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END TO END ANASTOMOSIS OF INTESTINES BY
MEANS OF THE MURPHY BUTTON.

By JAMES BELL, M.D.,

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I am able to report three cases in which I have used the Murphy button to secure end to end union of intestine after resection. In two the results were completely successful and most satisfactory. In one thus made there was non-union, sloughing of the apposed ends of the bowel, escape of contents and death from peritonitis. Two of the three operations were upon the same patient, and it was the second operation upon this patient which proved fatal. I am, therefore, enabled to present specimens showing (1) the union which had resulted from the first operation, as well as (2) the sloughing of the bowel which resulted from the second operation. This case is, moreover, a most interesting and puzzling one from a pathological standpoint, although I wish for the present to direct attention specially to the use of the Murphy button.

The second case was one of femoral hernia, in which 39 hours of strangulation had produced complete gangrene of the extruded loop of bowel. Until very recently such cases were the *bête noir* of the surgeon, and the question,

* Read before the Montreal Medico-Surgical Society, November 30th, 1894.

“What shall be done with cases of gangrenous hernia?” has been much discussed. This case and others, now a goodly number, of recoveries after resection of the bowel, indicate the only rational treatment, and it is particularly in this very class of cases, where rapidity of operation is frequently such an important consideration, that artificial aids are, if useful at all, of the greatest service.

CASE I.—J. W. McC., male, *æt.* 40, had always enjoyed good health until June, 1893, when, while in Chicago attending the World's Fair, he was suddenly seized with severe and painful diarrhoea. The diarrhoea subsided in four or five days, but pain remained, and he felt so badly that he came home and was unable to work for six weeks. His bowels had never been quite regular since this attack. He recovered fairly well, however, until December, 1893, when he had another attack of pain and a hæmorrhage from the bowels. Since that time he had never had a natural movement of the bowels, without a purgative, and he had suffered greatly from wind, which, after rumbling about for some time, finally escaped in an explosive manner, giving great relief. In February, 1894, he was seized with faintness and some hours afterwards passed a large quantity of blood per rectum. A similar attack had occurred once since. On the 14th June, 1893, he was admitted to the Royal Victoria Hospital, with complete obstruction of the bowels of six days standing, and for which he had been given various kinds of purgatives, as well as enemata, but without any effect. His abdomen was greatly distended. The principal distress was referred, vaguely, to the hypogastrium, and bimanual examination, (with a finger in the rectum), discovered an ill-defined mass in the middle line, about midway between the umbilicus and the pubes. This examination gave a good deal of pain and was followed by the passage of a little flatus and soon afterwards by a liquid stool. The symptoms were at once relieved and free evacuation of liquid *fæces* continued for two or three days. He remained well, with the exception of the wind and constipation, which was relieved from time to time by purga-

tives until the 14th of July, when he was seized with faintness, and became quite pale. This condition lasted all the afternoon, and the patient stated that he knew from his past experiences that he was about to have a hæmorrhage, and within a few hours a large quantity of dark clotted blood was passed per rectum. I now advised operation, to which he readily consented, and on the 19th of July I opened the abdomen in the middle line below the umbilicus and directly over the part at which the mass had been felt, although it had disappeared with the free evacuation of the bowels and had not since been discoverable. Two loops of small intestine, each acutely bent upon itself, were found attached to a mass which overhung the brim of the pelvis. These were carefully separated, when it was found that they both communicated with a free cavity, bounded posteriorly by the mass above mentioned, and in which lay a long irregular mass of inspissated faecal matter. The obstruction was at the upper of the two acutely bent portions of the ileum, and the bowel above this angle was three times as large as it was below it. Over a space of two inches in length, and involving one-third of the circumference of the bowel the wall of the gut was entirely absent. This portion was excised and the ends united by the Murphy button. At the lower attached loop the destruction of the bowel was less, being about one inch in length, and involving a narrow strip along the mesenteric border. These deficiencies in the wall of the bowel were apparently the result of a destructive ulcerative process. It was from this point that the hæmorrhages had occurred, and a small artery, which was ulcerated through, bled very freely. The vessel was ligatured and the opening in the bowel closed by a continuous Lembert suture running obliquely from the mesenteric border to near the free border of the bowel. This, of course, narrowed the lumen of the gut somewhat, and gave me some anxiety as to the possibility of the passage of the button, which, it will be noted, was on the proximal side of this suture. My only alternative, however, was another resection and end to end anastomosis,

and I decided to leave it as it was, as I had still to turn my attention to the mass overhanging the pelvis, and which had been in such intimate relation with the bowel already operated upon. Careful examination of the mass led me to the conclusion that it was simply cicatricial, and that it did not involve any other part of the intestinal canal. The subsequent history shows that I was wrong in the conclusion arrived at, as to the character of the mass, but right as to its not then involving any other portion of the bowel. The patient made an excellent recovery, and after a week or ten days his bowels moved regularly and he passed large well formed stools (showing that there was then no obstruction in the rectum or sigmoid flexure), but the button never came away. With the exception of some discomfort after an enormous dinner of corned beef and cabbage and several summer apples, he continued well and left the hospital on the 12th of August in first rate condition. (He wrote me the day after leaving the hospital, to say that we had not felt so well for two years.) On the 11th September he returned, again suffering from obstruction. He had enjoyed good health for from one to two weeks after leaving the hospital. Then diarrhoea set in for a few days, after which it was succeeded by constipation and rumbling of wind in the intestines, ending as before in painful and explosive evacuations with temporary relief. This continued until September 18th at 4 p.m., when obstructive symptoms, (inability to pass even flatus, vomiting, &c.), came on. These were attributed by the patient to the arrest and impaction of the button (which had never been found), in some portion of the ileum or large intestine. In this condition he reached the hospital on the night of the 11th of September, and on the following day at 2 p.m., forty-six hours after the onset of the symptoms I reopened the abdomen through the original median incision. The button was found free in the splenic flexure of the colon and removed through a small incision on its free surface, which was closed by Lembert sutures. I had

previously discovered the obstruction in the lower portion of the sigmoid flexure by passing the button down through the descending colon and attempting to expel it per anum. The site of the previous resection could only be located by the irregularity in the mesentery, and the bowel was of uniform size above and below it. The mass overhanging the brim of the pelvis was apparently smaller and was certainly much more movable than at the previous operation. The site of the obstruction having been located in the lowermost portion of the sigmoid flexure, I proceeded to remove it, together with the tumour overhanging the brim of the pelvis, with which it was continuous. This was finally accomplished after some difficulty owing to the depth in the pelvis at which the manipulations had to be carried on. The mass, which was dense and hard, surrounded the bowel as a narrow band, (about an inch in width externally), and nearly closed its lumen, leaving only a narrow slit about as large as a waistcoat button hole. It was infiltrating and was evidently either cicatricial tissue or scirrhus cancer. It has since been demonstrated to be the latter. During the operation the bowel was occluded on either side by a piece of hollow rubber tubing. About three inches of the bowel was removed, and the ends united by the largest sized Murphy button. The operation lasted about two hours and was well borne. There was little loss of blood and no fouling of the peritoneal cavity. A glass drainage tube was carried down to the bottom of the pelvis and exhausted from time to time. A small quantity only of odourless fluid—at first blood-stained and afterwards colorless—was all that was withdrawn from the tube for forty-eight hours, during which the patient did typically well in every respect. Several copious evacuations of dark liquid feces occurred, the first about three hours after the completion of the operation. There was no vomiting, the pulse ran from 88 to 94, and the temperature from 98.5° to 99.5°F., and with the exception of the thirst and restlessness usually observed after

severe abdominal operations, he was perfectly comfortable. About 2 p.m., on the 14th, (48 hours after operation) the patient was seized with very severe pain which was not sensibly relieved by a moderate quantity of *Lig. opii sed.* (Battley) injected hypodermically. The dressing was removed and the glass drainage tube found filled with liquid faecal matter. From this time he sank rapidly and died in about 18 hours. Post-mortem examination discovered a general peritonitis, with quantities of liquid faecal matter free in the peritoneal cavity. The button remained in situ, but the approximated ends of the bowel were completely gangrenous in their whole circumference and had given way just beyond the border of the button. I cannot offer any satisfactory explanation of this unfortunate result. Dr. Murphy states, in a letter to me, that "this is an exceptional case and has not occurred so far, except where there was infection from without, preventing the union, and where the post-mortem showed that there was no effort at union at any portion of the circumference, as well as at the point where the perforation occurred. This condition was certainly shown by the post-mortem in this case, but I cannot believe that it was primarily due to infection from without. I cannot believe that with such symptoms as I have narrated in the history of the first forty-eight hours after operation there could have been infection from without. I am much more inclined to attribute it to one of two things, either (1) impairment of the vitality of the ends of the bowel by the use of the elastic ligature; or (2) pressure upon the wall of the bowel between the end of the glass drainage tube externally and the button internally, producing erosion and escape of intestinal contents, and then infection from without. Finally, it is perhaps open to question, whether the vitality of the bowel was not already impaired by its great distension about the stricture, and also whether, considering the thickness of the wall of the bowel in this situation, the button may not have been closed too tightly.

CASE II.—Mrs. M., æt 49; strangulated femoral hernia.

Operation in the Royal Victoria Hospital, October 20th, 1894, at 11 a.m., thirty-nine hours after onset of symptoms. The patient, a stoutly built woman, had always enjoyed good health. About fifteen years ago a hernia first appeared in the right femoral region. It had always been reducible and had never given her much trouble. She had not worn a truss. Symptoms of strangulation came on about 8 o'clock in the evening (October 18th), severe pain, swelling of the mass, which could not be reduced, great tenderness (a specially marked symptom), and frequent vomiting which soon became faecal in character. On admission these symptoms persisted, but in a modified degree. The pulse was 96 and the temperature 100°F. The abdomen was moderately distended. No attempt was made to reduce the hernia. On making the incision through the skin and fascia, brownish serum exuded from the cellular tissue having a strongly putrefactive odor. The sac was greatly thickened, dark, oedematous and friable, and contained a couple of drams of dark blood-stained serum, which also gave off a strong odor of putrefaction. The hernia consisted of about three inches of ileum tightly caught and quite gangrenous. When the opening was enlarged by incision of Gimbernat's ligament and healthy bowel brought down, the gangrenous part lay collapsed and empty, and was almost separated from the healthy gut at both ends where it had been constricted. The bowel was emptied and compressed by the fingers of an assistant, and six and a half inches removed and the ends united by the Murphy button. The mesentery corresponding to this portion had been ligated off at some distance from the bowel through healthy tissue. In spite of the greatest precautions, however, the mesentery stripped itself away from the bowel at either end. There was no great bleeding, but I felt that I could not leave the patient in that condition, for fear of hæmorrhage in the first place, and secondly, for fear of sloughing of the bowel which had been thus deprived of its vascular supply. I therefore continued my incision upwards and outwards through Poupart's ligament and opened the abdominal cavity. I

again resected ; this time five inches, going well within the border of the attached mesentery, united the ends with the Murphy button, ligatured the mesenteric vessels and brought the mesenteric borders together with catgut sutures close up to the bowel. There were thus 11 inches of bowel removed. The hernial sac was excised, and the peritoneal wound closed with mattress sutures of silk. The muscular borders were next closed with buried sutures of silk-worm gut and the pectineal fascia was attached to the re-united Poupart's ligament by three sutures of catgut. Finally the skin was closed by a separate layer of silk-worm gut sutures, and a small tent of iodoform gauze introduced at the lower angle of the wound. The operation lasted two hours and was well borne. The patient never had a bad symptom and made an uneventful recovery. A liquid motion, (with flatus), was expelled at the end of twenty-four hours, (after administration of an enema). A regular movement occurred again next day, and on the fifth, sixth, ninth and tenth days. The button was found imbedded in a well formed stool, which was passed at 1.30 p.m., October 30th, just ten full days after operation. The wound was perfectly healed and the patient allowed up on the 22nd. Healing per primam.

