thought the treatment adopted too severe and that everything necessary could have been done through the urethra. He had found a five per cent. solution of lactic acid directly applied to the ulcer followed by much benefit, and he had used the same substance as an injection in the strength of one per cent. He exhibited a table of fifty cases of vesical ulceration which he had had under treatment. Mr. R. Johnson spoke favorably of treatment by injection of iodoform emulsion as used by Mr. Berkeley Hill—(iodoform 2 parts, mucilage 4 parts, glycerine 2 parts, water 20 parts).

Prolapse of the Rectum.—Dr. J. B. Roberts of Philadelphia describes (*Annals of Surgery*, April 1890) a *New Operation for the Relief of Complete Prolapse of the Rectum*, and reports a case. The steps of the operation are as follows: A small incision is made in the middle line near the apex of the coccyx, the finger introduced, and the cellular connections behind the rectum broken down. The sphincter muscle is then divided in two places by incisions situated each about half an inch away from the posterior median line. By carrying these incisions obliquely backwards through the skin until they meet at the original incision near the tip of the coccyx, a triangular portion of tissue, having as its base about one inch of the anal sphincter, is cut out, and with scissors a long triangular piece is cut out of the posterior wall of the rectum, the apex of the triangle being situated some three inches up the gut, whilst the base corresponds with the space between the two incisions and the sphincter. Hemorrhage having been controlled, the incised walls of the rectum are brought together with chromicised catgut sutures. The divided ends of the anal sphincter are now brought together

by two catgut sutures and one wire shotted suture. The anal aperture is thus reduced so that it is barely possible to introduce the tip of one's finger. A drainage tube of rubber is then introduced into the space between the rectum and the coccyx and the original incision closed by numerous shotted wire sutures carried deeply down into the tissues.

In the case reported there was considerable suppuration, which rather interfered with proper healing, but the patient could go up and down stairs without any tendency to prolapse of the rectum.

Mr. Frederick Treves contributes an interesting paper on the "*Treatment of Prolapse of the Rectum by Excision*," with a report of three cases in which the operation recommended by him was carried out. (*Lancet*, Feb. 22nd, 1890.) After describing the various causes of prolapse which is especially common in children, he says the majority of cases yields to simple measures, as rest, removal of cause of trouble, improvement of the general health, regulation of the bowels, and the use of astringent applications. When these fail, other methods of treatment are in vogue, as—

(1) Subcutaneous injections into the ischio-rectal fossa of ergot, nux vomica, carbolic acid, etc.

(2) The application of nitric acid, a method entirely condemned by Mr. Treves, and which is spoken of as "little less than barbarous," although recommended in most text-books and frequently carried out with success.

(3) The application of the actual cautery to the mucus membrane of the prolapse or the removal of linear folds of that membrane by clamp and cautery. This method is also condemned by Mr. Treves, who looks upon all the methods above described as "clumsy, uncouth, uncertain, and unsafe," and therefore not to be practised by modern surgeons. He also says that the method of excision is simple, final, and not painful, and offers the best claims of being a "radical cure." The operation recommended by him is performed as follows: The rectum having been well emptied by an aperient, followed by an enema, the patient was anaesthetized and placed in the lithotomy position.

Clover's crutch was employed and the buttocks raised. The mucous membrane within the lumen of the prolapse was seized at some height above the aperture of the bowel with tongue forceps and pulled down; three pairs of such forceps were employed, and were applied at different points on the rectal wall. When it was evident that the whole relaxed mucous membrane was entirely drawn down, the forceps were allowed to remain attached. They served to indicate the real apex of the protrusion and to allow a hold to be taken of the part, while this weight prevented any great recession of the everted mucous membrane. A circular cut was now made around the base of the prolapse at the exact spot where the skin joined the mucous membrane; the incision involved the mucous membrane only. This was next dissected off, turning the whole of it down like a cuff; it was dissected entirely with scissors and forceps. When separation was complete the prolapse had an hour-glass shape, the waist of the hour-glass corresponding to the site of the apex of the protrusion. There was no bleeding. The external anal sphincter, hypertrophied, was now exposed, and within it the internal sphincter could be defined. The left forefinger was now introduced into the lumen of the prolapse, and it was ascertained that the prolapse consisted of mucous membrane only. This layer of mucous membrane was next divided at a level with the anus by scissors; as each cut was made the parts were seized with pressure forceps and so all bleeding was immediately arrested. After all bleeding was controlled, the mucous membrane was attached to the skin at the margin of the anus with sutures of silkworm gut, then dressed with iodoform or wool. In his first case he was tempted to excise a portion of the external sphincter in order to lessen the size of the anus; one inch of the muscle was removed and the divided ends brought together with catgut stitches. Mr. Treves now thinks this proceeding unnecessary, and gives rise to some pain and much tenesmus.

Operative Treatment of Cancer of the Rectum.—In the *Annals of Surgery* for March, 1890, is an interesting resumé of the present views on the operative treatment of rectal cancer and of which a short account is given below.

M. Routhier (*Bull. et Mem. de la Soc. Chirurgie de Paris*) reports a case in which he successfully removed four inches of the rectum which was the seat of an annular carcinoma. The lower border of the growth was four inches above the external sphincter. The patient was a woman aged 29. The method of operating was by the posterior or sacral method. The coccyx was removed and the lower angle of the sacrum. The rectum was easily separated from the sacrum, but the separation from the vaginal wall was more difficult; in fact, the peritoneal cul-de-sac was opened and afterwards sutured. The cancerous portion of the rectum was removed and then the two cut ends of the rectum sewn together. The wound was stuffed with iodoform gauze. The case did remarkably well. The bowels moved on the seventh day, the sphincter acting perfectly.

Statistics of excision of the rectum have been given by various men. Frank, in the *Dublin Journal of the Medical Sciences*, vol. lxxxiii, gives a mortality of 30 per cent. done by the older surgeons. Gross, in his *System of Surgery*, gives a mortality of 20 per cent. in a total of 193 cases; Ball, in 175 cases, a mortality of 16 per cent.; and Cripps puts it at 17 per cent. in 76 cases. There is much in the proper selection of cases. Czerny, out of 45 cases, considered only 25 fit subjects for operation, and of these only one died. Koenig, at the German Surgical Congress of 1888, had operated on 50 patients with a mortality of 10 per cent.; 18 per cent. had no return in four years, and 10 per cent. no return in three years. Bardenheuer lowered the mortality to 5 per cent., and mentions three cases (women) which remained cured after a lapse of six, seven and eight years.

The great objection to the circular amputation is the removal of the sphincter ani. Now all operators cut the rectum across, above and below the growth, as far as possible from it. Kraske and many others slit the posterior wall of the rectum down to the sphincter before making the transverse cut below the cancer. Kraske has abandoned the complete circular suture, and in order to prevent the escape of fæces into the abdominal cavity provides an artificial anus at the line of suture. Others (Heinade and

Hochenegg) go further and suture the upper cut end of the intestine to the cutaneous borders of the sacral incision, reserving the closure of the artificial anus for a later operation. Schede, again, makes a complete suture and then establishes a temporary artificial anus in the inguinal region. All surgeons leave the sacral wound open and stuff it with iodoform gauze.

With regard to the peritoneum, Kraske proposes a deliberate opening of the peritoneum to facilitate the pulling down of the intestine. Bardenheuer strips the peritoneum from the intestine. Most operators deliberately open the peritoneum and tampon it during the rest of the operation with iodoform gauze. Some do not close the peritoneal wound and others close it only partially, leaving a drain in the opening. The abdominal cavity is closed by a few operators, the parietal peritoneum being sutured to the serous covering of the bowel.

Dr. R. Stierlin (*Brun's Beiträge zur Klin. Chirurgie*, 1889, Bd. v., Hft. 3), in an article on this subject, after giving the history and statistics of the operation, says the operation is indicated in different types of cases.

(1) In canceroid of anal portion, the diseased tissues should be excised and the healthy mucous membrane sutured.

(2) In carcinoma extending circularly upwards from the anus, but easily definable, Lisfranc's method of amputation should be practised, with, if necessary, a posterior incision of the rectum. Continence is fairly satisfactory without a pad, and hence this method is to be preferred to the sacral method of Hochenegg.

(3) For neoplasms beginning considerably above the anus and extending circularly upwards, Kraske's operation is indicated, the sphincter is saved and incision of the posterior wall avoided.

(4) For very high-seated carcinoma, the sacral method is the only one possible.

(5) For limited tumors of the rectal wall, when near the anus, Simon's forcible dilatation will usually make them accessible. When exposed, an ellipse transverse, if possible, is excised, the edges sutured, and the wound drained.

Before operation the intestines should be thoroughly and completely emptied. Fluid diet for eight to ten days, laxatives, in-

jections of water and harmless antiseptics by means of a tube carried well up the bowel. The bladder should be emptied immediately before operation. For primary disinfection of the wound, sublimate (1-2000) and iodoform have proven the best. The drainage must be thorough; strips of iodoform gauze alone or an unperforated tube wrapped in the same are the best. The parts should be cleansed once or twice daily with a weak sublimate lotion. Opiates are given at first; later, laxatives. As soon as the drain and sutures are removed, and the wound is granulating, the patient is bathed once or twice a day. The dressing consists of sublimate wool and wool cushions retained by a T bandage. The peritoneum was injured and immediately sutured without bad result. Suture of the cut ends of the gut in the operation by the sacral method is necessary. In complete circular suture it is as well to pass a large drain up the rectum beyond the sutured spot to avoid fecal stasis. In the ordinary operation the patient should be in the lithotomy position; in the sacral operation, on the side. Dr. Stierlin's mortality in 22 cases of radical operation was two—one from delirium tremens and one from retro-peritoneal phlegmon. As a palliative method he prefers intra-peritoneal colotomy to scraping, cauterization or linear rectotomy. With regard to the after results, six of his cases are alive after one to four years without recurrence, two are alive with recurrence, and eight have died. He considers that cases which have remained free from recurrence after three years may be regarded as definitely cured.

At the last annual meeting (1889) of the British Medical Association, held in Leeds, a most interesting discussion on *Cancer of the Rectum* took place. The discussion was opened by Mr. Jessop of Leeds. He divided the operative measures into radical and palliative. *Proctectomy* or excision of the rectum he placed among the established surgical procedures, and reported seven cases with one death. Of the six favorable cases, in three the disease was in the posterior or lateral wall of the rectum, above the sphincter, and entirely within reach of the finger; these three patients are alive, two after 21 and 17 months, and in one there was recurrence in seven months. In

a fourth case there was no return of the disease at the end of 13 months. In the two others the disease was high up, but the disease was removed without much difficulty; in one case the peritoneal cavity was opened, but no sutures were introduced, and free drainage used with good result. In these cases there has been no return in 20 and 26 weeks respectively. In the cases where no sutures were used the result was quite as good as where they were used. He washed the rectum out every eight hours for several days.

Mr. Jessop had performed colotomy (Inmbar) 103 times. He was of opinion that in cancers high up colotomy should be performed as soon as obstruction appears. The average duration of life after colotomy was $22\frac{1}{2}$ months; when the operation was not performed, the average duration of life was 17 months. Complete relief of pain and distress is never obtained, but the continuous pain is lessened in severity and the almost constant desire to evacuate the bowels disappears in some and is diminished in others.

Marsh and Banks advocated a preliminary colotomy in all cases where excision of the rectum was undertaken. In colotomy Mr. Banks completely divides the colon and stitches the upper end of the gut into the wound.

Mr. H. Cripps said that excision was only applicable to a small proportion of cases (about 20 per cent.), and should not be undertaken if the upper limit of the growth is beyond the reach of the finger, or if it has extended to other organs. Of 30 cases operated on he had two deaths—one from erysipelas and one from exhaustion. The duration in the 28 cases that recovered was as follows: In six, no after history; ten, recurrence within a year; four, recurrence between the first and third years; one died without recurrence a year after operation; one no recurrence after eighteen months, and one no recurrence at end of three months; one, two years, one, three years, one, four years, and one no recurrence after nine years. Mr. Cripps operates with patient in the lithotomy position and buttocks raised. A sharp-pointed, curved bistoury is passed up the bowel and then by transfixion is made to protrude through the skin on a level

with the side of the coccyx, the whole of the intervening tissues being cut through. A crescentic incision is now made, extending from the margin of the first cut to a point in the middle line in front. This cut should extend well into the fat of the ischio-rectal fossa, and, if the disease is not too low down, should go through the mucous membrane so as not to interfere with the skin at the anal margin. Dissection is now carried upwards to a point well beyond the disease, and the same is done on the opposite side. A sound in the bladder of the male will greatly assist. The bowel is then cut across and not sutured. The wound is packed for thirty-six hours, and after the second week bougies are passed regularly. Mr. Cripps reported 14 cases of lumbar and 26 cases of inguinal colotomy with only one death.

Mr. Allingham said that excision was justifiable only in those cases where there was a small annular growth freely movable, and only when this starts two inches up the rectum, and where the upper limit of the growth can be easily felt. His method of excision, which he claims can be accomplished in 15 minutes, is as follows: Lithotomy position; left forefinger in rectum. A straight bistoury is introduced half an inch behind the rectum, keeping outside the rectum to a depth of three inches, and the cut made to the coccyx. Next the rectum is divided in the whole of its circumference between the sphincters, then with scissors the tissues on either side of the bowel are divided and a careful dissection is made along the anterior wall up to a point beyond the disease, when the rectum is cut across.

Mr. McGill had substituted colectomy for colotomy in the lumbar region. In two cases in which he did colectomy death resulted from a gangrenous condition developing as a result of retained fæces in the lower portion of the bowel. He would therefore not recommend the operation unless this upper end of the lower portion was left open in the wound.

Dr. Charles Kelsey, in a clinical lecture (*N. Y. Med. Journal*, May 3rd, 1890) describes his method of operating for cancer of the rectum. The patient is placed in the lithotomy position, with buttocks well raised. After dilating the sphincter and introducing a sound into the bladder for a guide, an incision is made

through the anus in the median line behind, down to the tip of the coccyx. The left index finger is now placed in the gut and a bistoury is introduced behind the growth and pushed along the cellular tissue outside the bowel until its point is fully half an inch beyond the disease. The first incision is made to extend to this depth, and is tightly packed with sponges, no time being lost in tying vessels. Next, with a pair of straight, blunt-pointed, long scissors the rectum is cut through completely by a circular incision half an inch below the growth and between it and the sphincters. Then with the finger as a guide still in the diseased bowel, the cellular tissue of the ischio-rectal fossa and the levator ani is boldly cut into, first on the right, then on the left side, until the bowel has been completely separated from its attachments on all sides, except anteriorly, and to a point at least half an inch above the disease. This takes very little time, and as fast as the incision is made it is packed tightly with sponges. The next step is a careful dissection of the rectum from its anterior attachments, and this may take some time if the disease has involved the base of the bladder and deep urethra. After the rectum is dissected anteriorly above the limit of the disease it is cut off cylindrically and removed. The sponges are now removed and the bleeding points secured. The upper end of the bowel is now sutured to the lower as closely as possible, but nothing in the way of complete apposition or suturing is attempted and the wound is intended to heal by granulation. Three deep silver wire sutures are then put in the posterior incision and left without tightening until the end of the first week, so that there may be perfect drainage. The wound is irrigated with sublimate solution, packed with charpie, and dusted with iodoform. A drainage-tube is placed on each side of the rectum. This operation can be performed in from fifteen to twenty minutes.