My experience in these three cases leads me to the conclusion that the Murphy button is a valuable aid in end to end anastomosis of intestine. So many artificial aids have been introduced for this purpose, have had their day and have been discarded, that most surgeons are now sceptical about anything of this kind. It is, of course, not to be assumed that union of intestine cannot be secured without such aids, for it undoubtedly can, but the great desiderata, rapidity of operation and accuracy and security of co-aptation, are both admirably effected by this instrument. I cannot agree with the view which has recently been promulgated, that the Murphy button is useful in the hands of the tyro and is not necessary to the experienced surgeon. The actual union of the intestinal ends is but one part of the operation, even if it be the culminating point.

and the surgeon who is not possessed of the necessary skill to unite the ends of the intestine by suture, is certainly not fitted to undertake any such operation by any method. In my experience the most difficult part of such operations, and the part which most requires surgical skill, is that which is preliminary to the intestinal co-aptation. Again the button may be used, (as in my second operation), deep down in the pelvis where accurate union by suture would be almost impossible.

The great want of intestinal surgery at the present time is a suitable clamp, a clamp which will occlude the lumen of the bowel, without too much pressure upon its delicate walls, and without exercising pressure upon the arterial supply at the mesenteric border. Dr. Murphy's ingenious contrivance to exercise a uniform spring pressure gives, I think, a clue which may be utilized to effect this purpose,—I mean to produce a clamp to be locked like an ordinary artery forceps (Péan), with smooth blades capable of being armed with rubber tubing, and upon a spiral spring which will make the pressure indirect rather than direct uniform and capable of regulation. I know of no clamp at present in use which is not open to serious objection. The use of rubber tubing is, perhaps open to less objection than any other device, but it is not by any means satisfactory. As it surrounds the bowel, the wall must be puckered considerably in order to occlude the canal—especially in the large intestine—hence more pressure is required than should be necessary if applied so as to evenly appose the inner surfaces. It also cuts off the circulation for a time completely, and the proper regulation of the degree of pressure is extremely difficult. If one could always have the ideal assistant, I believe that the best clamp is the thumb and forefinger, but a serious objection to this is, that at best, the assistant's hands are greatly in the way of the operator, and worse still, there is the constant danger that by relaxing or moving his fingers the contents of the bowel may be allowed to escape and prove disastrous to the operation.

REPORT OF A CASE OF PRIMARY CARCINOMA OF KIDNEY.*

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AND

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The rarity of primary carcinoma of the kidney in the adult, has induced me to give a short resumé of the clinical aspects of a case, of which the specimen has already been brought before the Society.

The patient, a female, aged 42, was married at 23, and has had eleven children, nine of whom are living. She first consulted me at the latter end of August for recurring attacks of pain in the back and loss of strength. The pain was severe and extended on the left side from the lumbar region of the spine to the front of the abdomen, and occasionally was felt down the left thigh. She attributed her ill-health to the after effects of her previous confinement. Notwithstanding the number of her pregnancies, and the arduous duties of a large family in one in poor circumstances, she had always been in good health. Two months previous to the birth of her last child, which occurred on the 3rd November, 1893, she commenced to suffer with attacks of pain in the back, and noticed for the first time that the urine was blood-stained and contained blood clots. Her confinement was normal. She was delivered of a healthy child at full term, and, I am told, went to her work on the morning of the fifth day. Two months later hæmaturia returned, and appeared at intervals in small quantities till June, 1894. The pains continued, and she felt weaker and found it difficult to attend to her household duties. In January she noticed a small growth on

* Read before the Montreal Medico-Chirurgical Society, Nov. 16th, 1894.

the left side of her neck, which gradually increased in size, and had occasionally been the seat of pain. The family history contained nothing of importance.

When first seen she presented a pale, careworn expression, and was somewhat emaciated. The tongue was clean; appetite good; no vomiting; bowels fairly regular, but she had previously suffered from obstinate constipation. The pulse was 115, small and compressible; temperature normal.

In the neck was a growth about the size of an egg, situated in the triangular interval between the sternomastoid and the trapezius above and parallel to the clavicle. It was hard and nodular to the feel, and quite mobile. The cephalic vein of that side was dilated, and pursued an unusual course across the front of the chest, over the first intercostal space to the sternum. I looked upon the tumour as most likely a secondary growth, originating in the cervical lymphatic glands. There were no signs of disease in the mouth, throat or thorax. The apex of the heart was displaced upwards and outwards to the lower border of the 4th rib in the mammary line. Percussion dulness was made out at the upper border of the 3rd costal cartilage, nearly two inches to the left of the median line, and extended from the apex to nearly across the sternum. There was no distension of the abdomen. Its walls were soft, flaccid, yielding readily to pressure. A portion of the large bowel, distended with fecal matter could be easily felt beneath the abdominal parietes, extending from the ninth costal cartilage in the mammary line, downwards on the confines of the umbilical and left lumbar regions. Beneath the bowel, which I thought was the descending colon displaced forwards, could be felt a large growth, quite hard, non-fluctuating, with a smooth and rounded contour, having at its inferior border a smooth nodular projection.

The tumour extended upwards into the left hypochondriac region and downwards to the left iliac fossa through the left lumbar region; it inclined forwards towards the umbilicus, receding as it did so from the anterior abdominal

walls. It could be tilted forwards, without occasioning any pain, by pressure behind over the region of the kidney; in other directions it was quite fixed. Percussion dulness extended to the lower border of the 6th rib outside the nipple line and posteriorly over the region of the kidney a slight bulging was noticed.

There was no dilation of the superficial veins, and no oedema of the extremities. The urine was examined on two different occasions. The quantity excreted, though not measured, seemed normal. Nothing could be inferred from the sp. gr. or color. It was acid in reaction and contained neither albumen or sugar; but, when examined microscopically, blood cells were distinctly visible and urates were present in large quantities.

The disease progressed without any apparent signs of hæmaturia. The patient became more emaciated: there was some increase in the size of the tumour, and the exacerbations of pain towards the end became more frequent and more severe. A slight rise of temperature was noticed, on two occasions, to 100° and 100.3°F.

The last two or three weeks were marked by an uncontrollable diarrhoea. The patient now took to her bed, and from this out, the loss of strength was very rapid, and the emaciation extreme, and she died on the 31st October. Dr. Finlay saw the patient with me at the latter end of her illness, and agreed with the diagnosis.

Remarks.—The invasion of the cervical glands of the left side of the neck, the freedom from disease of the other superficial lymphatic glands, is worthy of note. It was this that gave me the first clue to the possibility of malignant disease. I ordered the patient to bed and made a thorough examination in search of the primary growth. It was only after this was localized that any mention of hæmaturia was made by the patient. In tracing the course of this secondary infection from the primary disease in the kidney, I believe that it was conveyed by the lymphatics of the kidney to the thoracic duct and by this channel to

the lymphatic glands of the left side of the neck. I feel more inclined to this opinion after noting, at the post-mortem, the condition of the retroperitoneal glands in the neighbourhood of the kidney.

Hæmaturia had appeared early ; had never been profuse, and for the last five months of the illness, was reduced to a mere trace, which required a microscopical examination to determine.

At the post-mortem the transverse colon was noticed to be uncovered by the great omentum, and extended downwards from the hepatic and splenic flexures to a point below the umbilicus. Although the intestine was at that time quite empty, from the severe diarrhoea that had preceded death, I think now that possibly that portion of the large bowel which could be so distinctly felt in life, was part of the transverse colon from its mid-point below to the splenic flexure, which in its abnormal position ascended almost vertically in front of the tumour.

Another point which I might mention, though I consider it merely as a coincidence, was the acidity of the saliva. It was tested with strips of litmus paper, placed over the orifices of the ducts. I made four tests at intervals of a few days. Three times the reaction was acid, once neutral.

Pathological Report.—The whole growth manifests the ordinary character of a primary medullary carcinoma of the kidney arising from the epithelium of the renal tubules. It shows in places the true glandular form of carcinoma, first described by Waldages, and indicated clearly, from microscopic specimens, how the tumour cells proliferating from the kidney epithelium becomes gradually smaller and like atypical cells of this organ, while the stroma of the cancerous mass takes its origin from the intertubular connective tissue.

The progress of the case has likewise been of interest, inasmuch as its advance by the lymphatics is the more unusual form of primary renal carcinomata, but the growth in the neck is undoubtedly to be regarded as secondary to

the kidney affection, metastases having formed through the thoracic duct and by retrograde advance to the lymphatic glands.

Primary cancers of the kidney do not, as a rule, form secondary growths, and when these occur it is usually by the blood stream. Here the vena cava seemed free, but we are by no means certain as to the condition of the lungs, being unable to examine the thorax for metastases.

Only a partial autopsy was permitted and that of necessity a hasty one. The abdomen was opened, showing a meagre panniculus. The visible coils of intestines were reddened and the transverse colon displaced downwards and to the left. A large mass was found beneath these intestinal loops, occupying the umbilical and left lumbar regions chiefly, and reaching for about one inch to the left of the vertebral column. This was discovered to be the left kidney and adrenal converted into a large tumour, which lay partly twisted on itself, so that the convex border of the kidney lay rather downwards than outwards. The tumour was easily and rapidly removed, in toto, there being no dense attachments to any neighbouring organs, but merely thin, loose adhesions.

During removal it was observed that some of the retro-peritoneal and lumbar glands were involved, and that a thrombus partially filled the renal vein. The vena cava was found free as far as could be ascertained. There was not enough time allowed to dissect up the thoracic duct.

The tumour on removal presented a large mass, divided at the junction of its uppermost and second growth into two unequal parts. The greater and lower portion had the usual renal shape, and was surmounted at its upper end by the remaining portion of the tumour which, as it were, fitted like a cap on top of the kidney.

That this was supra-renal was borne out by its position and relation to the kidney, as well as by the fact that the renal capsule could be stripped off between the kidney and the upper mass. To make further certain, there was no

other evidence to be found of adrenal in the neighbourhood.

The adrenal was, however, partly joined to the kidney by several areas of new growth, these being the channels of transmission of the growth from the kidney to the other organ.

On removal the whole mass weighed 1250 gram.

Measurement of the kidney alone was $7\frac{1}{2}$ inches long by 5 inches broad, and $2\frac{1}{2}$ to 3 in thickness.

Adrenal alone measured 4 inches x 3 inches x $1\frac{1}{2}$.

The kidney capsule presented numerous dilated lymphatics filled with granular material and was fairly easily stripped from the organ.

Section into the kidney showed that but little renal tissue remained, the cortex in the upper half being about half its normal thickness and less, and in some places so thin that the contents of the tumour were almost protruding. In the lower portion, however, not only was the cortex about the normal size, but there was further some evidence of medullary pyramids and calices. The hollowed out areas thus left were filled with a large quantity of cheesy looking pultaceous material, composed of fatty cells and free fat globules, granular detritus, cholesterine cells and remains of old hæmorrhages. The pelvis of the kidney and upper part of the ureter were filled with the same mass of degenerated cancerous material, and the renal vein showed the presence of a cancerous thrombus along nearly its whole course.

The adrenal was similarly affected, and its outer covering, which was greatly thickened, formed a kind of capsule to the enclosed mass of detritus, resulting from the retrograde changes and hæmorrhages within of the cancer which had involved this organ in virtue of its contiguity.

Microscopic examination of the remnants of kidney tissue showed masses of columnar and polyhedral small cells of epithelial character, distributed in various portions and situated amid a fibrous stroma. In many places very

little evidence of tubules could be found, the whole renal tissue being overrun by the neoplasm. Where, however, tubules or glomeruli could be found, it was evident that from here the growth had taken its origin, while the fibrous stroma arose from intertubular connective tissue.

Sections of the involved suprarenal showed the walls densely infiltrated with cancerous tissue, so much so, that there was but little evidence of the original normal adrenal tissue.

Retrospect Department.

RETROSPECT OF PHARMACOLOGY AND THERAPEUTICS.

BY A. D. BLACKADER, M.D.

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The Treatment of Diphtheria.—(The *Medical Record* November 3, 1894.) By A. Campbell White, M.D.—In this paper the writer gives us the results of his experience in the Willard Parker Hospital with three different modes of local treatment. In the first series, the nasal and throat cavities were thoroughly irrigated every one to three hours with warm salt solution, until the pseudo-membrane had disappeared; then less frequently till the entire disappearance of the bacilli. In the second series, in addition to the above treatment, a spray of peroxide of hydrogen, of varying strength, was also used to the throat and nose every three hours, except during the night. In the third series, a solution of bichloride of mercury was substituted for the salt water solution of the first series. The nasal cavities were irrigated every eight hours with a warmed 1 to 4000 solution, and the throat, every three hours, with a 1 to 3000 solution. Besides this local treatment, nearly all the cases received frequent doses by the mouth of the tincture of the chloride of iron and of alcoholic stimulants. The conclusions arrived at from the results obtained in these cases, together with the investigation and observation of a much larger number of cases, may be stated as follows:

1. Frequent washing of the air passages attacked by diphtheria lessens the duration and amount of diphtheritic membrane.

2. The addition of antiseptics in sufficient strength to be

germicidal to the irrigating fluid is irritating to the mucous membrane, thereby causing extension and persistence of false membrane, rather than the effect desired.

3. The addition of antiseptics to the irrigating fluid is liable to cause systemic poisoning.

4. Spraying the throat (also the pernicious treatment of swabbing the throat) whatever solution is used can have no good effect as the parts reached by the spray, except in the hands of an expert, must necessarily be very limited. In very young children the spray cannot be used at all with advantage.

Frequent cleansing of the throat and nasal cavities with a bland solution, such as plain warm water, or normal salt solution, is easier of application, more agreeable to the patient, and does all that any antiseptic solution can accomplish, either upon the duration of the membrane or the period of the isolation.

A Case of Leucocythæmia Apparently Cured by Bone Marrow.—(The *Lancet*, September 22, 1894.) By W. G. Bigger, M.D.—The writer reports a lad, aged 12 years, who, for the previous six years, had been under observation, suffering from splenic enlargement with anæmic symptoms, but who had previously been much relieved with arsenic and iron. Two months ago the disease acquired a more active character. The spleen became much larger, and completely filled the left half of the abdomen, while at the same time there was diarrhoea, pyrexia, and frequent attacks of epistaxis. He was fed on raw bone marrow spread on thin slices of bread. Under this treatment the improvement in the boy's condition after the first week was marvellous. The spleen receded in size, the anæmia rapidly improved. After a month's treatment the boy was reported as being better than ever he was, while the spleen had so far receded as only to be felt about three inches below the ribs.

Oxalic Acid in Combination with Iron and Manganese Peptonates as an Emmenagogue in Chlorosis.—(Medical

News, September 29, 1894.) By H. C. Bloom, M.D.—This is a second report by Dr. Bloom on the value of oxalic acid as an emmenagogue. Since his previous paper he has used the drug in upwards of one hundred cases of amenorrhœa, and while it occasionally failed him, his experience still led him to regard it as the surest and safest emmenagogue we have. He thought it also reliable under certain conditions as an oxytocic. In chlorosis, additional therapeutic measures were necessary, looking towards the establishment of a better condition in the blood. Frequently, however, even when the anæmia disappears, the amenorrhœa may persist. In such cases the combination of the ferruginous preparation with oxalic acid has yielded, in his experience, the best results. His formula is as follows :

| | |
|-------------------|----------|
| R. Ferri peptonat | gr. xii. |
| Mangani peptonat | gr. ii. |
| Ac. oxalic | gr. ii. |
| Alcoholis | ʒ iii. |
| Aquæ q. s. ad. | ʒ iv. |

Sig. Two drachms three times a day.

The Effect of Creosote on the Virulence of the Tubercle Bacillus.—(*British Medical Journal*, September 22, 1894.) By W. Kington Fyffe, M.D., (Cantab.)—In this paper the writer gives us the results he obtained from an investigation undertaken to decide whether the value of creosote, as a remedy in phthisis, was due to any restraining action exercised over the growth of the bacillus, or simply to its power of improving digestion, and so aiding assimilation. At Victoria Park Hospital creosote is used in one of three ways : (1) As an inhalation ; (2) by the mouth ; (3) by means of the creosote chamber. The latter method consists in placing the patient in a small room, in which creosote is heated till the air is saturated with the vapours. The method adopted by the writer in conducting his investigations, was that recommended by Professor Delepine, namely, that of injecting tuberculous sputum into the leg of a guinea pig, and noting the time it lived, and

the extent of lesion at the time of death. The conclusions he arrived at are summed up as follows:—(1) In those patients who were taking creosote simply as an inhalation, no effect on the virulence of the bacilli was noted. (2) In those to whom the creosote was administered by the mouth, in doses ranging from two to twelve minims three times a day, a slight diminution in virulence was noted when the dose was small, and when large amounts were administered, the diminution was well-marked. (3) In those to whom the creosote was administered by the the third method, the number of cases examined was only three, and, therefore, an absolute dictum could hardly be given, yet the animals lived longer after the injection than in any other instance, and died in the end from cellulitis, set up by the injection.

Apocynum Cannabinum as a Cardio-Kinetic and Diuretic.—(*British Medical Journal*, September 22, 1894.)

—This drug, which has been known for some years as an emetic and cathartic, and has been employed as a remedy in dropsy, was examined by Schmiedeberg in 1883, and was found to contain an amorphous substance, apocynin, and a glucoside, apocyncine; the first soluble in alcohol, not in water; the second, soluble easily in water. Petteruti and Somma (*Il Policlinico*, Nos. 10—14, May to July, 1894), have experimented with the drug in the form of a decoction and of a tincture. They found that the action of the decoction is exercised chiefly on the stomach and intestines producing first catharsis and then emesis. Should this action be postponed, increased diuresis and acceleration of the heart beat may be noticed. The tincture, however, was found free from gastro-intestinal irritant effects, even when large doses were employed, while distinct cardio-kinetic effects were obtained. Sixty to ninety minims of a tincture, having a strength of 1 in 10, were given daily. Marked diuresis was produced, which was not accompanied by albuminuria. The drug appeared to act as a diuretic without irritating the renal epithelium. Sphygmographic tracings showed a considerable increase

in the force of the pulse, the rapidity of which was sometimes markedly diminished. The change in rapidity was not, however, a constant effect. Irregularity in rhythm was sometimes noted. They considered the tincture as likely to prove useful in valvular lesions of the heart, and especially valuable in cases of œdema and dyspnoea, while it has the advantage over the other cardiac drugs that it does not irritate the primæ viæ and that it may be used without danger for a long time.

Compression of the Common Carotid Arteries for Uremic Convulsions.—(*Lancet*, August 25, 1894.) By A. V. Lindsay, M.D.—The writer relates the case of a boy four years of age undergoing treatment for acute nephritis. Uremic convulsions suddenly supervened, and in spite of the use of ice to the head and of pilocarpin, became general. While at their height he made firm pressure with his fingers, compressing the vessels against the tubercles of the sixth cervical vertebra, and in less than a minute there was a cessation of the convulsions. After gradually relaxing pressure there was no return of the spasms for three or four minutes, and on their return pressure again almost immediately checked them. Six times this was repeated, the period of rest gradually lengthening until, after waiting three-quarters of an hour without any return, the patient was left in charge of his father. He remained in a state of coma, breathing quietly, for eight hours, waking with a start, perfectly conscious. His subsequent progress was very satisfactory.

The Modern Treatment of Pulmonary Phthisis.—(*The Lancet*, November 3, 1894.) By C. Theodore Williams, M.D.—In reviewing the treatment of phthisis during the past eighty years, the writer emphasizes the fact that whatever success has been obtained, has been achieved by strengthening and fortifying treatment, whether by diet, climate or medicines, and not by so-called specific treatment. All these specific modes ignore the greatest factor of all, the resisting power of the organism to disease, and

it is to this that the physician should lend his aid and support. Life in the pure air, judicious exercise, and a light nourishing dietary, with such aids as cod liver oil and tonics, have effected more than all the forms of bacillicide treatment. The brilliant researches of Metchnikoff have acquainted us with some of the powerful weapons with which nature fights the battle of resistance to such bacillary invaders, and the problem of treatment would appear to resolve itself principally into means to increase the number and activity of the phagocytes. Dr. Williams thinks that experience teaches us that a large quantity of oleaginous food, supplied under conditions which promote its absorption and assimilation, is one of the surest methods of promoting the formation of lymph and of blood rich in phagocytes. He has little faith in the substitutes for cod liver oil, although he has given a fair trial to most of them. The introduction of a large amount of milk into the dietary is to be aimed at. If cows' milk fails, ass' and goats' milk, which are more easily assimilable, should be tried. Mere gain in weight, however, is not of great significance, and is by no means incompatible with progress of the disease; all it signifies is maintenance of appetite and the avoidance of much exertion. A most important factor in treatment is pure air, and on its thorough application to the system of the patient most success depends. He recommends an outdoor life, and that phthisical patients should accustom themselves to open windows throughout the year. The recumbent posture is not the best for expectoration and increases risk of fresh infection; he recommends in preference a position in which the head and shoulders are more or less raised.