Radical Cure of Hernia.—Dr. D. Hayes Agnew says (*University Medical Magazine*, April, 1890) that he does not think present operators should commit themselves to present plans until both in time and in number the necessary data for the expression of an authoritative opinion have accumulated. Dr. Agnew says, with the caution gained from years of experience and observa-

tion, that "any one who has followed the literature of the different surgical processes for the radical cure of hernia, and for most of which great success has been claimed (*e.g.*, Wurtzer's operation), and then discovers that all have fallen into disuse, becomes, naturally, a little sceptical of the trustworthiness of surgical statements." At the present time he thinks the knife is out on a grand revel, and is too often used without due consideration for human life. His views as to the necessity for operative measures in cases of hernia are as follows :

(1) The radical plan should follow all cases of strangulated hernia when it is necessary to use the knife.

(2) Cases of hernia in adults which cannot be controlled by mechanical means.

(3) Children under ten years of age who have rupture are not proper subjects for operation ; such patients usually recover after wearing a truss for two or three years.

New Operations for the Radical Cure of Hernia.—Now that the radical cure of hernia has become fashionable, and is an operation frequently performed, each surgeon is devising some method which surpasses every other hitherto employed, so that the invention of a new operation for the radical cure of hernia is as common as was formerly the invention of a new pessary, and these operations are called after the inventor's name. At present we have Macewen's, Ball's, Bank's, Barker's, Frank's, McBurney's, etc. Each operation is a perfect success in the hands of the operator, but others are not so successful with them. The success of the operation is judged, not by the number of permanent cures (for usually too short a time has elapsed before the cases are reported), but by the small number of deaths due to the operation.

One of the latest operations for the radical cure of hernia is that devised by Dr. Halstead of Baltimore (*Johns-Hopkins Hosp. Bull.*, Dec. 1889), and it is as follows : The incision begins at the external abdominal ring and ends one inch or less to the inner side of the anterior (superior ?) spine of the ilium in an imaginary line connecting the anterior-superior spines of the ilia. Throughout the entire incision, everything superficial to the

peritoneum is cut through. The vas deferens and its vessels are carefully isolated up to the outer termination of the incision and held aside. The sac is opened and dissected from the tissues which envelop it. The abdominal cavity is closed by quilted sutures passed through the peritoneum at a level higher by one and a half to two inches than that of the neck of the sac. The vas deferens and its vessels are transplanted to the upper end of the wound. Interrupted, strong, silk sutures, passed so as to include everything between the skin and the peritoneum, are used to close the deeper portion of the wound, which is sewed from the crest of the pubes to the outer end of the incision. The cord now lies superficial to these sutures and emerges through the abdominal wounds one inch to the inner side of the anterior superior spine of the ilium. The skin is united over the cord by interrupted sutures of very fine silk. These sutures do not perforate the skin, and when tied become buried. They are taken from the inner side of the skin and made to include its deeper layers only, the layers not occupied by sebaceous follicles. Dr. Halstead has treated all his wounds this way for two years. The method was suggested to him from his experiments on dogs. He thinks it impossible to disinfect the skin of a dog, and believes that pyogenic organisms may be present in the sebaceous follicles of the skin. In completing the operation for hernia he uses one or two small gauze plugs as wound drains.

Still another operation has been suggested by Mr. E. S. Bishop of Manchester (*British Medical Journal*, April 14th, 1890). This is rather a modification of Macewen's operation than a new operation. The sac is treated somewhat after the manner of Macewen. A long suture armed at both ends with needles is passed from below upwards through each wall of the sac in such a way that when the ends are pulled upon, the sac is drawn up, not like a curtain, as in Macewen's operation, but like a purse. The central fold formed is the largest, and each fold progressively diminishes in height on either side as it nears the external ring. The neck of the sac is then invaginated on one side before the finger, and the needle belonging to the end of the thread on that side passed through the internal ring and made to pierce

the abdominal wall from within outwards. The same thing is done on the opposite side. When both threads are presenting through the abdominal muscular structures they are pulled up, the sac being at the same time invaginated before the finger as the threads are drawn upon; the sac is thus turned inside out on its passage and becomes fixed as a rounded bow exactly over the internal ring. The ends of the threads are then tied firmly over the ring. Mr. Bishop says the whole pad forms, as it were, a bridge—a Roman arch—over the weak place on the abdominal wall, of which bridge the fundus forms the keystone. The article is well illustrated, and theoretically the procedure seems most excellent, but, unfortunately, the sac has not the consistency of a Roman arch, and in some cases is composed of very flimsy material indeed. However well the operation may look diagrammatically, in reality it would not, I think, come up to anticipated expectations.

At a recent meeting of the Royal Medico-Chirurgical Society of London (*Lancet*, April 12th, 1890), Mr. Barker gave the results of a study of fifty consecutive cases of operation for the radical cure of non-strangulated herniæ. There was not a single death. True suppuration of the wound only occurred in two cases. There were no cases of wound infection or shock. The ages of the patients varied from three months to seventy years. In the discussion which followed, most of the speakers advised against operation in young children, and held that if properly treated by truss the case tended to cure.

Prof. Eduard Bassini of the University of Padua reports 262 cases of radical cure of hernia (*Archiv für Klin. Chir.*, Bd. xl., Hft. 2, 1890) treated by the following operation. The incision is made through the skin and the canal slit up, the cord separated from the neck of the sac, the sac dissected out, and any adherent intestines or omentum separated. The neck of the sac is freed and ligatured and then cut off, and when the neck of the sac is large it is tied off in two pieces. The cord is then kept in the upper angle of the wound and held up, whilst the conjoined tendon is separated from the aponeurosis of the external abdominal oblique and then sutured by a continuous suture to

Poupart's ligament, the cord not being included, but is replaced in its proper direction and remains superficial to this line of sutures. Then, finally, the aponeurosis of the external abdominal oblique is sutured over the cord, and the skin is brought together over all. Drainage is only used when the hernia is large. Of the 262 cases, 12 were strangulated and 251 non-strangulated, both reducible and irreducible. These 251 cases occurred in 216 individuals—10 females and 206 males; the youngest was 13 months and the oldest 69 years. In 196 cases the hernia was acquired and in 55 congenital. Of the 251 cases of non-strangulated herniæ only 1 died, fifteen days after the operation, and after the wound was completely healed. The cause of death was pneumonia, and the post-mortem showed that the wound had been aseptic throughout and that the pneumonia did not depend on this operation. There was no return in 108 cases in from four and a half to one year; in 33 cases from one year to six months; and from six months to one month, no return in 98 cases. In 7 cases there was return, 4 cases were lost sight of, and 1 died. Of these cases, in 108 complete healing took place in from nine to thirteen days, in 66 from fourteen to sixteen days, and in 44 from seventeen to thirty days. Of the 11 cases of strangulated hernia he had to excise a portion of omentum in all, and in no case was the bowel gangrenous; 9 cases rapidly recovered, and 2 died—one twenty-one days after the operation, the other four hours after.

Treatment of Fractured Patella.—At a meeting of the New York Academy of Medicine, held Feb'y 10th, 1890, the above subject was discussed, and a number of cases illustrating the results of treatment by different methods were shown by members.

Dr. W. T. Bull read a paper on the *Results of Treatment of Fracture of the Patella without Operation* (*N. Y. Med. Record*, March 22nd, 1890), and exhibited cases to illustrate the paper. He recorded 22 cases which he had treated during the last fifteen years, and which he had been able to follow; 22 other cases were lost sight of. These 22 cases are represented by nineteen patients, as three had fractures on both sides at different times. Six cases were refractures. Of the 16 fractures, he found an

excellent result in 14 and a bad result in 2 (87½ per cent. satisfactory). In 10 of the 14, flexion and extension of the limb was complete and strong and the ligament firm, with little or no atrophy of the thigh, so they were classified as “functionally perfect.” There were 4 cases where flexion or extension was imperfectly performed, with a joint useful, according to the patient’s statement, for all the purposes of his or her occupation. In 2 cases there was no power of extension at all, and the patients are compelled to wear supports or walk with a cane. In all the cases the treatment was the same, viz., plaster-of-Paris bandages after the effusion has subsided with the application beneath the splint of an adhesive plaster strip to steady the fragments, the fragments of the patella being kept in apposition by figure-of-8 turns of a bandage. The bandage is left on six weeks, then removed, and patient allowed to go about with a splint of leather to back of knee. This latter is worn for six weeks and the thigh and knee vigorously shampooed and kneaded. At the end of three months the patient can bend the limb but slightly, but power of extension has been good. In the discussion which followed, the consensus of opinion was against operative measures, and many cases of accident and some deaths were recorded as the result of wiring the patella. No doubt the results are brilliant in many cases where no complications occur, but when suppuration takes place ankylosis of the knee is a favorable termination.

Laparotomy for Appendicitis in its Quiescent Stage.—Dr. Robert Weir, in an article on the above subject (*Medical News*, March 1st, 1890), says that it cannot be considered as settled that surgery is justified in its interference by the removal of an appendix when symptoms of urgency are not present, notwithstanding the teaching of Mr. Frederick Treves. He asks that more consideration be given to this point before accepting too hastily the maxim that the “ounce of prevention” theory applies to an appendix which has given rise to sundry previous attacks of pain and perhaps dangerous tumefactions in the iliac region. He goes on to say that we are ignorant in a great measure of the simpler forms of appendical trouble, such as inflammation pure and simple, or associated after a while with stenosis of some

part of its canal, and how often such a stenosis will beget trouble by accumulation of retained materials. He has been struck, when witnessing laparotomies for the ablation of the appendix in its quiescent stage, by the total absence in each case of any trace of peritoneal changes from previous attacks of pain, many of which were reported to have been severe. In most of the cases there was only stenosis with a moderate accumulation of mucus or muco-pus beyond the removed portion. He has seen fatal results follow this removal in the quiescent stage, and concludes that in any but exceptional cases (such as where the attacks of recurrent appendicitis are so frequent as to impair the patient's usefulness in life) is it justifiable to perform an operation of acknowledged risk, such as the removal of the appendix when the patient is not suffering from an attack of appendicitis.

In a discussion on the above subject at a meeting of the Practitioners Society of New York (*N. Y. Med. Record*, April 26th, 1890), Dr. W. T. Bull, after reviewing the literature on the subject, said that while he should not, in the light of present experience, encourage operations after one attack of appendicitis without urgent symptoms, he was unqualifiedly in favor of them when attacks frequently occur. Although some surgeons look upon the operation in simple uncomplicated appendicitis as one of the easiest and safest of all intra-abdominal operations, yet in his experience it was not always so, for the appendix and cæcum are often buried in adhesions and the dissection was complicated and tedious. He mentioned one case where he had performed this operation in a lady aged 63, who had attacks of appendicitis every three weeks for four months; they last only a few days and were accompanied by fever. A small ileo-cæcal tumor could be felt. On opening the peritoneum the appendix was found imbedded in a mass of plastic exudation. He decided not to dissect out the appendix, because the operation would have been prolonged, difficult and risky on account of the extensive raw surfaces which would be left behind in the peritoneal cavity, so he closed the peritoneal wound and left a drain in the wound outside the cavity. He mentioned several other similar cases. Another objection to the operation is that it is sometimes followed

by serious ventral hernia. He had seen half a dozen cases during the winter, and the victims complained bitterly of their condition. With this additional uncertainty attached to the fate of the patient, and with the traditional uncertainty of the course of the disease, it is of importance that we bring every accessible fact to light that can help us to formulate a safe rule of treatment.

Dr. Peabody said the physician should decide in what cases operation was necessary. These were where the attacks frequently recurred and the danger of their recurring at a time when surgical aid could not be reached if it were demanded.

Dr. W. H. Draper said he had seen a number of cases of recurring appendicitis in which recovery had taken place without operation. He could not recall a fatal case of peritonitis from appendicitis where there had been a previous attack. In his experience the fatal cases had been in persons who had never before had an attack.

Dr. Andrew Smith recalled six cases of appendicitis with supuration, in three of which surgeons operated and all died; while the other three not operated on recovered. Of the six, in only one case was the disease recurrent.

Dr. Geo. F. Shrady related the case of a physician who had had four attacks of appendicitis, in all of which the question of operation arose. Dr. Shrady had seen the patient in three attacks, all of which were pronounced. The fourth attack occurred in Paris, where the question of operation came up. Each attack was attended with all the severe symptoms indicating the formation of an abscess—there was dulness, tenderness, more or less rigidity, and some œdema in the neighborhood of the cæcum. In each attack the patient was willing to take the risks of operation, but in each case the symptoms gradually disappeared and he recovered. He asked Dr. Shrady, should he survive him, to examine his appendix, which was done when death occurred some time subsequently from another cause. The appendix was found perfectly normal. There was not the slightest appearance of any inflammation around it; it was not even thickened.

Dr. Partridge said there was a class of cases to which but

little attention had been paid where the appendix, when cut down upon, would be found distended, containing, perhaps, a good deal of pus, the cases giving only a history of recurrent pain, showing that a considerable time had been occupied in the production of the pathological changes, and yet very little surrounding peritoneal inflammation or adhesion would be found to have taken place. These cases, when recurrent, were highly dangerous. He concluded by saying that where there were repeated attacks of local pain pointing to appendicitis, but without induration, he would suppose the prognosis grave.

Dr. Mitchell Clark and Mr. J. Greig Smith of Bristol report (*Lancet*, May 3rd, 1890) a successful case of removal of the appendix during the quiescent period for recurrent attacks of inflammation. The patient was a girl aged 22, and had had two well-marked attacks of appendicitis. At the operation a number of adhesions were found and the appendix with great difficulty brought to the surface; it was the size of one's thumb, thickened, red and distended. In it were found three orange pips covered with mucus and fæces; it was tied off, and, after sewing the peritoneum over the stump, returned. Mr. Greig Smith says the operation was not an easy one, and advises no one to attempt it who has not had some considerable experience in abdominal surgery and full confidence in his sense of touch. As a possible factor in the decision as to the removal during a quiescent period this question of surgical difficulty and perhaps danger must be reckoned with. A few of the cases operated upon have been easy, and then no adhesions, but a number are described as having had adhesion of the tip of the appendix to some outlying part; in others the presence of adhesions is simply noted. Mr. Smith asks: "Is it not possible that too much weight is given to a foreign body in the appendix and too little to fixation of its apex, as a cause of irritation, catarrh, distension and rupture?"