In cases of consolidation, or of excavation, with pyrexia, exercise is undesirable, but in cases of limited apical lesions and limited cavities without fever it is desirable for the patient to take as much exercise as his strength will permit.

QUARTERLY RETROSPECT OF GYNÆCOLOGY.

PREPARED BY T. JOHNSON-ALLOWAY, M.D.,

Gynecologist-in-Chief, Montreal General Hospital; Associate Professor of Gynæcology, McGill University.

Report in Abdominal Surgery.—Dr. VAN DER VEER, of Albany, N. Y., read a very able and instructive paper on the history of 145 cases of abdominal surgery operated upon by himself, and read before the Am. Assoc. of Obst. and Gynæcologies, Toronto, 1894. (*Annals of Gynæcology and Pudistry*, Oct., 1894.)

Dr. Van der Veer's paper shows a high rate of mortality, 17 deaths in 145 cases, but he is to be commended and respected by the profession throughout the country for his honest acknowledgment, and, as he says, his desire to lessen the mortality in the future by the lessons these accidents have taught him.

It is my intention to review but a few of the salient points in connection with Dr. Van der Veer's work, and if the author will receive some suggestions from me in a kindly spirit I think I may possibly throw some light on the causes of this high mortality which Dr. Van der Veer, to my mind, does not seem to recognize.

The author classifies his fatal cases under two headings, "unavoidable" and "avoidable." Among the avoidable he describes minutely the following :

Case X. This was a case of "simple uncomplicated ovarian cyst." Death on the fourteenth day. The autopsy revealed pelvis containing a large number of blood clots. The abdominal cavity also showed evidence of the hæmorrhage having extended upwards. The clots had undergone septic change. The important part, however, in this case refers to the condition of the pedicle found at the autopsy. The author says the ligature had "loosened" and had allowed secondary bleeding to take place, and had

he used the drainage tube the bleeding would have been discovered before death.

In regard to the silk loosening, or slipping, as it is called, there was never a greater fallacy propounded and one more likely to deceive. Silk from its very nature is inelastic, rigid and cuts like a sharp clamp. It does not crush the tissues, but cuts them. Then when a slight shrinkage takes place in the part included in the knot the silk *nouse* does not follow the shrinking pedicle as an elastic substance would do. Oozing begins gradually to take place and when it once begins it is only a matter of time for the patient to bleed to death. I do not think the drainage tube is of much guidance in such cases, as the blood clot will not always rise in the tube, but goes around or above it. The great error made is in the use of silk as ligature material; heavy catgut (No. 6) well sterilized fills all necessary requirements spoken of above. It is very strong, elastic and crushes the tissues without cutting them, and it will be found that if properly applied (which method can only be acquired by seeing) there will be room left for shrinking of the tissues after the double knot has been secured. In about thirty to forty days this material entirely disappears by absorption, which is another great advantage over silk.

As another safeguard against hæmorrhage I would draw Dr. Van der Veer's attention to the great advantage of thoroughly cauterizing the cut surface of pedicle with thermo-cautery before returning it. Throughout the whole of Germany silk is now rarely used—all catgut and almost all tissues are divided with thermo-cautery.

Case XLIII. Another case of uncomplicated ovarian cyst in which the fatal Staffordshire knot was used. Hæmorrhage set in five hours from operation. Abdomen re-opened pedicle religated, free use of saline solution into peritoneal cavity, drainage, &c., but she died 12 hours afterwards.

Here again the silk was to blame aided by the unreliable

Staffordshire knot. Other following cases died from hæmorrhage, shock, pneumonia, intestinal obstruction, &c.

Case LXXIII. It would have been well in this case to have kept her under hospital observation until the sugar had disappeared from the urine. Most surgeons would prefer operating on a patient with slight albuminuria than saccharine diabetes. It is probably the very worst condition under which a surgeon can have to contend in so major an operation.

In the history of the remaining cases of death, they occurred from shock, exhaustion, septic peritonitis, &c., and the cause could very well be accounted for. In summing up the history of these cases, Dr. Van der Veer gives some directions about preparing the patient and the room in which the operation is to take place. As a rule I do not think it is wise to either prepare a patient at her home or to operate on her there. The profession and the public are both beginning to recognize the fact that there is only one place to treat a patient subjected to a surgical operation, with safety to the patient and the highest possible advantages to the surgeon in carrying out his work. The specially fitted up operating room in either a private hospital or public general hospital, is the only place an abdominal surgeon is justified in operating, with the exception of emergency cases which will not admit of being moved. Doing abdominal surgery in a large general surgical amphitheatre before some hundreds of students is, to my mind, morally wrong. Let any surgeon of unbiased mind compare the chances of a patient under these conditions and those where she is operated upon in a private room thoroughly equipped for the purpose, and in which no other kind of surgery is done, and by a specialist in this line of work who does no other surgery, and I think he will see the advantage of the latter. I am not sure whether Dr. Van der Veer uses sponges or not. If so I would strongly advise him to discard such dangerous carriers of infection. They are friable and likely to leave pieces

behind in the cavity which decompose in about 60 hours or less, no matter how carefully prepared, and give rise to so many cases of apparently unaccountable peritonitis. Gauze pads of various sizes made from the so-called "Butter cloth," thoroughly sterilized, are the only sponges reliable, and the only ones seen to-day in the university clinics throughout the whole of Germany. Should by any unavoidable accident, such as an error of the nurse in counting, a sponge be left in the cavity unless reopened at once, means a death. If, however, it be a sterilized gauze pad it may be removed months afterwards with but little inconvenience to the patient.

Dr. Van der Veer used the drainage tube 39 times in the 145 cases. This is certainly a very high rate of drainage cases. Surgeons are, I think, beginning to fight shy of the drainage tube, and depending more on perfection of technique and rapid operating for success. We all agree, I think, with the author when he writes about the attending physician procrastinating in bringing his patient to the specialist, and when he does bring her to express a desire to catch an early train that day after he has been present at the operation. Although I have not had any experience in this way, I am sure it has occurred in the past.

The Value of Local Treatment in Septic Infection of Puerperal Woman.—Dr. EVANS read before the Montreal Clinical Society recently a paper on this interesting subject (MONTREAL MEDICAL JOURNAL, December, 1894), and gave the members some very good advice. There are some statements of the author, however, which we cannot very well endorse, and which, we think, require a little friendly notice. Dr. Evans' intentions and views are undoubtedly well meant, but we think at the same time, a little strong and stormy. For instance he says, "Many practitioners have but the haziest ideas as to the subjective and objective symptoms of septic infection of the puerperal women, and these are scarcely less nebulous than their ideas of treatment." Dr. Evans then continues to impress upon his

audience the disastrous consequences of such a state of ignorance on the part of the general practitioner. Now statements of such a nature are not only incorrect, but are somewhat unjust to make in so sweeping a manner. So far as our experience goes, the general practitioner of medicine of to-day is the most highly cultured gentleman and the most considerate and careful of all men of the lives and welfare of his fellow creatures, and as an active teacher of pelvic disease in women, and consultant, I have reason to know that the practitioner's ideas of aseptic midwifery are anything but hazy, and that he is in no way slow to recognize the onset of accidental infection. We are sure that Dr. Evans does not appreciate the many difficulties under which obstetricians have to work. The ignorance of the general public, the contempt some people have for the man who wants to make *an unnecessary fuss* in their homes when the advent of a baby is to take place. The many sources of infection right in the lying-in-chamber over which he has no control. And above all, when symptoms of infection do occur, the obstinate refusal, in many instances, of the patient and her relatives, to acknowledge that there is anything unusually wrong, and to submit to local treatment until the disease has extended to the tubes and peritoneum. As regards the pathology and treatment expounded by Dr. Evans we have nothing to add but praise and endorsement. It would have been well, however, if the author had spoken with more caution regarding the use of the curette. It is truly a two-edged sword and may bring about as much harm as good. There is no other instrument, the use of which we are aware, requires more constant application—almost daily—to become sufficiently expert in its use, especially in puerperal cases, to ensure freedom from danger to the patient, than the curette.

Inaugural Address before the British Gynecological Society, by Professor Thomas Savage.—In this able address Dr. Savage spoke strongly of the personal element, for

success or otherwise, of the individual operator. "No two surgeons would perform the same operation exactly in the same manner." In speaking of the great importance of details, he said: "The importance of this principal will be more and more manifest, when it will be universally admitted that when death occurs after such operations as abdominal section, it is due much more frequently to causes connected with the details of the operation, and therefore personal to the operator, than to any other cause. And because the personal element possesses such an enormous influence in success or failure—for good or for ill—he must ever be striving to that high ideal—*no deaths at all.*" While it is thought by many that there is a tendency to split up medicine into too many lines of work, and that perhaps we may, at the present time, not even have reached the limit, yet gynecology stands out somewhat prominently on an assured and established basis, too secure now to be assailed upon its *raison-d'être*, and too strong in its accomplished and prospective work to be injured by cavil or deterred by scorn. Even the most rigid impersonation of Tory principles is bound to recognize the revolution which has taken place since gynecology has shaken herself free from obstetrics, and started on a free and unfettered course." At the termination of this address, Dr. Barnes and Dr. Bantock made some remarks. Dr. Bantock said the address was necessarily only a *resumé*, but it was full of suggestion for action in the future. In one London society lately, a member proposed that the general surgeons should give up gynecological operations to the gynecologists; but it seemed to him that the suggestion did not go far enough. He would have proposed that a special official should be appointed to teach gynecology, as in the provincial schools. Were he on the staff of a general hospital, he would urge that gynecology should be more considered than it ever had been in the past. Surgery itself was indebted to gynecology for the most important advances of recent years.

Echinococcus of the Ovary.—SCHULTZ (*Festschrift zur Feier des fünfzigjährigen Jubiläums der Gesellsch. Geburts. u. Gynæk. in Berlin*, 1894) has collected previous records, and believes that Chemnitz and Generali's cases are true examples of hydatid disease of the ovary. In 1893 he operated on a third case. He admits that it cannot be proved that the disease originated in the ovary. The patient was 32 years of age; her abdomen began to enlarge in 1888; in 1890 echinococcus of the peritoneum was diagnosed. In the autumn of 1893 Schultz detected an ovarian tumour, the uterus being free. The abdomen was tapped, but, though the fluid had the characters of that which is found in hydatid cysts, no hooklets could be discovered. On November 11th he operated. Thirty hydatid cysts were removed, some with great difficulty; there was free hæmorrhage, and other cysts proved irremovable. The largest tumour of all was six inches in diameter; over it ran the right tube, obstructed at the ostium. This tumour was nowhere adherent; it consisted of the ovary and was nowhere adherent. Its lowest part projected into Douglas' pouch, whence it was lifted without difficulty. The pedicle was normal and easily transfixed and divided. The left ovary and tube were healthy. The under surface of the liver and the kidneys seemed free from hydatids. The operation lasted over two hours, and saline water was injected into the subcutaneous tissue in the infraclavicular region whilst the abdominal wound was being sutured. The pulse continued to be very rapid for several days and there was obstruction on the third day, relieved by a dose of magnesia. The patient left the hospital on the thirty-first day in good health; the hyatids which could not be removed could be clearly felt. The greatest part of the removed ovary consisted of a cyst, the lining of which was freely beset with scolices. It contained three daughter cysts, the largest $3\frac{1}{2}$ inches in diameter. The mesosalpinx was unaffected and the parovarian tubes ran into the hilum of the ovary, represented by thickened tissue on the

surface of the hydatid. In fact, the hydatid had developed, not in the broad ligament but in the ovary itself.

Removal of Appendages: Fatal Hæmoptysis.—QUÉNU (*Gazette Médicale de Paris*, 2, 1894), operated on a virgin aged 27, who had been sickly from childhood. Last autumn, when she suffered from leucorrhœa, etc., Quénu, finding no severe lesions, used the curette and kept her at rest two months. She became worse, and an operation was performed on March 9th. The tubes were found fixed by adhesions, tuberos, yellowish and caseating. She did well till the third day, when she had violent hæmoptysis and died. The sputum was used for inoculation; pneumococcic infection resulted. Each tube contained a great cystic pouch and numerous secondary cysts. In all these cysts the contents were granular without giant cells. In the walls of the cysts Metchnikoff discovered large cells, round pigmented bodies presenting the type of hæmatozoa. Bodies of the same kind were found in the lungs, but not in the blood.

Tuberculosis of the Fallopian Tube.—PENROSE and BEYER (*Amer. Jour. Med. Sci.*, November, 1894) report 5 cases found in a series of 25 abdominal sections for pelvic inflammatory trouble—a large percentage. All the 5 patients had been sterile, though 4 were married. In this respect these histories differ from those of ordinary cases of non-tuberculosis salpingitis, where, in the great majority, there is a history of at least one child or miscarriage before the disease reached such a stage as to render the woman sterile. In 3 no tuberculous lesion could be found elsewhere, in the fourth it was not certain the lungs were not involved, and in the fifth the tubal disease was, it appears, secondary to tuberculous disease of the hip. There was nothing in the symptoms presented by any of the cases to indicate that tuberculosis of the tubes or of the peritoneum existed, nor was anything elicited by a bimanual examination of the pelvis to allow of diagnosis other than that of adherent tubes and ovaries. The account of the beginning

of the disease was too vague in all the cases to allow it to be determined with any degree of accuracy, In no case could it be ascertained whether the tuberculosis began in a healthy tube or followed an attack of salpingitis. The disease assumes several forms when it attacks the tubes; they are well described by the authors, who conclude on the evidence of their own, and Whitridge Williams' researches, that primary tuberculosis of the female organs must be more frequent than modern statistics indicate.

Rupture of Uterus and Vagina.—DOHRN (*Centralbl. f. Gynak.* No. 11, 1894) relates how a woman, aged 41, in her eleventh labour, was driven in a sledge over eighteen miles to Königsberg last December. The presentation was transverse and the uterus had been ruptured during an attempt at turning. The child was extracted, but not the placenta. She arrived in an exhausted condition, anæmic, and with distended abdomen. The funis hung out of the vulva, whence blood trickled rather freely. The vulva was at once cleansed with a 5 per cent. solution of carbolic acid. A 1 in 1,000 solution of sublimate was used to swab the vagina, which was afterwards irrigated with boracic acid lotion. Then, on exploration, a large rent was found in the cervix, extending into the left vaginal fornix. In the rent were coils of intestine and the placenta, which was extracted. After reduction of the bowel over six yards of iodoform gauze three inches wide were pressed into the vagina. A binder was firmly fastened round the abdomen. The patient at once began to recover. On the sixth day the tampon was removed. A little lochial secretion had trickled through it, but it was free from smell. On the fourth week the patient had an attack of pneumonia, from which she recovered. The uterus became fixed and dextroverted. According to Merz 7 out of 15 cases of ruptured uterus treated by the tampon recovered.

Myomectomy vs. Hysterectomy.—DUDLEY greatly prefers partial operation to complete removal of the uterus in suit-

able cases, and takes very conservative ground about removing the appendages as well as the tumour. He still thinks that moynectomy should be supplemented by removal of the appendages in:

1. Cases in which the appendages are the seat of such disease as would demand their removal under other conditions.

2. Cases in which the enucleation of the tumour or tumours has so injured the uterus as to render it incapable of performing its functions, especially if the injury be such as would cause cicatricial atresia of the uterine end of the fallopian tubes. This might be the occasion for the removal of the appendages on one side only. With increased experience this class of cases ought to diminish.

3. Cases in which the uterus contains an additional myoma so inaccessible as to make enucleation extremely hazardous.

Microbes in the Female Urethra.—GAWRONSKY (*Münch. med. Woch.*, No. 11, 1894) made cultivations of secretion from the female urethra, gathered by means of a sterilized speculum and a platinum needle. In 15 out of 62 cases bacteria were found, in 3 the streptococcus pyogenes, in 8 the staphylococcus pyogenes aureus, and in 1 the *S. pyogenes albus*, in 2 the bacillus coli communis, and 1 in Gessner's bacterium tholoideum. Amongst the negative cases were 10 where the patients had peri- or parametritis, 6 prolapse, 3 pregnancy, and 1 gonorrhœa.

Fatal Metrorrhagia in Purpura.—RESNIKOFF (*Gazette Hebdomadaire Médicale de la Russie Méridionale*, 1895, 15) observed this condition in a girl aged 15, with no hereditary history. Diffuse ecchymoses and petechiæ appeared for eighteen months; then bad attacks of epistaxis took place and continued for several months till the period was first established. Clots were discharged for a week. For three months the epistaxis ceased, and at the end of that time recurred. The second period was seen nine months after the first and proved fatal. For the first week the

show was slight; during the second clots were passed and symptoms of acute anæmia set in. Notwithstanding the application of hæmmostatics the patient died of the hæmorrhage on the nineteenth day.

Pulmonary Embolism After Operations on the Recto-Vaginal Septum.—BUMM: This complication having recently occurred twice in the author's experience, he devoted some attention to it. Whether the occurrence was merely a coincidence or not will probably soon be cleared up. In the two prolapsus cases forming the basis of the paper Bumm had performed amputation of the hypertrophic vaginal portion, anterior colporrhaphy, and stretching of the posterior vaginal vault after Franck's method, all at one sitting. Deep continuous catgut suture, with silver wire superficially. On the fourth and fifth days respectively after the operation symptoms set in which left no doubt that embolic infarction of the lung had occurred. The wounds in both patients healed by first intention without any secretion. As before the operation both the women had healthy hearts and lungs, with no thrombosis anywhere in the body, thrombi must have formed primarily in the venous plexus of the septum. A similar thing occurs in operations for hemorrhoids, and the same veins are involved when the recto-vaginal septum is split. The development or filling of the venous plexus about the vagina and rectum is very variable.

The two patients were not injured by the limited infarction with aseptic thrombi, but it is quite possible when first intention is not attained that the thrombi in this region will undergo suppuration and cause much graver symptoms. The thrombi might also be infected by occasional injuries in the rectum. Careful coaptation of the surface by superficial silver wire or silk sutures after closure of deep wounds of the septum with the running catgut suture would therefore seem to be indicated.—*Centrl. f. Gyn.* 1894, No. 29; *Am. J. Obstet.*

Technique of Vaginal Hysterectomy.—RICHELOT has

performed 225 vaginal hysterectomies during the last four years, with a mortality of 4.88 per cent, all by the clamp method. There was no hæmorrhage of importance, either primary or secondary, although they may easily occur in the hands of inexperienced operators, or if improper instruments are used. The clamp may seize a ureter as well as can a ligature, but is not likely to, as the clamp is applied under the guidance of the eye. If a piece of intestine is seized, it shows only that the operator was working in the dark. This accident never occurred in R.'s hands. R. denies the objection, sometimes raised, that the clamps obstruct the vagina. On the contrary, if properly applied, they serve to the better bringing of the field of operation into view. The only objection to the clamps to which R. ascribes any importance is that of pain from their use, and even this he regards as greatly exaggerated, and pain can easily be quited by an injection of morphine.

R. describes his instruments at length.

Correspondence.

A NEW MORGUE FOR THE CITY OF MONTREAL

To the Editors of THE MONTREAL MEDICAL JOURNAL.

DEAR SIRS,—We have taken the liberty of suggesting the arrangements necessary, from a medical point of view, in connection with a morgue for the city of Montreal, as the matter keeps cropping up from time to time in the City Council, and no very definite idea appears to exist as to what is needed.

One of us recently had an opportunity of visiting the morgues of the following cities: Boston, New York, Philadelphia, Baltimore, Cincinnati, St. Louis and Chicago, for the purpose of studying the arrangement and construction of buildings of this description, and the other has taken occasion to do the same with the morgue at Paris.

The general arrangement, apart from medical matters, is a matter into which it would be out of place for us to enter fully here, as it does not come within our province as physicians. We will therefore simply state that it should be centrally placed and be in direct communication with, or form part of a police station, in order that all matters concerning the guarding and identification of bodies shall be in the hands of the police.

In Montreal the morgue would naturally have to contain a coroner's office and a court for holding inquests, with a separate room for witnesses. Some provision for the safe keeping of the records is also necessary. There should be an apartment for the janitor or guardian of the building.

MEDICAL ARRANGEMENT.—The essential requirements are (1) the mortuary, (2) the room for autopsies, (3) the laboratory.

1. *Mortuary.*—A mortuary is required for keeping bodies

during the pending of a medical examination or inquest and for keeping unknown bodies as long as may be necessary for identification. As this must be done without danger to health and without creating a nuisance, some means must be employed to prevent the decomposition of the bodies.

The system of cold storage in a dry atmosphere at about the freezing point is the only means which has been found suitable for this purpose elsewhere and has the advantage of costing very little, after the apparatus has been constructed.

A cold storage chamber suitable for the requirements of Montreal could be made at a cost of about \$1,200 by building a chamber with double wooden walls, the ceiling consisting of a galvanized iron tank filled either with brine cooled artificially, or simply with a mixture of ice and salt. By this means the temperature in the air space below can be maintained at the freezing point for an indefinite time and all danger of the nuisance and danger to health arising from putrefaction avoided.