In an article headed *Indications for Abdominal Section and the Details of its Performance*, Mr. Lawson Tait (*N. Y. Med. Record*, May 3rd, 1890) attributes both the invention of the modern artery forceps and the introduction of the drainage-tube to Kœberlé of Strasbourg. He says the drainage-tube has re-

duced the mortality 10–15 per cent. He washes out the abdomen with a stream of water from a bucket, and by means of a strong current gets rid of “all rubbish from the crannies and crevices,” even oozing from adhesions may be stopped by a current of water like this. The after-treatment is conducted practically by nurses. For the first twenty-four hours the patient is not allowed to swallow anything at all, except, perhaps, a little warm water. Vomiting is a serious complication after an abdominal section, but the best way to avoid vomiting is to avoid giving patients anything they can vomit. He believes that the deprivation of fluids in the stomach favors absorption of the effusion in the peritoneum. The second day he gives a few tablespoonsful of milk and soda. The third day is the critical day, and the first indication of the secondary changes is distension of the epigastrium suggestive of peritonitis. In such a case the patient is given a small saline purge and a turpentine enema, and this will enable her to pass flatus. He does not care a bit for anything save distension, and never has any trouble if it is treated at once in this way. The temperature in abdominal surgery is a matter of very secondary importance, the pulse being the great guide, and whenever it rises to 120 a minute, there is reason to be anxious. Temperature rise alone has no value as an indication of danger, but the safest guide of all is the expression of the face. An anxious expression keeps him on tenter-hooks, and a woman who will not keep quiet after an operation, but will go on chattering, is almost sure to die.

Two Hundred and Fifty Extirpations of the Thyroid Gland by Dr. Th. Kocher.—Six years ago the author reported 58 cases of extirpation of the thyroid gland, and computed the mortality of the operation as 13.9 per cent. Since then he has performed 250 operations with six deaths, a mortality of only 2.4 per cent. And if we exclude the cases in which the operation was done for malignant struma or the goitre of Basedow's disease, the mortality sinks to only .8 per cent. On the ground of these statistics Kocher maintains that the operation, when practised for simple goitre, is perfectly free from danger, independent of the size of the growth and the age of the patient. The author has

not found it necessary to modify the technique of the operation. He warns us that in ligaturing the inferior thyroid at the point where the vertical portion of the vessel becomes horizontal, we should exercise special care to avoid wounding the recurrent nerve and the cardiac branches of the sympathetic. Of especial importance also is the most scrupulous antisepsis of the wound. To prevent the cachexia which follows complete extirpation of the thyroid gland, it is necessary to leave behind any portions of the gland still capable of performing their function. He concludes as follows: (1) Extirpation is indicated in malignant and inflamed goitres, and in diffuse hypertrophies of the thyroid gland; it is contraindicated if healthy gland tissue is absent on the other side. (2) Enucleation is indicated in cystic goitre; that is, goitres in which a cyst forms the main portion of the tumor, and in cases of isolated large nodular goitres which are imbedded in well-preserved gland tissue, and in cases where large nodules are present in immovable goitres, if the nodules are soft and are surrounded by a vascular zone. (3) Resection is reserved for the numerous class of cases which do not fulfil the above indications; contraindications are malignant and immovable goitres, and those which are the seat of infectious inflammation. (4) Ligature of the thyroids is indicated in vascular goitre either as a method of treatment or as introductory to a subsequent partial extirpation or resection. Only those arteries should be tied in whose districts the changes are most marked.—(Quoted in the *Edinburgh Med. Jour.*, March, 1890.)

Hemorrhoids treated by the Clamp and Cautey.—Dr. B. Gibbs, in a paper read before the Alumni Society of Bellevue Hospital, Feb. 5th, 1890 (*N. Y. Medical Journal*, April 26th, 1890), strongly advocated this method of treatment. He has a record of over two hundred cases without a single case of hemorrhage, and he has never seen any septic complications. In five or six hours after the operation the perineal pad is removed, and if there is any soreness hot applications are applied. The patient is allowed to get out of bed to pass water as soon as the urine shows itself. After this no dressings used, and no suppositories of iodoform or others employed. A laxative is given within forty-

eight hours. He has found no pain follow this operation or retention of urine.

In the discussion which followed the reading of the paper, Dr. Kelsey said he had formerly advocated the method by ligature, but latterly he has used the clamp and cautery with the best results. There was less pain, no greater danger from hemorrhage, and it cured the patient in less time. Dr. Kelsey also stated that he had formerly been a very strong advocate of the method of injection by carbolic acid, and had reported 200 consecutive cases treated in this way without bad result, but immediately after he met with his first unfortunate case. The operation was followed by an unusually large slough, by a peri-proctitis or ischio-rectal abscess. The operation was not radical, and was dangerous on account of its uncertain action. He did not think the operation of Mr. Whitehead any better than the clamp and cautery, and it was much more tedious.

Hospital Reports.

MONTREAL GENERAL HOSPITAL.

Three Cases of Fracture of the 6th Cervical Vertebra, followed by complete Paraplegia, Motor and Sensory, below the 3rd Intercostal space, with surgical procedure in two cases for relief of the Spinal Cord by Dr. Jas. Bell.

(Reported by DR. W. S. ENGLAND.)

CASE I.—E. P., aged 50, a French-Canadian, was brought to the hospital, per ambulance, July 19th, 1889, having fallen off a scaffold, a distance of thirty-five feet, striking on his feet; thinks a falling plank struck him on the back. Personal and family history of no importance.

Examination.—Patient is in a fair state of nutrition; assumes the dorsal decubitus and presents the appearance of helplessness; flexor surfaces of hands and arms dependent; elbows slightly flexed. Respiration diaphragmatic; abdomen moves passively with inspiration and expiration. Paralysis of body below the arms; voluntary power of arms weakened; paralysis of flexors

and interossei; voluntary power of extensors slight. Sensation as to touch, pain and temperature absent below the 3rd intercostal space; also absent over ulnar and extensor surfaces of arms; present over radial flexor aspects. Reflexes: patellar, cremasteric, abdominal and ankle clonus absent; pupillary reflex present, pupils contracted; no deformity of the back. Subjective sensations: complains of pain in the back of the neck, between shoulders, and in right elbow; general sense of coldness. Urine negative; penis passively congested; retention of urine. *Treatment*—Palliative.

July 21st—Developed cough; a few râles in chest.

July 22nd, a.m.—Dyspnoea; rattling in the throat; intelligence still good; loss of sensation has extended up to 2nd interspace. 7 *p.m.*—Slight delirium; temperature 102°F.; soon became unconscious, and died from respiratory failure.

Autopsy.—Fracture of body of 6th cervical vertebra and compression of about half an inch of cord; separation of posterior ligament for about one inch; hemorrhage into cord.

CASE II.—P. St. A., aged 40, was brought to the hospital, per ambulance, on the morning of the 25th October, 1889, having fallen off a ladder on to the back of his head and neck. When first seen by the ambulance doctor, patient was quite conscious, but paraplegic.

Examination.—Patient is a well-nourished man, in good general health; lies in a helpless state; respiration wholly diaphragmatic; paralysis of body below arms; complete paralysis of flexors of arms; paresis of extensors; able to supinate hand to a moderate degree; sensation lost below the 4th rib in front and blades of scapulæ behind, also absent over ulnar and triceps surfaces of arms, but present elsewhere; marked tenderness on deep pressure at the lower cervical area; bending forwards of head and rotation caused pain; reflexes absent; pupils contracted; intellect good. Complains of slight pain only and a feeling of general numbness over the body, most marked in the legs; priapism; loss of desire to micturate. Pulse strong and full, 72 per minute; temperature 102°F.; respirations 22.

Oct. 26th.—General condition unchanged. After a consultation of the staff being held, Dr. Bell decided to operate with the view of removing pressure from the spinal cord if it existed. Chloroform was administered, patient turned on his face, and occiput and back of neck shaved and cleansed. An incision about four inches long was made over the lower cervical vertebræ, reaching to the spinous processes and laminæ; the tissues were removed by a rasparatoire. On examination, found a fracture of the left laminæ of 5th and 6th cervical vertebræ. The right laminæ were also cut by the bone forceps, and by the aid of the knife and lion forceps the membranes covering the cord were readily exposed. These appeared normal; the spinal canal was examined above and below the opening and seemed regular and even. The dura mater was picked up and incised; a considerable quantity of a reddish cerebro-spinal fluid escaped; the cord looked normal on its surface, no irregularity or evidence of traumatism at any part. Thought it proper to desist from further interference. Sutured membranes by a continuous fine catgut suture; rubber drain inserted; muscles and skin brought together by deep silk sutures; iodoform and gauze dressing. Patient made a good recovery from the operation.

Oct. 27th.—About 8 a.m. patient took a bad turn; dyspnœa; brandy administered; dry cupping over bases of lungs; large amount of oozing of cerebro-spinal fluid. In the afternoon the patient's condition improved; some slight expansion of chest (?).

Oct. 28th.—General condition much improved; copious mucus râles throughout chest; takes nourishment better; anæsthesia over entire surface of right arm; return of sensation in soles of feet.

Oct. 29th.—General condition not quite so good.

Oct. 29th.—This morning patient's condition remained unchanged. At 11 a.m. suddenly became much worse, and died in ten minutes.

Post-mortem examination showed a portion of the cord, about three-quarters of an inch long, opposite the 6th cervical vertebræ, soft to the touch. No dislocation of the bodies of the vertebræ, and no separation of the posterior ligament.

CASE III.—W. W., aged 36, was brought to the hospital, per ambulance, January 6th, 1890, suffering from several severe injuries. Patient, while white-washing a ceiling over an engine, had lost his balance and fell into the belt of a rapidly-revolving wheel, which carried him around about twenty times, inflicting a fracture of the right leg, right clavicle and pelvis, causing hæmaturia, contusions about the face, and a fracture of the cervical spine, causing paraplegia.

Examination.—Patient is a well-nourished man, in good general health; intellect clear; pulse 72, strong and full; respiration diaphragmatic; pupils contracted and react to light; patellar, abdominal, etc., reflexes absent. Loss of sensation, as to temperature, touch and pain, of the whole body below the 3rd intercostal space, also of the extensor and radial surfaces of both arms; present on the flexor surfaces. Paralysis of the body below the arms and of flexors of arms. Still possesses some voluntary power over the extensors. Is unable to help himself in the least degree. Complains of pain at the lower cervical region; marked tenderness on pressure here. On examining the spine, find a marked prominence of the spinous process of the 6th cervical vertebræ; no priapism.

Treatment.—Palliative; was unable to catheterize on account of fracture of the pelvis and laceration of the urethra.

Jan. 7th.—Consultation and decided to operate. General condition about the same as on the day of admission. Chloroform was administered, patient turned on his face, and neck and occiput shaved and cleansed. The membranes were exposed as in the former case and incised. About one inch in extent of cord substance was found very badly crushed, so ended operation by suturing membranes and bringing muscles and skin together by deep silk sutures, inserting a rubber drain, and dressing with iodoform and gauze.

Patient made a good recovery from the operation and passed a good night, although sleep was poor. He lived three days after operation without amelioration of any of the symptoms, and died comatose from respiratory failure.

Reviews and Notices of Books.

Chronic Urethritis and its Treatment. By M. BERKELEY HILL, M.B., F.R.C.S. With colored plates by F. COLLINS, M.R.C.S. London: H. K. Lewis. 1890.

This little work consists of three lectures delivered at the Royal College of Surgeons, London. These lectures were written with the object of describing the forms of chronic urethritis as seen by reflected light, and the treatment of the troublesome discharge termed gleet mainly by topical methods. The healthy urethra is first described, then the morbid changes caused by urethritis, and finally its treatment. In speaking of "duration of contagion" in urethritis, Mr. Hill says he can offer no definite rule for deciding this question; he says that in the present state of our knowledge it is rash to assume that, in the absence of gonococcus from any particular drop of discharge, the contagion is past. He is inclined to think that when the discharge is secreted entirely from granular patches, the crypts and ducts of glands having ceased to furnish pus, we may consider the discharge to be no longer specific in character or capable of communicating disease to others. A narrow meatus is a frequent cause for the continuation of a gleet, which disappears on enlarging this opening; other causes are stricture (single or multiple), patches of inflammation, and granular areas. The commonest cause is stricture, even though in many cases it means merely a lessening of the natural distensibility of the urethra. These strictures are most frequently met with between the third and fourth inch from the meatus. In all cases, the average duration of treatment before cure was effected was two and a half months. Treatment is described in detail by soluble bougies and instillations of nitrate of silver by Guyon's catheter and syringe. When nitrate of silver instillations were used, cure was made more rapid by a preliminary stretching of the urethra with large bougies. In the third lecture, prostatitis and tubercle of the prostate are described. In prostatitis, the most advantageous local remedy is found to be the repeated application of strong astringent solu-

tions to the membrano-prostatic portion of the urethra, combined with a thorough dilatation of the urethra with sounds gradually increasing to No. 30 French. Mr. Hill is of opinion that gonorrhoea is indirectly an exciting cause of tubercle in the genital organs. In tubercular ulcers of the prostate he has found that thorough washing out of the bladder to clean out the pus and urine from the parts and then the injection of quinine gr. ii- $\bar{3}$ i, of which solution about two ounces should be left in the bladder, a good plan. In chronic cystitis he gets the best results by injecting an emulsion of iodoform (iodoform 2 parts, mucilage 4 parts, glycerine 2 parts, water 20 parts). The book is full of interest to all urethral surgeons, and should be carefully studied. The arrangement of the matter is not as orderly and convenient as it might be, but the matter itself is unquestionably good, and the result of a ripe and wide experience. The colored illustrations, which are beautifully executed, add much to the value of this work, and will be of great service to all who examine the urethra by reflected light—a method of examination at once scientific and accurate.

Essentials of Diseases of the Skin, including the Syphilodermata. By HENRY W. STELWAGON, M.D., Ph.D. Philadelphia: W. B. Saunders. 1890.