In Montreal, where ice is cheap and plentiful, its use would be probably found more economical than that of artificial means of obtaining cold, especially if the ice was stored on the premises. In any case, if it was subsequently found advisable to substitute some artificial process, such as the ammonia distillation or expansion, no further change would be required than simply fitting the expansion tubes into the tank. By either artificial or natural cold the cost ought not to exceed a couple of hundred dollars per year. The use of cold would only be necessary during the period from May to November; during the remainder of the year sufficient cold can be obtained from the outside air by having a flue opening outside.

Some provision for refrigerating is absolutely essential for medico-legal purposes in Montreal, since during the summer, especially in the case of drowned bodies, the effects of putrefaction make identification uncertain and the results of autopsy unreliable, under ordinary conditions

in the course of a few hours. In addition, where it is necessary to preserve organs for a time, pending inquiries as to the necessity of a chemical analysis, putrefactive alkaloids are produced in them which tend to confuse the results of the chemist and at the same time the poisonous alkaloids tend to become destroyed.

Whether it is desirable to make a place where the bodies of unknown persons are kept, a place of public show, which any person shall be allowed to visit through morbid curiosity, or whether the view of such bodies should be restricted to those who are professionally or personally interested in their identification, is a question which can best be decided by the police. There is much to be said on both sides, but certainly the less the idea of a morgue is made repugnant to the general public the better. In any case means should be taken to secure that bodies which have been identified shall not be needlessly exposed, and that as far as possible inquirers shall only be obliged to see such bodies as correspond in sex, age, etc., with the individual whose identity it is sought to establish.

By keeping a description of the body, clothing, etc., together with a photograph, in the coroner's office, it could be at once stated whether any of the bodies in the morgue corresponded with those sought. Photographs suitable for this purpose can readily be taken with an ordinary Kodak camera and can be printed at a cost of only a few cents each. Such photographs would, in addition, form a permanent proof of the appearance of the body if it finally had to be buried unidentified.

The chamber for viewing these bodies should be so placed as to be accessible without interfering with the other parts of the morgue. It could be illuminated either by day light or by electricity, in which latter case the consumption of ice would be decidedly less.

In connection with the mortuary there should be a room in which undertakers could lay the bodies in coffins and in which the bodies could be received. This should have a

separate entrance apart from that used by the public and situated in the rear of the building.

The mortuary should communicate directly with the post-mortem room. The jury could view the body, if necessary, in the mortuary.

2. *Room for Autopsies.*—The autopsies should be performed in a large, well-ventilated room lighted partly from above. This should be furnished with a suitable dissecting table and instruments, weights and measures. Hot and cold water should be provided and there should also be a good artificial light, in case examinations have to be made at night.

It is very essential that accommodation should be provided for physicians, medical students, law students and other persons interested in medico-legal investigations, so that they may have the benefit of seeing autopsies performed. The absence of some such arrangement at present is a serious drawback to the proper education of physicians in medico-legal duties, the result of which is only too apparent throughout the country.

Provision should of course be made by which, when it is considered necessary by the judicial and police officials, an autopsy may be perfectly private and only witnessed by such persons as are officially necessary. This restriction might seldom require to be enforced, but should be left under the control of the coroner.

For autopsies which have to be held privately, or where more than one autopsy has to be held at the same time, a smaller post-mortem room is required, connecting directly with the mortuary and placed in a part of the building not accessible to the public. By this means, when it is necessary to order the removal of a body from a private house in order to secure a more thorough medical examination, the friends and relatives could be assured that the body would not be exposed to the public view.

3. *Laboratory.*—In connection with the autopsies microscopical examination is often necessary before an opinion

can be given, and the examination of blood-stains, hairs and other substances is often necessary. For this reason a small laboratory, provided with the necessary apparatus and fittings, should adjoin the post-mortem room.

Part of this laboratory should be arranged for making simple chemical examinations, especially of the blood, urine and the contents of the stomach. It would probably not be expedient to provide a fully equipped chemical laboratory for elaborate chemical analysis, as this work is better entrusted to some regular chemical laboratory in important cases. In poisoning by certain volatile substances, notably prussic acid, it may be necessary to have the reagents for a chemical test immediately at hand. In connection with the laboratory a supply of jars suitable for preserving organs for analysis should of course be always available.

In poisoning cases it is often necessary to perform experiments in order to establish the poisonous nature of the substances isolated by the chemists. As such work alone, should be made jointly with the physicians of the morgue, a room for keeping animals under observation should be available somewhere in or near the building.

In connection with the autopsies it is often necessary to consult books of reference in regard to a number of special anatomical and other details which it is impossible to retain in the memory. A collection of standard books on legal medicine should therefore be available.

It is often necessary while studying an injury to compare it with other similar injuries, and for this purpose a collection of medico-legal specimens should be available. A small museum would not necessarily involve an increase in the size of the morgue, as the rooms containing it could be also employed for other purposes.

The maceration of skeletons is from time to time necessary in order to determine questions of identity or to study the nature of injuries. Specimens exhibited in court are often of great value in explaining the true nature of injuries to the jury.

In concluding, we wish to state that there are two classes of morgues: The one, are those employed simply as places of deposit for dead bodies; the other those which form recognized centres of medico-legal investigation and teaching, and have raised legal medicine to its present important position. As both classes of morgue cost practically the same sum to build and equip, the future success or failure of a morgue depends upon how it is designed and above all how it is conducted. It is to be hoped that in providing a morgue those in authority will furnish one in every way worthy of this city.

A building such as we have suggested could, as has already been pointed out by Coroner McMahon, be constructed by capitalizing the sum now annually paid by the coroner's court in connection with the transport and care of bodies, rooms for juries, and so forth. If built in connection with the police station the annual cost of heat, lighting and attendance would form but a trifling amount.

In the American cities mentioned above, and in most European cities, the construction and running expenses of morgues are met by the municipalities. In the case of Montreal it appears as if expenses in connection with transport, preservation, guarding and burial of bodies, as well as arrangements to prevent nuisance or danger to health, should legally belong to the city, while those in connection with judicial or medical study of the cases should be borne by the Province.

No doubt an amicable arrangement could be readily arrived at by which a satisfactory service could be obtained at an outlay not exceeding that required for our present very primitive arrangements.

The whole is respectfully submitted.

(Signed)

WYATT JOHNSTON.

GEORGE VILLENEUVE.

INDEX MEDICUS.

To the Editors of THE MONTREAL MEDICAL JOURNAL.

DEAR SIRS—I have learned that the *Index Medicus* will cease to be published with the February number, owing to lack of support and the fact that a large number of its subscribers are delinquent, unless an effort is made to continue it.

The value of this publication is so great that I take the liberty of writing to you to express the hope that you will not only become a subscriber, but will urge other of your professional friends to do so.

It is particularly necessary that the *Index Medicus* should be continued, owing to the fact that after the completion of the supplementary volume of the *Index Catalogue of the Surgeon General's Library* there will be no record of contemporary medical literature, and he who desires to keep pace with it, or wishes to study a particular subject, will have to resort to the laborious task of seeking in various journals that which he desires, if the publication of the *Index Medicus* ceases.

It will be possible to continue the *Index Medicus* if 500 new subscribers are obtained. The subscription price is \$10 per annum, which should be sent to Mr. George S. Davis, publisher of the *Index Medicus*, Box 470, Detroit, Michigan.

As the *Index Medicus* can never be made a success from a commercial point of view because of the peculiar scope of its work, I have no hesitancy in making you acquainted with these facts, and I earnestly hope that you will insert a notice emphasizing the importance of this matter in the columns of your valuable journal.

Yours truly,

H. A. HARE.

Philadelphia, Dec. 7, 1894.

Reviews and Notices of Books.

A Treatise on the Principles and Practice of Medicine. Designed for the Use of Practitioners and Students of Medicine. By **AUSTIN FLINT, M.D., LL.D.**, late Professor of Medicine in the Bellevue Hospital Medical College, New York. Seventh edition; thoroughly revised by **F. P. Henry, A.M., M.D.**, Professor of Medicine in the Women's Medical College of Pennsylvania. Philadelphia: Lea Brothers & Co. 1894.

We are pleased to see that Flint's Practice of Medicine has been brought up to date. For many years it was the leading work on medicine by an American author, but owing to its non-revision for the long space of eight years it was gradually being displaced as a text-book. Now, however, it will again take a worthy stand among the many other admirable works of a similar character published in America and England.

The task of revision was entrusted to Dr. F. P. Henry, of Philadelphia, and he has very ably fulfilled the onerous duty. Dr. Henry has added many new articles, besides correcting and making additions to the subjects treated of in the last edition.

Among the new articles may be mentioned those on pulsating pleurisy, Weil's disease, syringomelia, beri-beri, hereditary chorea, acromegaly, Reynaud's disease, influenza, lithæmia, rickets, actinomycesis, anthrax, glanders, etc. The subject of gastric neurasthenia in its manifold manifestations has been entirely re-written and brought up to the most recent knowledge on this important subject.

Inebriety, or Narcomania; Its Etiology, Pathology, Treatment and Jurisprudence. By **NORMAN KERR, M.D., F.L.S.**, Fellow of the Medical Society of London, etc. Third edition. London: H. K. Lewis, 136 Gower street, W. C. 1894.

The third edition of this standard work on inebriety contains upwards of 300 pages of new matter, dealing with

etheromania, the true place of alcohol in therapeutics, the relations of insurance to inebriety, the relation of inebriety to civil law, the criminal responsibility of the inebriate, etc. etc. Some very valuable information is given about the legislation regarding it in different countries, including the United States and Canada.

The work bears the evidence of a great amount of research compiled with judicious care. Its perusal will well reward the medical practitioner. It is a handsome and well printed volume of 750 pages.

Lectures on the Diagnosis of Abdominal Tumours.

By WILLIAM OSLER, M.D., Professor of Medicine, Johns Hopkins University, Baltimore. (Reprinted from the *New York Medical Journal*, 1894.) New York: D. Appleton & Co. 1894.

We have here a very valuable series of lectures on abdominal tumours. They include tumours of the stomach, liver, gall bladder, intestines and kidneys. They are founded on the careful investigation of sixty-six cases that were under Dr. Osler's observation in the Johns-Hopkins Hospital in the year previous.

A Synopsis of the Practice of Medicine. By WILLIAM BLAIR STEWART, A.M., M.D., Lecturer on Therapeutics, late Instructor in the Practice of Medicine, Medico-Chirurgical College of Philadelphia, etc. New York: E. B. Treat. 1894.