This small book adds another to that innumerable group of compends written for students of medicine with the object of compressing all necessary information on various subjects into as small a space as possible. This method of studying medical subjects we have before condemned, and think it tends to make students less thorough and to encourage the idle. However, the subject of skin diseases is rather outside a medical curriculum, and students generally acquire but a smattering during their course, so if by any means this small amount of knowledge can be increased we must not object, even if compends have to be made use of. The subject-matter is arranged in the form of questions and answers, and certainly the answers are very concise, accurate, and to the point, and will be useful for those who have but little time to consult the larger works on skin diseases. There

are numerous illustrations throughout the work, which add to its value. Students will find it a handy pocket volume for use in clinics on skin diseases.

Diseases of Women and Abdominal Surgery. By LAWSON TAIT, F.R.C.S., Edin. and Eng., LL.D., Professor of Gynæcology, Queen's College, Birmingham; Surgeon to the Birmingham and Midland Hospital for Women, &c., &c. Vol. I. Philadelphia: Lea Brothers & Co.

The advent of Mr. Tait's book is regarded with great interest by the whole profession. It is entirely characteristic of its distinguished author. To Mr. Tait, more than any man living, modern gynæcology owes its remarkable position. Amongst the concluding words of the author's preface are the following: "My chief object is to offer the results of my own experiences in as condensed a form as possible." The book is a clinical digest of the author's enormous experience, and is, therefore, in certain directions, because of that experience, of a value that can only be appreciated by one who has seen him at work.

The first part of the book is devoted to what may be called the minor diseases of women. In the chapter on physical examination, Mr. Tait makes some of his characteristic strong statements. These will not be universally accepted. However true they may be of gynæcologists of large experience, they cannot apply to the many whose opportunities have been moderate in extent, and who, though still learners, must do a large amount of the work in this department of medicine. Thus, for a pelvic examination, Mr. Tait says the position of the patient on the left side is the best for both vaginal (digital) and bimanual. We venture to say that few observers of experience of the dorsal position will subscribe to this statement. We, however, quite agree with him in his denunciation of the use of instruments, to the neglect of the far more instructive, careful use of the educated finger and opposite hand. So, not many who have thoroughly acquired the Sims' method of examination will agree with him when he says that by far the best speculum for almost every purpose is the glass-barrelled Fergusson's speculum.

In the chapter on the diseases of the uterus, Mr. Tait merely mentions Emmet's operation for torn cervix, and then only to denounce it. "Nothing more useless than Emmet's operation has ever been introduced into surgical practice." Surely he does not speak from experience. In speaking of chronic cervical metritis and endometritis no mention is made of the value of iodine or systematic tamponade. In the treatment of cancer of the uterus, Mr. Tait has little to say in favor of any surgical treatment, and is entirely opposed to total extirpation. In the treatment of displacements of the uterus, he does not approve of shortening the round ligaments.

The chapter on uterine myoma is, as might have been expected, most interesting and satisfactory. Contrary to the opinion of many, Mr. Tait reiterates his belief, many times already expressed, that myoma is often a fatal disease. It is therefore, according to him, to be dealt with promptly. He gives a table of 262 cases of removal of the appendages, with four deaths. He, however, classes separately pyosalpinx and hydrosalpinx occurring with myoma, as a much more serious condition. For the soft, rapidly-growing myoma, extirpation is the only procedure he considers advisable.

The chapter on chronic, inflammatory, and other diseases of the uterine appendages is full of interest, but we have not space to say more than that the author is evidently as strong an advocate as ever for prompt operation for their removal.

The last chapter of this first volume, consisting of a hundred pages, is devoted to ectopic gestation and pelvic hæmatocele. Of the author's many brilliant contributions to gynæcological surgery, none is so remarkable as his work in the treatment of this condition, and his unique experience commands attention to every word he says on the subject.

Such, in brief, is the scope and character of the first volume. We await with impatience the appearance of the second. The work of the well-known publishers is entirely satisfactory.

Insomnia and its Therapeutics. By A. W. MACFARLANE, M.D., Fellow of the Royal College of Physicians, Edinburgh, Examiner in Medical Jurisprudence in the University of Glasgow, &c. London: H. K. Lewis, 136 Gower street.

Dr. MacFarlane's work is one of great value to the practitioner, for of all troublesome conditions that he is called upon to treat few are so annoying and persistent as sleeplessness. The difficulties that present themselves in unravelling the mysteries that give rise to insomnia are very great, and frequently tax the patience and acumen of the ablest and most experienced physician. The author of this work has done a great service in bringing together the scattered information that we have in all that relates directly and indirectly to sleeplessness.

We have, first, an introductory chapter on the physiology of sleep, followed by one on the conditions which influence sleep and sleeplessness. Then, in order, is taken up the affections of the different systems which conduce to insomnia. First of all, we have the great group of nervous affections; over work, shock, depressing emotions, neurasthenia, hypochondriasis, the organic and the toxic affections. The gastro-intestinal, renal, respiratory and circulatory disturbances which tend to bring on insomnia are fully treated in this connection.

One of the best chapters in the book is that devoted to gouty insomnia. The insomnia of fever is also dealt with.

The work, on the whole, is one that will well repay diligent perusal, and no practitioner can read it without feeling that the author has done his work well.

Spinal Concussion. Surgically Considered as a Cause of Spinal Injury, and Neurologically restricted to a certain Symptom Group, for which is suggested the designation Erichsen's Disease, as one form of the Traumatic Neuroses. By S. V. CLEVENGER, M.D., late Pathologist to County Insane Asylum, Chicago. With thirty wood engravings. Philadelphia and London: F. A. Davis. 1889.

This work not only deals with concussion of the spine, but also with a great many other subjects, as medical electricity, medical

politics, medical education, the anatomy and physiology of the sympathetic system, etc., etc. It is difficult to see what connection there is between such subjects. The work on the whole represents a great amount of diligent research and study, and will no doubt be a very useful work of reference in certain medico-legal cases. We would advise the author, if ever a second edition is called for, to eliminate all such subjects as do not belong to "concussion of the spine." The amount of padding is altogether too great. It is unfortunate for both the author and his hypothesis that there is so much of it.

Essay on Medical Pneumatology. A Physiological, Clinical and Therapeutic Investigation of the Gases. By J. N. DEMARQUAY, Surgeon to the Municipal Hospital, Paris. Translated by SAMUEL S. WALLIAN, A.M., M.D. Illustrated. Philadelphia and London: F. A. Davis. 1889.

This work is devoted mainly to the consideration of the pharmacology and therapeutics of oxygen. Under the latter head we have a very full account of what has been written on the value of oxygen both in medicine and surgery. In our opinion, the most valuable part of the work is the translator's notes, comments and additions.

Handbook of Materia Medica, Pharmacy and Therapeutics. Including the Physiological Action of Drugs, the Special Therapeutics of Disease, Official and Extemporaneous Pharmacy, and Minute Directions for Prescription Writing. By SAMUEL O. L. POTTER, M.A., M.D., Professor of the Theory and Practice of Medicine in the Cooper Medical College of San Francisco. Second edition. Revised and enlarged. Philadelphia: P. Blakiston, Son & Co. 1890.

The second edition of Dr. Potter's Handbook is in many respects a considerable improvement on the first. It is now one of the most useful of the many textbooks on this subject. The section on pharmacy and the act of prescription writing is well and ably prepared, and would itself well repay any practitioner

who is not thoroughly conversant with this necessary part of his professional work. A considerable part of the work is devoted to special therapeutics. This is in a great measure an elaborate index to the more important diseases and their treatment. The publishers have performed their part of the work with great credit.

Annual of the Universal Medical Sciences. A Yearly Report of the Progress of the General Sanitary Sciences throughout the World. Edited by CHARLES E. SAJOUS, M.D., Lecturer on Laryngology and Rhinology in Jefferson Medical College, Philadelphia; and 70 Associate Editors, assisted by over 200 Associate Editors, Collaborators and Correspondents. Illustrated with chromo-lithographs, engravings and maps. Five volumes. F. A. Davis, Philadelphia, New York and London. 1889.

The five volumes of this excellent work more than sustains the reputation gained by the issue of the previous year. We have here a judicious and critical review of all the important medical papers and publications issued in different parts of the world for the past year.

Electricity in the Diseases of Women. By BETTON MASSEY, M.D. Second edition. F. A. Davis, publisher, Philadelphia and London. 1890.

This well known author on electricity has written a most useful little work on the subject. It is very similar to other works which have gone before it, and we can recommend it to all who are interested in the treatment of diseases of women by electricity.

May's Diseases of Women. Second edition. Revised by LEONARD S. RAW, M.D. Philadelphia: Lea Bros. & Co. 1890.

This little work, intended for senior students and practitioners, has some very excellent qualifications, but in some instances is very much behind the present practice of teaching. In regard

to sutures, the author speaks of using wire where silkworm gut is in more recent favor ; also, he advises the use of many silver sutures in the operation of primary perineorrhaphy, where one is all that is necessary. The author leaves out altogether the mechanism of the pessary in treating retroversion, and does not mention the very important direction to always return the uterus to its forward position before the pessary can be applied. This is a very grave omission, as it would result in a serious abuse of the pessary by the inexperienced. The book, however, will have its usefulness, and can be read with pleasure.

The Doctor in Canada. His Whereabouts and the Laws which Govern Him. A Ready Book of Reference. By ROBERT WYNYARD POWELL, M.D., Ottawa.

Dr. Powell has performed a very useful piece of work in giving to the profession the work in question. It deals with all subjects of special interest to the medical practitioner in Canada. We have first the various acts which are in force in the different Provinces, the Public Health Acts. We have next detailed information on the different teaching and licensing bodies. Then follow accounts of the hospitals, asylums, etc., of the country. The book should be in the hands of every practitioner in Canada.

Society Proceedings.

HAMILTON MEDICAL AND SURGICAL SOCIETY.

Stated Meeting, May 20th, 1890.

DR. CAVILLER IN THE CHAIR.

DR. A. B. OSBOINE read a paper entitled,

SPECTACLES AS THERAPEUTIC AGENTS.

If "the proof of the pudding is in the eating," then the value of any therapeutic measure consists in its successful application. The results—remote and direct—of strain upon certain portions of the ocular mechanism are being rapidly ascertained and are becoming recognized by the profession. So far reaching are the effects of ocular strain that an examination of the eye is considered incomplete unless the state of the refraction and motor apparatus is fully noted, and many chronic inflammatory affections of the eyes become much more amenable to treatment when the ciliary strain is removed by glasses.

The constant occurrence of certain symptoms in cases of hypermetropia and astigmatism, as well as the equally constant relief to these symptoms afforded by wearing glasses, point at once to a strain of the ciliary muscle as the prime factor in their production.

Headache is one of the commonest manifestations of ciliary strain; in fact, refractive errors are so productive of this disorder that every case of chronic or recurring headache should be tested for glasses. The headache may occur in almost any form, but is most frequently frontal, accompanied by a sensation of weariness and a desire to close the eyes. It is rarely present upon first awakening in the morning, but commences during the day or in the evening after the eyes have been in use for some time. Among school children who are compelled to study at night these headaches are specially frequent; a good night's rest usually removes the trouble completely, but only to return at the end of another day's work. The sufferer may be quite unaware of any defect of the eyes, as there are frequently no symptoms pointing directly to them and the vision may be excel-

lent—in fact, it is the proud boast of many such cases that their sight is perfect, yet a careful examination reveals an amount of hypermetropia which when corrected affords a measure of perfect relief. It is not infrequent to be consulted by patients about headaches which are referred to a slight or purely imaginary catarrh, but are in reality due to the eyes and are cured by wearing appropriate glasses. The casual relation between ciliary strain and headache is produced by the disappearance of the latter when the former is relieved, but the direct chain by which such an effect is produced is difficult to trace.

Neuralgia, especially of the frontal nerve, but also of the facial and occipital nerves, is commonly the result of ocular strain; indeed such association is sufficiently frequent to call for an examination of the eyes in obstinate and recurring cases. This form of neuralgia is particularly prone to occur when the patient is somewhat run down owing to the fact that the eyes are required to do their customary work notwithstanding the fact that they are in the same weakened condition as the rest of the system. In these reflex neuroses which are influenced, if not actually caused, by strain of the ocular mechanism, the neurotic condition, unless early relieved, may become a confirmed habit, making it much more difficult to eradicate. This is one of the strongest arguments in favor of an early optical correction. It is hardly necessary to remark that the symptoms so far enumerated are most apt to occur when the system is debilitated, so that invigorating treatment is indicated as well as relief to the ocular strain.

The local effects of ciliary strain are numerous, fully two-thirds of an oculist's cases presenting themselves on account of or as a result of such strain.

The causation of cataract is probably one of the most direct results of ciliary strain. It has long been known that the majority of cases of cataract were hypermetropic, but it has been reserved for recent observers to begin at the other end of the scale and demonstrate incipient cataracts in a large proportion of cases of hypermetropia and astigmatism. The probabilities have long been in favor of such a theory, and recent observations appear to have established it as a fact.

A large percentage of squints are the outcome of ciliary strain, and many oculists can cite cases where, having seen the patient before the squint had become a confirmed habit, it disappeared completely under the use of atropine and correcting glasses. Similarly a simple surgical correction without the assistance of spectacles is too frequently a complete failure. So well known has this fact become that surgeons do not operate upon squints without first testing the vision and ordering the requisite glasses.

Chronic affections of the lids, as blepharitis and recurring styes, may be kept up by ciliary strain; these cases recover rapidly when glasses are worn. This is also true of a chronic form of conjunctivitis affecting principally the palpebral conjunctiva. The writer has found a considerable proportion of his cases of chalazion associated with hypermetropia and astigmatism, and the correction of these defects has materially lessened the irritation. Photophobia, lachrymation, and an apparent hyperæsthesia of the retina may all be produced by strain of the refractive mechanism.

The hypertrophy of the ciliary muscle resulting from the continuous strain necessary in hypermetropia and astigmatism is an important factor in the production of glaucoma.

Lastly, the asthenopia produced by some forms of ocular strain is familiar to all; it disappears rapidly after proper glasses are worn.

The large number of children wearing spectacles in the present day is frequently adduced as evidence of the deterioration of the species. It would be more correct to call this an index of the advance of science, inasmuch as we are now able to relieve diseases by means of glasses which our predecessors were barely able to diagnose, much less treat.

From what has been said it will be seen that spectacles occupy a prominent place among our therapeutic agents, not only in relieving visual defects and in the treatment of some painful reflex symptoms, but also in diminishing the danger to eyes later in life from such serious diseases as cataract and glaucoma.

DR. LAFFERTY then read the notes of a case of

TABES DORSALIS.

J. M., a laborer, aged 51, married ; has served in the British army for eleven years. With the exception of smallpox thirty-two years ago, has had no sickness of any kind. Drank very hard until about twelve years ago. During this latter period he had been a total abstainer. Family history good ; parents both lived to 80. Never contracted any venereal disease ; in fact, never required any medical attention until about four years ago, when he experienced some difficulty in micturating. The urine contained a considerable quantity of white substance, milky in appearance. Had retention, and was relieved by means of a catheter. This deposit has gradually increased in quantity ever since, being almost constantly present. About this time pains began to be felt in the sacral and gluteal regions, darting and shooting down both legs to the heels. Little notice was taken of it, believing it to be sciatica, until in May 1887, three years ago, there was a decided weakness in his lower extremities. The pain was more frequent and severe, and shortly after, while walking with a friend at night, fell down on the sidewalk and had to be assisted home by his companion. In August of this same year (1887) I was summoned to attend him ; found the patient in bed, complaining of pain in both limbs, especially in the calves. While lying on his back with his legs crossed, when endeavoring to change their position by lifting the top one, there would be a disposition for the lower one to move first. Has considerable difficulty in walking, and in the dark stumbles from side to side. If walking during the day, cannot look back without first stopping ; that is, he cannot look back over his shoulder and still keep moving forward. Has a tendency to fall under these circumstances. Eyesight good, pupils equal ; no arcus senilis ; conjunctival normal. No evidence of paralysis ; has good power of muscles. Can stand steadily when eyes are open, but when asked to close them begins to sway backwards and forwards and is quite unsteady. With closed eyes can place right index finger on tip of nose without any hesitation ; the left is slower in movement, and does not find the nose so conveniently.

Walks with a staggering gait, bringing the heel down with the toes. Diminished sensation in both extremities. Tendon reflex *nil*; bowels very constipated; appetite diminished and variable. Describes a feeling of numbness most noticeable in right leg and foot, and a sense of constriction about the body as if a rope was tied around him above the hips. Urine somewhat increased in quantity; very slight trace of albumen, no sugar; sp. gr. 1022, turbid and alkaline. After micturating a light, creamy deposit was frequently passed. Sexual powers normal. Pulse 65. Weighs 160 lbs.

Diagnosis—*Tabes dorsalis*, non-syphilitic. Ordered rest in bed, a liberal dose of castor oil as bowels had not been moved for four days, and fluid ext. Calabar bean \mathfrak{m} ii four times a day.

Aug. 21st.—Bowels moved thoroughly; feels much more comfortable.

Sept. 2nd.—Allowed up; pains slight; appetite good; sleeps well. Takes pulv. glycyrrhizæ co. every alternate day.

Oct. 15th.—Retention, relieved by catheter. Complains of a fatigued feeling generally; marked numbness in both legs; pain increased; has to use a cane to steady himself when walking at night. Ordered pil. argentum nitrate $\frac{1}{4}$ gr. three times a day in addition to previous prescription.

Nov. 20th.—No improvement. Thinking that owing to his military career and previous intemperate habits there might possibly be a specific cause, pot. iodid. was given in gradually increased doses. This drug produced gastric disturbance and was intolerable at times, hence discontinued it after a trial of a few weeks and substituted fld. ext. Calabar bean \mathfrak{m} ii, with four minims of acid phos. dil. four i.d.

Aug. 30th, 1888.—Galvanism has been systematically used for the last two months. The pains are somewhat relieved by its use. Walks very slowly, assisted by a cane; dare not venture out at night alone. Occasional doses of morphia have to be administered to relieve pain. Greater loss of sensation in lower extremities; numbness extends higher up the waist. Complains of tightness from the ribs down. Slight numbness in right arm. Sensation in soles of feet when walking as though stepping on spongy material. On pinching the neck the pupils

do not respond by dilating as is seen in normal subjects. Power of co-ordination much lessened ; in fact, the conditions present a year ago are now greatly exaggerated. Prescribed syr. trip. phos. ʒi ter in die.

May, 1889.—Is so much disabled as to be unable to go out. Goes around the house with a crutch under each arm. Pains in the lumbar region and down both legs very troublesome. Says stiffness and tightness has become worse. Sensation leaving right arm and shoulder ; can remove the hair from his arm without feeling it. Left arm normal. Is now given Sayre's apparatus, which is attached to the ceiling. By means of this he is to be raised off his feet once a day and allowed to hang five minutes each time. When raised, he described the sensation as if being pulled apart ; could feel the spine, as it were, separating. Found almost immediate benefit, pain and stiffness being relieved. Bowels began to move without purgatives, and four weeks after walked from the street car into my office, the only assistant being a heavy cane.

Aug., 1889.—Went to Toronto on a visit for a month, using Sayre continually, taking syr. trip. phos., and still improving.

Dec., 1889.—The pain, stiffness, etc., has again returned, although he has persevered with the treatment recommended. Is forced to use the crutches once more. Has lost all sexual desire and power. Urine is now clear and normal. Muscles do not respond to a very strong faradic current. Sensation in legs almost entirely gone ; can strike them with a heavy stick without feeling it, as he puts it, "they are just like a board." Loss of sensation extends over upper right half of body, limited by clavicle and scapula above and the median line before and behind.

April, 1890.—General condition much the same as in December last. Sayre's apparatus is of no benefit to him now further than some temporary relief for an hour or so. Has taken nothing in the way of drugs for the last three months, except an occasional half grain of morphia as may be found necessary.

THE ANNUAL MEETING OF THE ASSOCIATION OF
AMERICAN PHYSICIANS.

Held at Washington, D.C., May 13, 14 and 15, 1890.

The proceedings of the Association, so far as its scientific work was concerned, opened with a paper by Dr. J. E. Reeves of Chattanooga, Tenn., upon *Some Points in the Natural History of Typhoid Fever*, in which he considered the character, course, and complications of the disease from its inception through to convalescence.

In the discussion, DR. J. C. WILSON of Philadelphia spoke of his belief in the great value of Brandt's method of using the cold bath whenever the temperature rises to a point over 101.5°, and briefly detailed the favorable results obtained by him in the treatment of thirty cases of the disease in the wards of the German Hospital in Philadelphia. In the majority of these no medicine was given, in a few a little calomel being occasionally used to evacuate the bowels at the beginning of the attack, and in every instance the results were extraordinarily good.

DR. ALFRED L. LOOMIS of New York stated that he failed to recognise the distinct forms of typhoid fever characterized by Dr. Reeves as mild, intermediate, and malignant, and expressed surprise at the statement of the author that he had seen five recoveries in typhoid fever after perforation of the bowel had occurred. He himself had never seen a recovery where perforation really took place; although he had observed cases in which peritonitis of a localized or diffuse character had complicated typhoid fever, not due to perforation, and resulting in recovery. Dr. Loomis believed that cardiac softening is a very common complication of typhoid fever, and asserted that if a loud systolic murmur is heard at the apex the prognosis is unfavorable, as it shows that softening has occurred, and that thrombosis or sudden dilatation has taken place, the latter resulting from some sudden movement straining the softened viscus. He thought that getting up too soon probably caused the symptoms of a weak, dilated heart following typhoid fever. Dr. Loomis then proceeded to state that he had recently seen in New York a form

of nervous trouble consequent upon typhoid fever which, as far as he was aware, had been described nowhere except in a paper by Dr. V. P. Gibney, in which the author had detailed several instances of what he was pleased to call "typhoid spine." This condition is marked by great pain and tenderness over the spinous processes of the vertebræ, and has been confused by some physicians with lumbago and other similar conditions. Eventually the cases which had consulted Dr. Loomis were cured by the use of the hot iron and a particular jacket devised by Dr. Gibney.

DRS. S. WEIR MITCHELL and ABRAHAM JACOBI objected very strongly to the idea that typhoid spine was in any way a new or distinct sequelæ of typhoid fever, both agreeing that it was simply a spondylitis.

DR. H. A. JOHNSON of Chicago stated that he had seen a case of what he believed to be recovery after perforation of the intestine in typhoid fever, and detailed the symptoms which gave rise to this belief.

DR. WM. PEPPER of Philadelphia agreed with the opinions of Dr. Mitchell and Dr. Jacobi, and expressed the thought that the immunity from typhoid fever in Chattanooga, as stated by Dr. Reeves, was very extraordinary, and must be largely dependent upon some peculiar condition of the soil. He also insisted upon the great value of the use of nitrate of silver internally in typhoid fever throughout the attack as a means of avoiding complications and lessening its severity.

The paper of DR. N. BRIDGES of Chicago on *Appendicitis* (see page 937) was discussed by several of the physicians present.

DR. ATKINSON of Baltimore stated that in his opinion the surgeon is often called too late, and yet, on the other hand, a large proportion of the cases get well if left alone; leaving us in a position of indecision as to what course is to be pursued.

DR. R. FITZ of Boston believed that there were many cases of mild catarrh of the appendix that never come to the care of the physician, and gave the conclusions derived by him from 72 cases which he had personally seen. He thought that the 500 cases previously collected by him and reported some four years

ago had been somewhat misleading in respect to the results derived from them. His opinion at present is that there are half as many females affected as males, and he added that while 11 per cent. in his statistics had recurring attacks, 44 per cent. in his personal experience had recurring attacks. Dr. Fitz also made the interesting statement that recurring attacks take place with equal frequency, whether the cases be treated medically or surgically, unless the appendix be removed, the general average of recovery being 74 per cent. He believed that the mortality of medical treatment is only 11 per cent., while that of surgical treatment is 40 per cent., but it is to be remembered that the high percentage of surgical treatment rests largely upon the serious and advanced condition of the disease before the surgeon is called in or given the opportunity to operate. He also thought that two simple rules could readily be formulated—namely, that where the symptoms were very urgent, or where a tumor was present, the surgeon should operate, but that in cases of slow recurrence without urgent symptoms medical treatment is to be resorted to, as surgical treatment is difficult owing to the changes produced in the relative positions of the parts caused by previous attacks.

DR. JACOBI of New York objected to the term “turn the case over to the surgeon,” saying that in his opinion physicians should be able to perform four surgical operations—namely, intubation, tracheotomy, herniotomy, and abdominal section for appendicitis. He did not think that localized peritonitis in the right groin should be operated upon during its stage of activity, but punctured if necessary and operated upon in the course of a week or two, after the severity of the inflammation had passed, provided that it was considered necessary to use the knife.

DR. PEPPER, on the other hand, did not believe that any physician should operate upon such a case, and thought it required all the skill of the thoroughly trained surgeon to undertake such a procedure, the physician always sharing his responsibility with a surgeon.

DR. J. H. MUSSER spoke of tuberculosis as a cause of appendicitis, having seen three such cases.

The paper of DR. LUSK on *Antisepsis during Labor* was discussed by Drs. Welch, Pepper and Roosevelt, who all expressed their interest in the conclusions reached by the essayist, and agreed with him as to the inadvisability of the vaginal touch in most cases. The fact that the hands of the accoucheur could not be considered sterile, although they might be aseptic, even if a very strong solution of bichloride of mercury was used, was pointed out by Dr. Welch.

DR. DANA read a paper upon *Seizures Accompanied by Shock and Coma*, which was discussed by Drs. Lyman, Edes and Loomis. Dr. Loomis spoke of the difficulty of differentiating embolism, apoplexy, and thrombosis in diagnosis. In many cases he has found supposed apoplexy to be in reality cerebral thrombosis with softening. The patient in embolism, however, generally does not lose consciousness, and he thought that before fifty years of age such attacks are always due to extravasation and after fifty to thrombosis and softening. In his opinion, too, uræmic coma cannot be diagnosed by the condition of the pupil. Dr. Jacobi stated that in his experience the œdema of uræmic coma is often unilateral, not bilateral, and that its diagnosis cannot rest upon any such diffusion of the puffiness.

The paper of DR. S. WEIR MITCHELL, as referee, upon *Disorders of Sleep*, was unusually interesting, and dealt with the psychical, motor and sensory disturbances of the præ-dormitium and post-dormitium, including sensory, motor, and emotional overflows or explosions, as well as the condition of the subjects of waking numbness, and post-somnic paresis and paralysis. Dr. Mitchell also dwelt on the curious nervous disorders known as night neuralgias, night choreas, and failures of respiration in sleep.

DR. FOLSOM, the co-referee, considered the physiology of sleep, the causes and conditions of insomnia, the influence of habit, and the various diseases and poisons which produce it. He also spoke of the vaso-motor conditions associated with disorders of sleep, and discussed quite fully the treatment of these by measures directed to the improvement of hygienic surroundings of the patient and by the use of certain drugs. He believes

that drugs are to be generally avoided as far as possible, but chloral, hyoscin, methylal, and sulphonal are the best remedies to be resorted to if drugs are necessary. Dr. Pepper added that a person might train himself to sleep and to put aside all mental effort, arranging the body in such a manner as to let it rest entirely upon the skeleton, thereby affording the muscular system total relaxation and rest. As the superior oblique and external rectus muscles of the eye are generally severely strained by prolonged eye-work, and ache, he advised rotation of the eye-balls upward during the endeavor to obtain sleep, in such a way as to relieve these muscles from all exertion. Dr. H. M. Lyman of Chicago said that he believed that many cases of insomnia were due to rheumatism, and recommended the use of milk of sulphur and bitartrate of potassium in the proportion of one to five parts. Dr. G. L. Peabody of New York related a case where full doses of soda and rhubarb cured insomnia which had resisted all other remedies. Dr. M. Allen Starr of New York expressed great confidence in sulphonal as a hypnotic, and believed it to be valuable, particularly if food is taken just before instead of just after its administration.

In closing the discussion, Dr. Mitchell remarked that many cases of insomnia, though depending upon gastric or other trouble, failed to recover from the disease causing the insomnia unless sleep was induced by the use of drugs. He also recommended the administration of sufficiently large doses of hypnotics to make the production of sleep sure of occurrence, as the use of smaller doses, if they fail, produces a condition of doubt in the patient's mind as to his ability to sleep, or the power of remedies to make him sleep, which is unfortunate and interferes with successful results. He advocated the administration of thirty or more grains of bromide at once, or that one-hundredth of a grain of hyoscin should take its place. Finally, if these both fail, he depended upon sulphonal.

DR. C. L. DANA of New York followed with a paper upon a study of the *Sensory Disturbances in Hysteria*, which showed careful study of the entire subject, and was received with great interest.

The paper of DR. WHARTON SINKLER of Philadelphia upon *Migraine* dealt very largely with its causes, its unusual visual phenomena, and particularly with its treatment. He recommended phenacetin, antipyrine, eucalyptus, and caffen in large doses as the best means of treatment.