One turns with some curiosity to the preface to learn what the aim of such a book can be and reads "To give the busy practitioner and student concise, accurate and brief descriptions to suggest outlines and practical thoughts." The mere enumeration of causes, symptoms and treatment in the smallest possible space is of doubtful utility except, perhaps, as an artificial memory to the student preparing for examination, but the claim to accuracy is not borne out. Among other things one reads that "Malaria is produced by the bacillus malarie isolated by Lemaire, Klebs and others," and there is no mention of the hæmatozoa or of examining the blood. Appendicitis appears only as a variety of typhlitis to which a page is devoted. The points of diagnosis are "a

tumour like hard links of sausage" in the right iliac fossa with pain and high fever.

Temperature Chart. Prepared by D. T. LAINE, M.D.
Philadelphia: W. B. Saunders. 1894.

This chart is designed for use in cases of typhoid fever treated by the Brand method. On the back is printed full directions for giving the baths, feeding, etc. The face of each chart is ruled for four days, each day is divided into eight divisions, and these are again divided, making sixteen divisions for the twenty-four hours, so that the temperature can be recorded every three-quarters of an hour. Spaces are left for pulse, respiration, urine, etc.

The chart is most complete and will be of the greatest service to anyone using this method, especially as both the Fahrenheit and centigrade systems are marked.

Saunders' Question Compend, No. 24. Essentials of the Diseases of the Ear. By E. B. GLEASON, S.B., M.D. Philadelphia: W. B. Saunders, 925 Walnut street. 1894.

We have before us for review another of Saunders' Question Compend, forming No. 24 of the series. This number treats of diseases of the ear and is written by Dr. E. B. Gleason.

To start with we, as before stated, do not believe in these extremely condensed works, too much is sacrificed in the attempt at condensation. The work before us forms no exception to this failing, and we must say lacks in clearness in many points.

The work is freely illustrated, clearly printed, and as a work of the printer's hands well gotten up.

Annual Report of the Medical Health Officer for the Parish of St. George the Martyr, Southwark, London, 1893. By F. J. WALDO, M.D.

This report, which is 90 pages long, deals with the sanitation of a city population of 60,000, situated in one of the poorest and most crowded parts of London, the number of persons per acre being 211, as compared with 57.7 for the whole of London, or roughly speaking nearly four times as great. As might be expected the death rate is relatively high, being 26.7 per 1,000, the rate for all London being 21.3.

Of the 13,000 tenement occupiers one-third live in one room and another third in two rooms. In other words about 1 in 14 is born, grows up, eats, sleeps and dies within the four walls of a one-room tenement.

It will be noticed that the death rate in St. George the Martyr, in spite of the over-crowding and the fact that a severe epidemic of scarlatina prevailed throughout the year, is identical with that of Montreal at present, so that something more than elbow-room appears to be needed for our own sanitary affairs.

We notice that 134 inquests were held in the parish during the year and in these autopsies were made in 101 cases. Comparing this with the annual number of medico-legal autopsies held in Montreal we find that for similar populations these autopsies are twelve times as frequently held in St. George's.

The Medical News Visiting List for 1895. Weekly (dated, for 30 patients); Monthly (undated, for 120 patients per month); Perpetual (undated, for 30 patients weekly per year); and Perpetual (undated, for 60 patients weekly per year). The first three styles contain 32 pages of data and 160 pages of blanks. The 60-Patient Perpetual consists of 256 pages of blanks. Each style in one wallet-shaped book, with pocket, pencil and rubber. Seal grain leather, \$1.25. Philadelphia: Lea Brothers & Co. 1894.

The Medical News Visiting List for 1895 has been thoroughly revised and brought up to date in every respect. The text portion (32 pages) contains the most useful data for the physician and surgeon, including an alphabetical table of diseases, with most approved remedies and a table of doses. It also contains sections on examination of urine, artificial respiration, incompatibles, poisons and antidotes, diagnostic table of eruptive fevers and the ligation of arteries. The classified blanks (160 pages) are arranged to hold records of all kinds of professional work, with memoranda and accounts. The selection of material in the text portion and the arrangement of the record blanks are the result of ten years of experience and special study. Equal care has been bestowed upon the mechanical execution of the book, and in

quality of paper and strength and beauty of binding nothing seems to be left wanting. When desired a ready reference thumb-letter index is furnished, which is peculiar to this visiting list, and which will save many-fold its small cost (25 cents) in the economy of time effected during a year. In its several styles *The Medical News Visiting List* adapts itself to any system of keeping professional accounts. In short, every need of the physician seems to have been anticipated in this invaluable pocket companion.

Bibliography.

Total Extirpation of the Uterus by a New Method.

By ALFRED H. TUTTLE, M.D., S.B., Surgeon to St. Omer Hospital, Boston, Mass. Reprinted from the *Boston Medical and Surgical Journal* of October 18, 1894.

A Case of Chronic Peritonitis, with Intestinal and Abdominal Fistulæ, Enterorrhaphy, Recovery.

By FREDERICK HOLME WIGGIN, M.D., President of the Society of Alumni of Bellevue Hospital, Visiting Surgeon to the City Hospital, Gynæcological Division, New York. Reprinted from the *Medical Record*, August 11, 1894.

Cauterization of the Nares and Accidents that

May Follow. By E. FLETCHER INGALS, A.M., M.D., Chicago. Read before Annual Meeting of Illinois State Medical Society, Decatur, May 15-17, 1894.

Royal Society of Canada. Section III. Presidential

Address. Read by G. P. GIRDWOOD, M.D., M.R.C.S., Eng., F.R.C.S., F.I.C., etc., Professor of Chemistry McGill University Medical Faculty, late Assistant Surgeon Grenadier Guards. May 22, 1894.

Canadian Medical Literature.

[The editors will be glad to receive any reprints, monographs, etc., by Canadian writers, on medical or allied subjects (including Canadian work published in other countries) for notice in this department of the JOURNAL.]

PERIODICALS—NOVEMBER, 1894.

CANADIAN PRACTITIONER.

The Péan-Segond operation in suppurative diseases of the female pelvis—G. H. Rohé, Catonsville, Md., p. 799.

The antitoxine treatment of diphtheria—J. J. Mackenzie, Toronto, p. 804.

The position of the science of medicine in these later days—G. A. Peters, Toronto, p. 807.

Hæmatocele due to extra-uterine gestation—J. P. Kennedy, Wingham, Ont., p. 820.

ONTARIO MEDICAL JOURNAL.

Three cases of uncontrollable vomiting of pregnancy cured by curetting the uterus—A. Laphorn-Smith, Montreal, p. 117.

Immediate capsulotomy following the removal of cataract—L. Webster Fox, Philadelphia, p. 120.

A case of empyema of gall bladder from gall stones—Operation, recovery—H. Meek, London, Ont., p. 123.

THE CANADA MEDICAL RECORD.

Three cases of coeliotomy—A. Laphorn-Smith, p. 25.

Double femoral herniotomy in a woman 64 years of age—S. E. Milliken, New York, p. 28.

DECEMBER, 1894.

THE BRITISH MEDICAL JOURNAL (Dec. 1st).

- (1.) Preliminary note on an epidemic of paralysis of children—Andrew Macphail, Montreal, p. 1233.

THE PHILADELPHIA MEDICAL NEWS (Dec. 7th ; Dec. 15th).

- (1.) An epidemic of paralysis in children with a report of one hundred and twenty-three cases—Andrew Macphail, Montreal, p. 619.

ANNALS OF SURGERY.

- (2.) Ether anæsthesia ; clinical notes on three hundred cases—G. Gordon Campbell, Montreal.

MARITIME MEDICAL NEWS.

Some facts and fancies concerning influenza, G. D. Turnbull, Musquodoboit, p. 443.

The importance of early operation for cancer—Edward Farrell, Halifax, p. 449.

- (1.) This paper also appeared in the December number of this JOURNAL.

(2.) This article consists of a series of three papers read before the Montreal Medico-Chirurgical Society, dealing with the administration of ether by Clover's inhaler. The conclusions arrived at by the author are of the greatest value, and should be carefully studied by all interested in the subject of anaesthetics. Synopses appear in April, 1893, page 744 ; June, 1894, page 942 ; December, 1894, page 445, of this JOURNAL.

Society Proceedings.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Two cases of Skin Grafting—Dr. Armstrong.

Aortic Stenosis and Incompetence with Tricuspid Involvement—
Dr. McConnell.

Notes on a Cerebral Tumour—Dr. James Stewart.

End to End Anastomosis of Intestine by means of the Murphy
Button—Dr. James Bell.

Spitting on Floors.

Stated Meeting, November 30th, 1894.

G. P. GIRDWOOD, M.D., PRESIDENT, IN THE CHAIR.

Drs. J. A. Henderson and E. D. Aylen were elected ordinary members.

Two Cases of Skin Grafting.

DR. ARMSTRONG showed a man and a boy on whom he had recently performed the operation of skin grafting.

The boy, aged 16, was burned in rather an unusual way some time before. A gentleman walking along the street in front of him, after lighting a cigar, had thrown the match behind and ignited the boy's clothes, severely burning him about the arm and chest.

The cicatrix following the burn had bound the arm to the chest in such a manner that he had only the use of his forearm, and the operation was undertaken to relieve this condition. The arm was freed by dividing the cicatrix, and it and the corresponding side of the chest were grafted with skin taken from other parts of the body.

The result was very good ; the arm and chest, including even the axilla, over the area corresponding to the cicatrix, were now covered with healthy skin, and the upper arm was quite moveable. Sensation over the grafted area, while not perfect, was all that could be expected, and was improving daily. Sensation in these cases, first appeared at the periphery and worked towards the centre.

In the case of the man, there had been malignant disease of the skin in the region of the temple, reported to be endothelioma. It had all the characteristics of a rodent ulcer. Until recently, it had been the custom to wait, after preparing the region, until granulations had appeared before applying the graft. Lately however, both time and pain had been saved by applying the grafts to the raw surface, and completing the whole operation at once. Dr. Armstrong had adopted the latter method in this case, and the result proved successful. He covered the area, which appeared to be about $1\frac{1}{2}$ to 2 inches in diameter, and fully $\frac{3}{8}$ of an inch deep, by a single graft. At the time shown it was almost on a level with the surrounding surface and approaching nearer to that point daily. He had encountered some difficulty in rendering that portion of the skin which bordered on the hair of the scalp aseptic, not being able to obtain any chemical capable of disinfecting without destroying the tissues, and in consequence the grafting had not done quite as well in this region. The quality of the skin appeared to be very good, it was quite moveable over the underlying tissue, and sensation was present at the periphery and increasing towards the centre daily.

Dr. GORDON CAMPBELL, was present at the operation. At the time it seemed to him that the patient, though benefited by removal of the ulcer, would still be disfigured by the depression in the temple, which, as Dr. Armstrong had stated, was fully $\frac{3}{8}$ of an inch below the surrounding surface. The amount of filling in that had gone on would hardly be credited by one who had not seen the previous condition.

Aortic Stenosis and Incompetence with Tricuspid Involvement.

Dr. McCONNELL read the report which will be published in a future number.