A very interesting demonstration was that of DR. HAROLD ERNST of Boston, who showed to the Society the body of a rabbit, which was one of three to which he had given, by means of a hypodermic needle, in the abdominal region, five or six drops of milk derived from the udder of a tuberculous cow. All the abdominal viscera were thickly studded with miliary tubercles, but the lungs were not affected. Dr. Ernst naturally believed this to be a very strong evidence of the communicability of tuberculosis by means of milk to human beings, and asserted that he was sure that the rabbit which had died was not affected by tuberculosis arising independently of his injection of the milk, as rabbits which did not receive the milk were healthy at this date. He then proceeded to discuss briefly and to place on record certain studies carried out by Dr. Stephen Martin of Boston, concerning the *contagium vivum* of cowpox and vaccine material. Dr. Martin had been able to make cultures through five generations of this material, and had inoculated children with matter derived from the fifth generation with success, since these children, when vaccinated with lymph which had been found active in other children, failed to develop the typical vesicles. He stated that Dr. Martin was continuing his investigations, and would report further upon them at future meetings of the Association.

DR. D. W. PRENTISS of Washington showed a man with an extraordinarily slow pulse, the pulse-beat at the time of the exhibition being but 30 per minute, but had been as low as 11, the respirations being 32. He also presented a boy suffering from rheumatic purpura, in whom so large an amount of blood had been poured out beneath the skin on the anterior belly wall as to produce a slough. In the discussion of this last case Dr. Atkinson of Baltimore stated that he had seen somewhat similar cases, and knew of instances where similar sloughs had occurred.

Dr. Tyson of Philadelphia also mentioned one such occurrence in his experience. Dr. Jacobi expressed the belief that all these cases were dependent upon changes in the bloodvessel walls, and that in those instances where the blood had undergone a change the leakage which resulted was due to alterations in the bloodvessels resulting from the hæmic alterations.

DR. W. H. WELCH of Baltimore then reported a case of *Acute Diphtheritic Colitis with Peri-pancreatic Fat-necrosis*. The patient, 53 years old, had been a hard drinker. Three days before death he became delirious and was admitted to hospital. Temperature elevated—when first observed, 101.5°F.; on day of death, 105.4°F. Pulse 120 to 132, compressible. Spleen not enlarged. Abdomen tympanitic, tender on pressure, especially in epigastrium. Urine slightly albuminous. Tongue clean and moist. No diarrhoea until a few hours before death, when he had an offensive liquid stool. Urine and feces passed involuntarily. Patient became unconscious and died two days after admission to hospital. At the autopsy, which was made a short time after death, were found numerous foci of so-called fat-necroses in the transverse meso-colon and in the adipose tissue around the pancreas, with beginning sequestration of the pancreas. Liver intensely fatty. Contents of bile-ducts and of gall-bladder viscid, clear, with only slight yellowish tint. Renal epithelium fatty. Ecchymoses, small ulcers, superficial necroses and diphtheritic exudation in large intestine. The foci of fat-necroses, as well as the liver, bile and spleen, contained in large number a single species of bacteria, which was isolated and studied in pure culture. The organisms are bacilli, belonging to the group of colon bacilli, and probably identical with the bacterium coli commune. Cultures and microscopical specimens from this case were exhibited,

He also reported a case in which symptoms suggesting intestinal obstruction existed. Exploratory laparotomy was performed. Numerous foci of fat-necrosis were found in the omentum and mesentery and a swelling in the region of the pancreas, but no intestinal obstruction existed. Portions of the omentum containing necrotic foci were excised and were examined microscopically by the writer. The patient recovered.

Following this report, DR. REGINALD FITZ of Boston described a *Case of Acute Pancreatitis*, which illustrated the suppurative in contrast with the hæmorrhagic and gangrenous varieties of the disease. Microscopical preparations were shown and the recent literature on the subject was reviewed.

DR. E. O. SHAKESPEARE of Philadelphia then read a paper entitled *What Can and Should be Done to Limit the Prevalence of Tuberculosis in Man?* In this essay the speaker advanced the following propositions :

1. The bacillus tuberculosis is the sole active or exciting cause of the disease, which is infectious or contagious and non-hereditary.

2. Whilst on the one hand the discovery of the bacillus has advanced our methods of treatment but little, on the other hand it has revealed most important principles upon which to base efficient means of preventing the spread of the disease.

3. In view of the admitted inefficiency of all present modes of treatment of actual cases of tuberculosis, effective prophylactic measures are infinitely more important to the general public, and should also be to the physician, than the most skilful therapeutic measures.

4. Since analysis of the fullest records bearing upon the relation of family history to the causation of tuberculosis can possibly account, through hereditary predisposition, for little more than one-fourth of the cases, the most perfect measures conceivable for the lessening of that influence cannot be rationally compared in importance to those which are essentially based upon the destruction of an infective poison, which is virulent enough to produce the disease, not alone in the comparatively few who may be born with hereditary predisposition, but also to cause tuberculosis in the majority who succumb, notwithstanding the absence of an hereditary weakness.

The following general principles underlie an efficient system of prevention of tuberculosis :

1. From the standpoint of the already diseased, effective and preventive measures should look to the rapid destruction of the tubercle bacilli in the excretions and secretions, and by as little association of the well with the sick as possible.

2. From the standpoint of those liable to become infected, nothing which may contain the living tubercle bacillus should be permitted to enter the digestive apparatus. Rigid inspection of meat and milk is a necessity.

3. Tuberculous subjects should not be admitted to hospital wards in which those with other diseases, especially of the lungs, are confined. In general hospitals, consumptives should be assigned to special consumptive wards.

4. Special hospitals for the treatment of consumption should be established.

DR. F. P. KINNICUTT followed with a paper upon *Methods of Diagnosis in Diseases of the Stomach*.

DR. F. C. SHATTUCK also read a paper upon the same subject. The meeting closed with *A Report of Two Cases of Aero-megaly*, by DR. J. E. GRAHAM of Toronto.—(*Medical News*.)

Selections.

INFLAMMATIONS OF THE APPENDIX AND CÆCUM AND THE DUTY OF THE PHYSICIAN REGARDING THEM.

BY NORMAN BRIDGE, A.M., M.D., CHICAGO.

[From the *Medical News*.]

To anyone who reads the recent literature of this subject it will be apparent that it has received its chief study of late, not at the hands of general medical practitioners, who have the greatest opportunities for observing cases of these inflammations, but at the hands of surgeons, men who make surgery a specialty, and who see few cases in their incipiency of inflammation of the abdominal organs. The character and effects of these inflammations have been revealed to a large degree by post-mortem examinations, but it was left for modern surgery with its anti-septic methods to illuminate the subject of the treatment of many of their results as well as their character and tendencies. In proportion to the number of cases falling under the observation and management of surgeons the results in many ways have been profitable and encouraging. The surgeons have reached certain

conclusions as to the character of these inflammations and what ought to be done for them, some of which are rather sweeping, and which encounter doubt and opposition on the part of many practitioners who give little or no attention to surgery. If the results attained by surgery were put with the observations of large numbers of cases never requiring surgical interference, and which are never seen by workers in the field of surgery, we should have the safest guide for diagnosis and treatment.

It is certain that these diseases are frequently not recognized and are often mistreated, and that the notions of doctors generally regarding them need to be radically revised. An obstacle to the exact understanding of the whole subject is the reluctance practitioners manifest to reporting their unfortunate results and bad diagnoses.

One prevalent misconception regarding these inflammations is is of their actual and relative frequency. Primary inflammation of the cæcum is rare, while that of the appendix is very common. Of all organs of the abdomen in males the appendix is most prone to dangerous inflammation. In females this tendency is exceeded by the pelvic organs only. Of 300 autopsies at random Toft reports that 36 per cent. revealed evidence of disease of the appendix. Such evidence doubtless consisted of adhesions of the organ to adjacent parts, and of various changes in its structure and condition which can be caused only by inflammation of some degree or character. Often these appearances are found in cases not known to have ever had abdominal inflammation. Four-fifths of all cases collected by Fitz were in males, showing a marked predisposition difficult to explain. While of all cases of appendicitis without extension only 20 per cent. were in females, 26 per cent. of cases of perityphlitis were of that sex. This does not prove, perhaps, that women are more prone to perityphlitis from inflammation of the appendix than men, but the increased percentage may be explained by the possibly greater tendency in them to pure cæcitis from foreign bodies—aggravated by constipation—since irritation within the cæcum sometimes leads to perforation and perityphlitis.

Dr. Ludvig Hektoen of Chicago, a careful observer, has noted

the condition of the appendix in 280 post-mortem examinations, and found that in 42 cases (15 per cent.) there were evidences, in adhesions or otherwise, of peri-appendicitis from which the patient had recovered. Cases of existing inflammation were not counted. So in Chicago, among people who find their way into the County Hospital, fifteen in every hundred have had inflammation of the peritoneal surface of the appendix or the connective tissues posterior to it or both, and have recovered. These figures are not inconsistent with the records of Toft, since he observed all diseases of the appendix both inside and out, while Hektoen only recorded cases showing inflammation of the outside of the appendix, and which had recovered.

While primary inflammation of the cæcum is unusual, its secondary involvement from appendicitis and resulting perityphlitis or circumscribed peritonitis is doubtless common.

It must be extremely unusual for the cæcum to be primarily attacked, except when irritated by foreign bodies from within. Even in such cases it is rare for perforation to occur, this process usually beginning from without, when a perityphlitic abscess opens into the cæcum.

The vast majority of cases of so-called typhlitis and perityphlitis begin as appendicitis; the tissues of and about the cæcum become inflamed secondarily and usually as a result of perforation of the appendix. These two pathological conditions are often confounded; probably in most instances perityphlitis is the term to use. It is not the inflammation of the cæcum that is usually a menace to life, but that of the cellular tissue and peritoneum which so often leads to induration and to abscess with its manifold dangers of spontaneous opening in perilous directions.

Probably failure of free evacuation of the appendix is the first step in the causation of its commonest inflammation. The moment its contents are unduly retained harmful decomposition begins, deposits of lime salts occur upon retained faecal matter, if such is present, and enteroliths are formed which press too hard on the swollen and tense mucous membrane, which finally yields in the weakest spot, and an ulcer is present. Only occa-

sionally are similar consequences produced by foreign bodies in the appendix. In a considerable proportion of cases the ulcer occurs without the irritation of a hard body of any kind. The ulcer deepens by a persistence of its causes till it touches the internal surface of the covering peritoneum, or the cellular tissue if within the mesentery; then trifling peritonitis or cellulitis or both occur, ending in a few days if the causative process stops. If, however, the ulcer deepens it perforates the appendix, a particle of its contents is extruded, when peritonitis or perityphlitis promptly ensues. In some instances the peritonitis is sharply localized and plastic exudation bars the irritating material from the general peritoneal cavity, and intra-peritoneal abscess forms; in others a general peritonitis occurs, and usually death in a few days.

If the perforation is within the mesentery a cellular inflammation results, and we have the common perityphlitis—usually not wholly independent of more or less peritonitis—and in a large proportion of cases such induration as may be easily demonstrated, and within this, pus.

Most cases in males of so-called “inflammation of the bowels” are simply instances of inflammation of the appendix or cæcum, with or without the involvement of the connective tissue about them, or the peritoneum, or both. It is equally true that most cases of peritonitis in men and boys, and not a few in females also, are due solely to perforation and infection consecutive to these diseases. Until discovered after death this cause is generally not suspected. I venture the assertion that most autopsies after peritonitis in the male sex reveal this etiology—and sections are made in only a meagre minority of such cases.

A case in point came under my observation in consultation about two years ago:

“Mr. S., a large, robust man, 45 years of age, had enjoyed apparent perfect health for many years. After attending a banquet he stood for half an hour, dressed in thin clothes and without an overcoat, in a cold and windy doorway waiting for his carriage. The next day he felt uncomfortable; later, had some pain and slight tenderness in the abdomen; the next day, fever

and some vomiting. A consultation a day or two later discovered simply the evidences of mild general peritonitis; there was neither much fever, pain, tenderness nor prostration, and the tenderness was localized in the lower zone of the abdomen, and to the same degree on either side. There was moderate tympanites, but no dulness on percussion. He was somewhat under the influence of opiates. He continued in much the same condition for nearly a week, when the symptoms suddenly became worse, collapse soon appeared, and death in a few hours. The autopsy revealed a fresh general peritonitis, a peritonitis of longer standing localized about the appendix, the intestines glued together by thick, plastic deposits, a pocket of pus, with faecal matter, by the side of the appendix, and the latter perforated at its junction with the caecum. The steps in the case were appendicitis, ulceration, perforation, extrusion of faecal particles, localized peritonitis and abscess, extension of the poison and the process to the general peritoneal cavity, general peritonitis and death."

Many cases of supposed intestinal obstruction, such as intussusception and volvulus, with some evidence of inflammation, are instances of peritonitis from perforation of the appendix, or of abscess due to previous inflammation of the appendix and its results. The fallacious theory that is often held is that an obstruction has occurred, which in a few hours has developed inflammation. A case in my own hospital service well illustrates this error :

"A youth of less than 20 years walked into the hospital from a cab at the curbstone, complaining of pain in the abdomen. He said he had been sick for several days with this pain to such a degree that he could not lie down, but must sit in bed bent forward. His friends said it had been impossible at times to keep him in bed, his suffering was so great. The sickness had, it was declared, come on suddenly, and he had repeatedly vomited. After his arrival he vomited yellowish fluid having a stercoraceous odor. He had considerable fever, a pulse of 130, a tense abdomen, and a look of desperate sickness. A consultation with my surgical colleague, Dr. Graham, resulted in the conclusion that the case was probably one of obstruction followed by peri-

tonitis. Certain to die speedily without surgical relief, he was given the chance of laparotomy. Nothing but peritonitis was discovered. This was afterward found to have resulted from a perforation of the appendix.”

It is probable that abscess rarely occurs until after perforation, which may be regarded as the direct cause of it. Inflammation of small surfaces of the peritoneum with adhesions, however, often supervene, as well as probably some degree of cellular inflammation, without perforation.

The mortality from appendicitis, considering the frequency of the disease, cannot be regarded as great. The mortality from those cases eventuating in perforation of the appendix, however, is great, since this is the condition that leads to induration and extra-peritoneal abscess, and to acute severe local peritonitis and intra-peritoneal abscess, or to general peritonitis. The general peritonitis means almost sure death, and the abscess, wherever it is and however well it may appear to be surrounded by protecting plastic deposits, is a constant menace to life, as abundantly shown by its spontaneous opening into the abdominal cavity, the venous canals, the bladder, and the chest cavity, as well as externally and into the intestinal canal.

In view of these considerations, it is of the highest moment that we should be able, if possible, to distinguish the mild from the grave cases. One-fourth at least of all post-mortems show recoveries from previously existing inflammation, or other diseases of the appendix, and probably 15 per cent. show recoveries from peri-appendicitis. The duty and aim of the doctor must be to determine, clinically, if possible, the cases that form this vast class and commit them strictly to medical treatment, while he insists on surgery for those that lead to death directly, or to the hazardous results of abscess. Can this determination be made with certainty?

The diagnosis of perityphlitis is usually easy. Localized pain, sometimes masked early by pain elsewhere, often in the epigastrium, and by vomiting; more especially, localized tenderness; soon some evidence, both by palpation and percussion, of tumefaction in the cæcal region; possibly pain in this region on flex-

ing the thigh, and with some fever—all perhaps following or attending diarrhoea—are ordinarily sufficient. Percussion dullness is often present over the tumor, though tympanites sometimes masks it completely, but palpation discovers an induration even of small size if it is done carefully and in comparison with the opposite side. The diagnosis of acute appendicitis before the advent of perityphlitis is more difficult, from the absence of any tumor and the deep location in the abdomen of the tenderness. The appendix sometimes hangs down into the true pelvis and far from the anterior wall of the abdomen. An appendicitis may be ushered in by vomiting and pain in the epigastrium, which may evoke such complaint as to mask the pain in the caecal region. In only a little over one-half of all cases of acute inflammation in the caecal region is the pain mostly in that locality, while in nearly one-third the pain is attributed to the abdomen generally. Sometimes there is a misleading sensation of induration to touch due to the tension of the abdominal muscles over the tender point, a condition that wholly disappears under anaesthesia. For purposes of diagnosis the hypodermic needle is permissible only when it is absolutely certain that it may be passed into the centre of the induration without entering the general peritoneal cavity. It is unsafe to use it in a supposed intraperitoneal abscess. The absence of fluctuation over an induration is no proof of the absence of pus; pus is present in all large and in most small indurations of a few days' standing. In a few cases (it must be very few) digital exploration of the rectum will discover indurated tissue below the caecal region.

A large proportion of first attacks, and probably many subsequent attacks, of acute appendicitis will doubtless recover without abscess, and with slight cellulitis or local peritonitis and adhesions, under proper treatment; namely, quiescence in bed, hot applications, anodynes, light diet, and a rigid avoidance of all influences that can provoke general intestinal peristalsis. It can hardly be questioned that a majority of such cases recover even without these wholesomely safe measures of treatment and hygiene. Many cases of chronic appendicitis utterly fail to improve much under any treatment, albeit treatment doubtless often prevents such from passing on to ulceration.

When to go beyond medical treatment of these diseases and insist on operation probably cannot be determined by any absolute rule. Each case must be dealt with by itself to some degree, since cases differ widely ; but there are certain general principles that ought to guide us, in view of which we cannot shirk our full responsibility.

Reliance on medical treatment is justifiable in acute inflammation in the cæcal region (*i.e.*, appendicitis, perityphlitis, or typhlitis) of moderate severity, in the absence of strong evidence of perforation, abscess, peritonitis, or marked tender induration lasting two or three days without some sign of decrease, and of high temperature either continuous or recurring, rapid weak pulse, or rapid anxious respiration. But we can never know when a catastrophe is to occur, even in an apparently mild case such as is here characterized. A few cases falling in this category will suffer sudden perforation, general peritonitis, and death ; but nearly all of them, failing of prompt recovery, will, if perforation occurs, have sharply localized peritonitis or perityphlitis, and probably abscess that will be easily discovered, and will demand surgical treatment. That, in a high percentage of a large number of post-mortem examinations made on all sorts of cases, there should have been found evidence of previous, recovered appendicitis would seem to justify the position here taken.

Reliance on medical treatment is also justifiable in subacute and chronic inflammation where the constitutional symptoms are mild, pain and tenderness slight, and the induration small and not increasing. Such cases frequently suffer occasional slight exacerbations of short duration, which do not positively indicate the need of an operation, unless each recurrence increases the size of the tumor or its sensitiveness to pressure, or develops other proof that it is an abscess. To say that every perceptible induration at the site of the cæcum should receive the ministrations of surgery is not justifiable ; and probably numerous cases might be reported of operation on small indurations without discovering pus. One such is here presented :

“ Mr. A. B. entered my hospital service complaining of slight pain and tenderness in the right iliac region, and giving a history

of several attacks of acute inflammation within a year. In each attack there was moderate fever, and in the beginning frequent diarrhœa. A small induration over the lower part of the cæcum was distinctly made out; it was slightly tender to pressure, and forward movement of the right thigh was embarrassed. This case was transferred to my surgical colleague, Dr. Parkes, in the belief that an operation should be made. He performed laparotomy, and found some thickened omentum, numerous adhesions, some of which he separated, but neither abscess nor appendicitis. The wound healed promptly."

The two outlines given above include the vast majority of all cases, and if the premises are correct, then these cases are most properly committed to strictly medical treatment, and the only proper treatment is the conservative course already described.

But surgical interference is demanded in certain cases of inflammation in the region under consideration, whether they happen to be called typhlitis, appendicitis, perityphlitis, or by some other name, and the weight of first responsibility is on the physician more than the surgeon.

1. Surgery is imperative in cases of acute inflammation in the cæcal region, with rather protracted high temperature, and with distinct induration, sensitive to pressure, that does not show positive evidence of subsidence within two days, or three or four days from the beginning. This rule becomes more urgent if the induration continues to increase in size and sensitiveness after two days, or if symptoms of general peritonitis occur, or rapid, weak pulse, or rapid respiration. The vast majority of such cases if left to themselves eventuate in abscess in less than a week, and many before that time lead to mortal peritonitis. Some require operation in less than two days from the beginning of the attack, and most of them have perforation of the appendix as early as the beginning of the symptoms.

I am aware that a few cases here characterized do not require operation and would recover without it, but the number is so small compared to those in the greatest peril, to which it is a crime not to offer the benefit of surgery, and the danger of an antiseptic operation is so slight that they constitute no impeachment of the rule.

2. Operation is required in cases of undoubted severe acute inflammation in the region of the appendix, even though no particular induration is demonstrable, and in cases of acute localized peritonitis having its origin certainly at the appendix and causing marked constitutional symptoms. In the one situation there is almost certainly such violent inflammation of the appendix as seriously to threaten perforation, with all its dire possibilities; in the other, perforation has occurred and an abscess is probably forming. In the one case there should be laparotomy and extirpation of the appendix; in the other, laparotomy, extirpation of the appendix, if possible, and treatment of the abscess. Probably these two classes cannot be distinguished from each other; many of the symptoms of the one belong to the other. Practically, it is hardly important that they should be distinguished, as both abundantly justify surgical interference; the patients are in vastly less jeopardy with the operation, when carefully made, than without it.

3. Surgery is especially promptly required in that small class of acute cases in which a large, sensitive induration develops rapidly, with high fever and general evidence of severe constitutional disturbance. Here extensive deposit and large abscess are almost certain to be present, and the danger of early rupture into the peritoneal cavity is considerable, hence the necessity of prompt action.

4. Surgical aid is demanded in all cases which have advanced to the subacute or chronic stage with distinct induration of considerable size, or with any induration that steadily increases in size for many days, since in most such cases pus is present. These are the cases where sometimes weeks and months after the acute stage a tumor of variable size is found in the iliac region, slightly tender, dull on percussion, and attended by a slight stiffness in walking dependent on pain in flexing the right thigh. Usually in such cases there are frequent exacerbations of moderate suffering in the affected region, often with slight fever, and disabling the patient for a day or two. Unless the tumor is very small pus is almost invariably found in its midst, the quantity varying from a few drachms to many ounces. The

patient cannot be safe so long as an abscess is present in the neighborhood of the cæcum, but the danger is in proportion to the size of the abscess. Some portion of the cæcum must generally form a part of the abscess wall, hence the liability of rupture into this canal and into the peritoneal cavity. In a case seen by the writer in consultation with Dr. J. B. Murphy, a perityphlitic abscess had undoubtedly existed for a year, since the date of a previous illness in which there were dull pain and fever for several weeks. The abscess ruptured into the abdominal cavity while the patient was scrubbing a floor; peritonitis rapidly supervened; a circumscribed large peritoneal abscess formed, which was opened by Dr. Murphy, and a quart of pus evacuated. This case also exemplifies the large induration developing rapidly already referred to. The apparently small difference between cases sure to die without operation and those likely to recover without it, as well as the difficulty in finding the line of duty in management, is shown in the two cases that follow:

“D. F. G., aged 14 years, robust and active, went hunting on April 30, 1881, and became very tired. The whole of the next day he felt fatigued.

May 2nd.—Felt a little better, but had a mild diarrhoea; next day more diarrhoea, pain, and slight tenderness on pressure in the cæcal region. *4th*—I was called and found the diarrhoea better, but still some pain and tenderness at the point mentioned; pulse was 100 and temperature 101°F. *5th*—Patient was improved; slight tumefaction in the cæcal region; pulse 100 and temperature 101.7°F. *6th*—No pain; tenderness less; pulse 100, temperature 99°F. *7th*—Temperature 99°F. There had been no increase in respiration rate, and the patient felt convalescent. The next day at 11 p.m. a piercing pain was felt in the lower abdomen at the right side, lasting only a few minutes. Some tenderness was found soon afterward, but no tympanites; the pulse was 100 and small, temperature 98.5°F.; respiration 20. Collapse came on in six hours, pulse was 150, temperature 98.5°F., and death in four hours more. It was found, post mortem, that perforation of the appendix had led to an intra

peritoneal abscess containing an ounce of pus ; that the plastic wall of this abscess had given way at its superior point, a fulminating general peritonitis being instantly lighted up. The rupture was at the distal end of the appendix, which was gangrenous."

"G. B., aged 30, salesman, strong and active, had had occasional attacks of pain in the abdomen lasting for a few hours. He was seized last February, in the morning, with severe pain in the lower abdomen, and went home and to bed. By evening his temperature was 104.5°F. ; then he discovered that the pain, which had continued to some degree all through the day, was most intense in the right iliac region. His bowels were moved by an enema. I saw him first at this time and found tumefaction and dulness in the cæcal region with the slightest possible tenderness ; next day and the day after, the evidence of tumor was greater than at this time, the tenderness being reduced. The second day of attendance the temperature was over 103°F., the third day 102°, and the day following 99°, from which time convalescence was rapid, and he was out in a week from the onset. The pulse was at no time much above 100, and the respiration was not accelerated ; there was no diarrhoea and the patient was tranquil in mind."

It will be seen that the temperature rapidly fell after the third day of the sickness ; with its fall the evidence of tumor rapidly disappeared. In this case tumefaction and dulness on percussion were marked in the cæcal region, and entirely disappeared with recovery, and there was never any notable tenderness. In the case of D. F. G., clinical evidence of tumor was slight, but during the first week there was constantly more or less tenderness, a symptom we now know as some indication for surgical relief.

5. Surgery is justifiable in all cases of undoubted chronic appendicitis with occasional exacerbations even if no induration is present. In all such cases we cannot doubt that the patient is in constant danger of perforation of the appendix and mortal peritonitis or perityphlitis—a danger greater than that involved in an antiseptically done laparotomy and extirpation of the little organ entire.

If the diagnosis was positive in every case there could be no objection to this proposition, for it covers only cases with some persistent cause of the inflammation, and not those with a temporary cause, and a single seizure with no special tendency to a recurrence. The persistent cause is usually something within the appendix that makes pressure and irritation, and back of that some constriction of the appendicular opening or some fault of its valve; the cases of one mild attack and quiescence afterward are those in which there is no incarceration of irritating matter of any sort, and where the exit from the canal is free.

Fitz says catarrhal appendicitis is probably not recognizable. The diagnosis of such cases is beset with difficulties, and probably many of them cannot be diagnosed, but some may be, and these should not fail to receive the benefit of surgery simply because they may not appear for the moment to be formidable. The diagnosis must often be made by exclusion, and is easier in males than females, since in the latter the pelvic organs are apt to produce symptoms resembling those of appendicitis. The following case is illustrative :

“ A lady of 28 years, vigorous and robust, had experienced from time to time since girlhood slight pain in the right groin and thigh, often aggravated by exercise. Occasionally there was accompanying but less pain in the left groin and thigh. Last summer she had what appeared to be a dysenteric attack, passed bloody stools, had much pain in the abdomen, especially on the right side, and fever. She recovered and resumed her active life, which required her to be much upon her feet. Soon pain in the abdomen recurred, then came slight fever, anorexia, occasional vomiting and constipation, tenderness over the hypogastrium, and pain in the thigh. At the end of six weeks she entered my hospital service and was carefully examined, my gynecological colleague, Dr. Merriman, assisting. Then she was in bed, unable to move without pain in the abdomen, and suffering considerably in the thighs, hypogastrium, and right inguinal region. The abdomen was tender over its right side, from the border of the ribs to Poupart's ligament, but no tumefaction or dulness was discoverable. An examination of the pelvic organs

revealed nothing pathological, nor could any induration be felt through the vagina or rectum. She had a daily rise of temperature to 100° or 101° F. The thighs were kept flexed much of the time, and pain in the psoas region occurred on flexing the right thigh against resistance; a daily enema was required; the appetite was poor, and the sleep much disturbed by pain. She soon began to improve, and in a month or six weeks could turn in bed with only slight discomfort; her appetite was better, the pain less, and the temperature much of the time normal. The tenderness in the abdomen, however, persisted and became more marked over the caecal region; and one or two tentative efforts at sitting up were followed by rise of temperature and return of pain lasting two days or more. It now seemed that the history and course of the case had excluded every other pathological condition but some chronic inflammation at the location of the caecum and appendix, and that the time for surgical exploration had arrived, and my colleagues, Drs. Parkes and Merriman, examined her at my request and agreed that an operation was justifiable. Laparotomy was made by Dr. Parkes, and the appendix was found enlarged in its diameter, hard and tense, projecting forward in an erect position, and deeply congested. No other pathological condition was discovered in the abdomen. The appendix was extirpated and found to contain three small enteroliths, and a quantity of thick, tenacious mucus; its walls were thickened. On laying it open longitudinally it assumed instantly a rolled form in the reverse direction—apparently the peritoneum contracted and the thickened mucous membrane and muscular tissue became extended. The patient made a good recovery from the operation and her symptoms have disappeared.”

There was in this case no evidence of beginning ulceration of the appendix, and so no immediate danger of a perforation, but the tension of the organ was so great as to prove the existence of an almost complete closure of its opening, and must have led to ulceration sooner or later. Moreover, the patient apparently would have been a permanent invalid without the operation.

Anæsthetics in Natural Labor.—Obstetric anæsthesia is quite different from surgical anæsthesia, the latter being indicated for all obstetrical operations. Obstetric anæsthesia may be general or local. For the former are used ether, chloroform, chloral, and a variety of mixtures, including the bromide of ethyl and the protoxide of nitrogen. Chloral can hardly be considered as a general anæsthetic in the same sense as ether and chloroform. An injection of three or four grammes of chloral in solution given during the period of dilatation, and repeated, perhaps, in four or five hours, will often prove of the greatest benefit and comfort to the patient, regulating the pains, moderating the suffering of the patient, and abbreviating the duration of labor. In the latter part of labor chloral is less useful than chloroform, this substance being now almost universally used in parturition. When it is employed only in the first stage of anæsthesia no particular influence is exerted upon the contractions. If it is pushed to the second stage the contractions are retarded, but soon resume their normal rhythm. In the third stage of chloroform anæsthesia the contractions are diminished, or may cease altogether. This is a stage of danger, for not only the uterus but the heart and other muscular organs may be paralyzed. The foetus experiences very little of the effect of the chloroform. The author's experience is thus summed up :

1. Chloroform given in small doses produces a condition of physical and moral calm in the patient.

2. If the inhalations are prolonged for a considerable time, the result will usually be an attenuation of the uterine pain. The perceptions of the patient become less keen and the uterine contractions are slower.

3. If the period of complete anæsthesia is reached with analgesia, there is surgical and not obstetrical anæsthesia.

4. In some cases chloroform excites instead of calming, and in such cases its use should be discontinued.

5. In some cases chloroform has unquestionably diminished the retractability of the uterus, and has thus been the cause of more or less severe hemorrhage after labor.

6. Chloroform has no action upon the foetus.

7. Chloroform given during the period of expulsion has a less decided effect upon the contractions of the abdominal muscles and the resistance of the perineum than is generally supposed. The sensation of pain at that period is not entirely abolished, the contractions are frequent.

Chloroform is especially indicated :

1. In primiparæ who are nervous and excitable, and in whom the pain may even cause delirium ; also in those with whom the labor is greatly prolonged, thus becoming a source of danger.

2. In all cases in which there is spasm, contraction, or rigidity of the neck or body of the uterus. Contra-indications are the absence of severe suffering, the existence of placenta prævia, general prostration, disease of the circulatory or respiratory organs, cerebral disease, alcoholism, etc.

During the period of dilatation chloroform is most required, but only to the extent of obstetric anæsthesia, as a rule. It sometimes gives rise to nausea, vomiting, headache, and various nervous troubles. Hemorrhage is not likely to result unless the anæsthesia is profound. Chloroform cannot cause convulsions ; on the contrary, it is one of the best means for relieving them. It may also be useful in warding off puerperal mania from those patients in whom the intense pain of parturition might lead to such a result. Dutertre has found reports of forty cases of sudden death during labor attributable to chloroform, but of that number thirteen should be eliminated as irrelevant. Of the others, some had cardiac or pulmonary disease, some suffered from alcoholism, and in others the narcosis was too profound. A first condition in the use of chloroform is that it be chemically pure ; death from respiratory syncope may follow the use of an impure article. Small quantities should be given, the patient being in the horizontal position, and there should be an interval between successive inhalations.

Subcutaneous injections of antipyrine, 25 centigrammes at a dose, have been used in a number of cases to produce obstetric anæsthesia. Other mixtures have been suggested, in most of which ether, chloroform, or chloral is an element. The author expresses his views upon the subject as follows :

1. Nothing can be applied to relieve the pain caused by the distension of the lower segment of the uterus which causes the pain felt during the contractions.

2. Applications of cocaine may give relief if they reach the nerve-endings of the supravaginal and infravaginal portions of the cervix and the nerves of the vagina. Thus the pain of dilatation may be modified.

3. For the pain produced by compression of the nerve trunks of the pelvis no local application will avail.

4. The pain in the vulva and vaginal mucous membrane during expulsion may be somewhat modified by local applications.

As to the value of hypnotism in parturition it must have a limited range. Of thirteen cases in which it was tried, it was successful in only four, the patients all being of a hysterical temperament.—(*Dr. A. F. Currier; N. Y. Med. Journal.*)

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ASYLUM MANAGEMENT.

It has now been authoritatively ascertained that nearly one hundred persons—mostly women—lost their lives in the dreadful holocaust at the Longue Pointe Asylum. In addition to these, a large, but uncertain, number of the patients have since died in consequence of the exposure, hardships, and increased mental excitement following the fire. It was, indeed, an appalling and a heartrending calamity, and it is sincerely to be hoped that the Government of this Province will take steps to ensure, as far as human foresight can, against any possibility of a repetition in the future of such a wholesale sacrifice of human life. It is a foregone conclusion that no radical change will be made in the method of caring for the insane in this Province. That method is the old everywhere-else discarded plan of farming out the lunatics—a plan, the fundamental defects of which have been exposed and condemned by all alienists of modern times—a plan which, with especial reference to this very Asylum, was shown by Dr. Tuke years ago to lie at the very root of the crude abuses and the mouldy mediævalism which pervaded all its departments. The opposite method, the direct care of the insane by the Government, which appoints the superintendents, builds the asylums, and controls all their operations—is that which commends itself to every intelligent man who gives the matter a moment's consideration; and is the method employed in our other Provinces where the management of the asylums has been highly spoken of by all experts who have visited them. There can be no comparison between the two systems. It is useless

for anyone at the present day to attempt a defence of the farming system, but in spite of that, we are obliged to say as we have already said, that no change in the direction of the modern treatment of our lunatics is to be hoped for. The nuns will get a new contract and will go on in the old way. The whole community was stirred by the simple narration of the facts gathered by Dr. Tuke at his inspection of the establishment. Some people, more sanguine than those who know the Province better, believed that this event was bound to lay the foundation of a new era. But public interest in the matter soon began to flag; no sturdy philanthropists appeared to keep the matter under discussion and by frequent repetition prevent a too-easily satisfied public from relapsing into its former apathy. Thus, after a few months, new topics of interest took the place of that of asylum-management, and everything has been going on as before. Then came the great fire and its dreadful loss of life. The newspapers point out that the duty of the Government is to re-consider the entire question, and especially to take over the direct care and management of their helpless wards. That duty is as clear as day; but, will they do it? As already stated, all information goes to show that that duty will not be performed—but that in this matter we shall remain, as heretofore, a standing reproach and a shame.

CHANGES IN MCGILL.

The old friends of Dr. Fenwick will regret to learn that, owing to impaired health, he has been obliged to resign his professorship in McGill University. As Demonstrator of Anatomy, as Professor of Clinical Surgery, and now for many years as Professor of Surgery, Dr. Fenwick has done admirable teaching work, has well maintained the high reputation of his department bequeathed to him by Dr. Geo. Campbell, and has taken a large part in moulding the present generation of Canadian practitioners. His keen interest in matters of surgical progress has never abated, and his great operative skill yet remains to him. He has won a well-merited rest from the laborious work of teaching,

and will, in future, have more time to devote to his *clientèle*. We trust that, with the renewed vigor secured by a lessening of his labors, Prof. Fenwick may yet live for many years to continue his much appreciated work in the interest of his patients and the public. We are glad to know that the Governors of the University, in view of his long and great services to the College, have raised him to the position of Professor Emeritus, so that the Faculty still will have the benefit of his presence and his wise counsels.

The vacancy thus created has been filled by the appointment of Prof. T. G. Roddick to be Professor of Surgery. Dr. Roddick will, however, retain his chair of Clinical Surgery in addition, and will continue to take an active part in hospital work during the winter sessions. We are certain that this appointment will meet with enthusiastic acceptance from the Canadian medical public.

In future, Dr. James Bell, who for some years has had experience in the teaching of practical surgery with the junior class, will assume the majority of the lecture and clinique work with the senior class. He has been appointed to the position of Lecturer on Clinical Surgery. Dr. Bell's already large experience in general surgery, the care and skill he has shown as an operator, and his zeal as an investigator, ensure his doing good work in the important department which he now assumes.

THE FATAL AFTER-ACTION OF CHLOROFORM.

Recently attention has been directed to a fatal action of chloroform coming on some hours or even days after its administration. Ostertag, in a paper published in the *Deut. Med. Zeitung*, records the result of a series of experiments he performed on rabbits, dogs and cats. By keeping the animals under chloroform for several hours, he almost invariably found that fatty degenerative changes were induced in different organs. The liver, heart and kidneys were found to be the most frequent seat of these changes. That similar changes are possible in man is very probable. The subject is one which has received but little attention. That chloroform may bring about a fatal issue days after

its administration from a destructive action on the cellular elements of the blood is a well recognized fact. Such a condition has, we believe, come under our observation. The case was one where chloroform had been given for several hours; the patient became cyanotic and icteroid, and died within twenty-two hours. The practical lesson to be derived from these observations is, that prolonged chloroform anæsthesia has its special dangers and should be avoided.

TOXIC ALBUMINURIA.

It is well known that albuminuria can be experimentally induced by certain drugs. Digitalis, for instance, will, in animals, as surely give rise to albuminuria, as the compression of the renal artery or vein and the mode of action is similar in the two cases. Digitalis acts by practically inducing compression of the renal arterioles. Strychnine has been proved to have a similar action to digitalis. Both of these agents induce albuminuria through their influence on the circulation.

We have a second class of drugs which bring about albuminuria by a direct action on the secreting texture of the kidneys. Cantharides, lead, mercury and chlorate of potassium act in this way.

It has recently been pointed out that albuminuria is not infrequent in those afflicted with the morphia habit. In a communication to the Société Méd. des Hop., Huchard advances the view that this accident is due to the action of the drug in lowering the blood tension. He narrates a case fatal with uræmic symptoms. It is important that the urine in all cases of the abuse of morphia should be examined, for the presence of albumen in it would certainly be an important guide to judicious treatment.

—An interesting ceremony took place recently in the surgical theatre of the General Hospital at Munich. The occasion was the celebration of the return to work of Prof. Nussbaum after a long and dangerous illness. The festal reception given him by his assistants and students, and the enthusiasm with which he

was greeted, showed the profound respect and affection which is entertained for this great surgeon. He expressed his gratitude for their kindly welcome, and felt thankful to the Almighty that he was once more spared to go out and in among them.

—The malaria plasmodia are now being universally recognized throughout Europe. Within the last few months L. Pfeiffer of Wiesbaden, R. Paltauf of Vienna, V. Jaksch of Gratz, and Plehn of Berlin, have had opportunity to investigate cases of malaria, and have all, without exception, recognized the correctness of Laveran's description.

Personal.

—H. S. Birkett, M.D., has been appointed Laryngologist to the Montreal Dispensary.

—Archie W. Campbell, M.D., has started practice as a specialist in laryngology in this city.

—T. Johnson-Alloway, M.D., has been appointed Assistant Gynæcologist to the Montreal General Hospital.

—T. A. Rodger, M.D., surgeon to the Grand Trunk Railway, has been appointed Assistant Surgeon to the Montreal General Hospital.

—Dr. Burgess, the recently appointed superintendent of the Protestant Hospital for the Insane in this city, has arrived, and will in a few days be able to receive patients. Dr. Burgess is a welcome addition to the professional men of Montreal.

Medical Items.

—A monument to the memory of Dr. Mesmer, from whom mesmerism derives its name, was lately unveiled at Dresden.

—Dr. H. C. Wood of Philadelphia has been appointed to deliver one of the public addresses at the International Medical Congress in Berlin.

—A committee has been formed at the Sorbonne for encouraging foreigners to study at the University of Paris. M. Pasteur is president. It is proposed to give special facilities to foreign students immediately upon their arrival in Paris.

TYPHOID FEVER.—A. Wiltshour of St. Petersburg, examined, in 28 cases, the stools of typhoid patients. He never found the specific bacilli earlier than the tenth day, after which date it was almost constantly present in the proportion of 1 to 25 or 30 of the other bacteria. Out of 35 cases where the blood was examined microscopically and by cultivation methods the characteristic bacillus was found once on the eighth day.

—During the past few years the subject of hygiene has received marked attention from the German Government. In nearly all the leading universities there are now hygienic institutes, thoroughly equipped in every way to afford to students excellent opportunities of acquiring a sound knowledge of this important subject. Last month the new Hygienic Institute in the University of Halle was opened by an address from Professor Benk. The Institute has a lecture-room which can accommodate sixty students, and also special chemical, physical and bacteriological laboratories. It is hoped that before long McGill University will possess a hygienic institute which will rival in completeness that of the German universities.

—J. B. Lippincott Company announce, in press, an important work on "Regional Anatomy in its relation to Medicine and Surgery," by George McClellan, M.D., Lecturer on Descriptive and Regional Anatomy at the Philadelphia School of Anatomy, etc., etc. With about one hundred full-page fac-simile illustrations reproduced from photographs taken by the author of his own dissections, expressly designed and prepared for this work, and colored by him after nature. To be complete in two volumes of about 250 pages each; large quarto. The object of the work is to convey a practical knowledge of regional anatomy of the entire body; the text to embrace, besides a clear description of the part in systematic order, the most recent and reliable infor-

mation regarding anatomy in its medical and surgical relations. The illustrations are intended to verify the text and to bring before the reader the parts under consideration in as realistic a manner as possible. Vol. I. will be ready for publication about December 9th, and the second volume is expected to appear shortly thereafter. The work will be sold by subscription only.

ONTARIO MEDICAL ASSOCIATION.—The following are the officers of this Association for the ensuing year:—

President—Dr. W. H. Moorehouse, London.

Vice-Presidents—Dr. Charles Sheard, Toronto; Dr. J. W. Gibson, Belleville; Dr. Powell, Ottawa; Dr. Wishart, London.

General Secretary—Dr. J. Gibb Wishart, Toronto.

Assistant Secretary—Dr. W. P. Caven.

Treasurer—Dr. E. J. Barrick, Toronto.

Committee on Credentials—Dr. Shaw, Hamilton; Dr. Lowry, Acton.

Committee on Public Health—Dr. W. J. Charlton, Weston; Dr. Farley, Belleville.

Committee on Legislation—Hon. M. Sullivan, Kingston; Dr. Waugh, London.

Committee on Publication—Dr. J. L. Davison, Toronto; Dr. A. Primrose, Toronto.

Committee on By-laws—Dr. Griffin, Hamilton; Dr. Carson, Toronto.

Committee on Ethics—Dr. A. R. Harvie, Orillia; Dr. J. F. W. Ross, Toronto.

The following were elected honorary members: Dr. T. A. Emmet, New York; Dr. E. M. Moore, Rochester; Dr. Joseph Workman, Toronto; and Dr. William Mickle, London, Eng.

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