Dr. ARMSTRONG remarked that the apparent cure of the appendicitis had proved nothing. Only a short time before he operated upon a man for this disease twelve hours after

the onset, and yet the operation was too late to save the patient. He had had previous attacks, but had been free from any for the past fifteen years.

Dr. JAMES BELL had a student now under his care in the hospital who had an attack of appendicitis about 15 years ago. He recovered without operation, and felt no further trouble until about three months ago, since which time he has had five different attacks.

Dr. LAFLEUR after examining the condition of the heart failed to see any tricupsid involvement, the valve appeared perfectly normal. He did not, therefore, think Dr. McConnell's diagnosis borne out in this respect.

Dr. FINLEY thought the presystolic murmur here might be explained on Dr. Austin Flint's theory, that in a certain number of cases of aortic regurgitation, a presystolic murmur heard at the apex was the result of the floating upwards of the mitral segments, thus narrowing the orifice, and producing this sound.

Notes on a Cerebral Tumour.

Dr. JAMES STEWART read a paper on this subject, which will be published in a future number.

Dr. C. E. CAMERON said this patient had come under his care two years ago last summer. At that time he had hallucinations ; he thought some beasts, as he called them, were crawling round his neck, and wanted the doctor to remove them ; he also believed he had worms in his stomach which he said were interfering with his digestion. Shortly after this he took to bed, and never left it till he died. Latterly he never made any complaints, never even sought his meals ; he lived, but his life was more like that of a vegetable, than animal. He lost control of his sphincters during the last year.

Dr. SHEPHERD regretted that Dr. Buller was not present, as he had for some years under his care a patient suffering from a tumour not unlike this. It grew from the pituitary body, and after lasting some years, involved the ethmoid and the palate bones, until you could finally see the tumour

through the mouth. The specimen existed in the museum of McGill University.

Dr. MILLS regretted that the condition of the brain was so far advanced in decomposition at the time of the autopsy, otherwise he believed the microscope should reveal some other degenerated conditions besides the presence of this tumour to account for all the symptoms in the case. Of course it was possible that the connection of the tumour with the pituitary body was capable of causing all these complex symptoms. Some said that this organ was allied to the thyroid, and being a blood viscus it might explain the anæmia. It would at any rate be important to ascertain definitely whether or not the pituitary body was involved in the tumour, and if it was many of the symptoms could be explained.

Dr. ADAMI, replying to Dr. Mills' remarks, said he had looked carefully through a large number of sections taken from that region, but had been unable to find any pituitary substance, which had apparently completely atrophied.

End to End Anastomosis of Intestine by means of the Murphy Button.

Dr. JAMES BELL read the paper, which will be found on page 481.

Dr. ADAMI, reporting on Dr. Bell's cases, remarked that with regard to the first specimen, the portion of the intestine removed had been examined by Dr. Shaw who made a series of sections, which showed that the cicatricial band in the intestines was not of the nature of simple fibrous tissue, but of fairly fibrous columnar-celled carcinoma. The post-mortem, which was made several hours after death, took place on Sept. 15th. Upon opening the abdomen, acute inflammation was noticed throughout the abdominal cavity. Fæces were first seen coming up through the region where the drainage tube had been, with gas bubbling up through them. Working down in this region they came to the sigmoid flexure, and the portion of the intestine where the "button" had been inserted, and found that

sloughing had taken place between the upper half of the button and the attached intestine, which opened up the bowel, and allowed its contents to escape. The mesentery in the region of the slough was enormously thickened. It seemed to Dr. Adami that the slough had occurred more in the region of the rectum than in that of the sigmoid flexure.

Dr. SHEPHERD congratulated Dr. Bell on his success in the last case. The fatal result in the first he thought was not the fault of the operator, but was owing to circumstances over which he had no control. It would be interesting to know what caused the non-union of the bowel. He had performed several operations of resection, but had always done the end to end suture. His difficulties had been with the mesentery, which tears, especially in regions where it is short, such as near the ilco-cæcal valve. The use of the clamp is another difficulty. Very little pressure is required to keep the bowel closed while the resection is progressing, and some instrument which will exercise exactly the right amount is much needed. He either used a rubber tube, or the hands of the assistant, the latter are best, but they are apt to be in the way; the rubber tube often exercises too much pressure. It is not the actual approximation of the bowel which takes up the time, but these other difficulties, which will exist just the same, notwithstanding the use of the Murphy button.

Dr. JAMES BELL after explaining the manner in which the Murphy button was used, remarked that in the old method of simply suturing, he always felt considerable uneasiness as to the danger of the sutures giving way. It was true he never had such an accident occur in any of his cases; but when one considered the friable nature of the tissues united, it was not an improbable danger, and the increased security which the "button" gave in this respect was an advantage in addition to its saving of time. In concluding Dr. Bell remarked that he began to use the Murphy button with some prejudice against it, but after

trying it, he was bound to admit it a very useful instrument indeed.

Dr. ADAMI commenting on Dr. Bell's theory as to the cause of the sloughing in his fatal case, said that at the post-mortem the glass tube was found rather to one side of the bowel, towards the middle line. It was found passing down to the portion of the bowel which held the button, which latter could be felt at the end of the tube when it was pressed down into the wound. It is possible, therefore that there might have been some undue pressure on the bowel between the button and the tube, but as the tube at most could, from its position, press against the inner (or medial) side of the intestine and the gangrene was equally developed all round the organ, save at the mesentery, it seemed to him more probable that the cause of the sloughing was the pressure of the elastic ligature on the intestine during the operation.

Dr. ARMSTRONG remarked that he had no special experience with the Murphy button ; but that he had this last summer seen one post-mortem where it had been used, and where a good deal of sloughing had taken place around it. He frankly admitted himself a little prejudiced against the instrument. He did not think it saved much time, it could only economise in this way, in the matter of suturing, and in operations of this kind, his experience was that it was not the end to end suturing which caused most trouble in competent hands, but the dealing with the mesentery. The old method had given good results, and when properly performed, leakages from the bowel very seldom followed the operation. He, however, could conceive of cases where the button might be an advantage, namely when resection had to be performed in portions where the bowel was not easily accessible to the hands, such as deep down in the pelvis ; but in any situation where the intestines could be brought up, and conveniently sutured he would prefer the old method. His great objection to the "button" was the manner in which it separated. This must of necessity be

by a process of ulceration, which seemed to him a very undesirable condition occurring around the two ends of a lately united bowel.

Dr. JAMES BELL closed the discussion by answering some of the principal objections to the use of the Murphy button, and giving a brief *resumé* of the complications existing in his fatal case. It was easy, he said, to see why the button did not in this case come away. In the first place he had narrowed the bowel before it, and in the meantime the stricture which occurred in the sigmoid flexure effectually prevented it. With regard to the saving of time, this came in, in the fact that in the purse string suture, there were not more than a dozen needle punctures to be made. The only suture that required to be accurate was that which brought the two folds of the mesentery together. This certainly saved time over the ordinary suturing method, where the needle had to be entered four or five times as often. Referring to the first case, he said the sequence of events was as follows: (1.) A perfectly healthy man taken with diarrhoea; (2.) following this was constipation, with evidence of obstruction, of pain, and of hæmorrhage. At the first operation it was found that the obstruction existed in the small intestine, loops of which had been destroyed by a destructive ulceration. At this time there existed no obstruction in the descending colon or rectum, and after the disease of the small bowel had been removed, perfectly formed stools were passed regularly, showing the functions of the intestinal tract to be normal. Now the interesting part of the problem is, how all this trouble could have developed. Dr. Bell's idea was that it must have originated in the peritoneum over the brim of the pelvis, and that it afterwards extended to the bowel. From a mechanical point of view this seemed the most probable sequence of invasion.

Spitting on Floors.

The following resolution was moved by Dr. MILLS seconded by Dr. MCCONNELL and carried unanimously:

Inasmuch as spitting on floors is a practice not only filthy but dangerous to health,

It is hereby resolved, to urge upon the Montreal Street Railway Company the desirability of prohibiting spitting on the floors of their cars by notices posted prominently.

Discussion on the Management of the Third Stage of Labour.

Dr. J. C. CAMERON opened the discussion. The third stage of labor being the separation and expulsion of the placenta and membranes, it became necessary to enquire, what were the placenta and membranes? to what were they attached, and how were they attached? He described briefly the decidual lining of the uterine cavity which prepared for the reception of the impregnated ovum; the arrival of that ovum, with its chorionic covering, planting itself in the portion of the decidua, afterwards called serotina, and the development of the decidua reflexa; the part taken by the decidua in the formation of the placenta; the formation of the amniotic sac; the growth of the ovum until it finally fills the whole uterine cavity, and unites the decidua reflexa with the decidua vera, or original decidual lining of the uterine wall. The membranes then were three-fold, and together they form a tripartite bag which is filled with fluid in which floats the embryo. Considering the character and texture of the separate membranes, and taking them in the order of their occurrence commencing from the inside, he said the (1) amnion was elastic and strong; (2) the chorion was thicker and more friable, and connected very intimately with the (3) decidua which was composed of two layers, an internal dense and firm, an external of a more spongy character. Summing up the character of the membranes as to strength, the latter decreases from within outward; the amnion very strong, the chorion less so, the decidua being least of all, has very little cohesion.

When labor is about to begin, the uterus is an ovoid body, with walls of tolerably equal consistence except at the lower part where the body joins the cervix. About one-

fifth of its cavity is lined with placenta, and the remaining four-fifths with the membranes. The cervix at this time is completely closed but with the onset of pains, the bag of waters is forced down upon the internal os and gradually opens up the cervix by a process of bulging. In order to bulge and dilate the cervix, the membranes must separate from their uterine attachments; during the first stage we find that they are separated from the lower uterine segment. At the beginning of the second stage they rupture and there is no further separation of the membranes till after the birth of the child. At the beginning of the third stage we find the uterus reduced considerably in size, and differentiated into two parts, an upper thick-walled contractile part, a lower thin walled dilatable part; the function of the first is to contract, and expel the placenta; of the second to expand, and give passage to it. There is no foundation for the statement that the placenta begins to separate normally when the head is being born. How then does the separation take place? Let us first recall how the different membranes are joined together. The amnion is loosely attached to the chorion; the chorion is intimately connected with the decidua; and the decidua is attached to the uterine wall in pretty much the same manner as the mucous membrane is attached to the non-pregnant uterus. Having then very firm union between the chorion and decidua, and a more feeble union between the chorion and amnion, and between the decidua and the uterine wall, it is only natural to expect that the lines of cleavage, or separation of the membranes, would be either between the amnion and chorion or between the decidua and uterine wall. The latter is where separation usually takes place. What is the mechanism of the separation of placenta and membranes from the uterine wall? Various factors are concerned; (1) the contraction of the uterus; (2) the retraction of the uterus; (3) the effusion of blood. Dr. Cameron then dwelt upon the two theories which were put forward to explain the expulsion of the placenta. The one claimed that the contractions of the uterus during labor

caused the placenta to arch or bulge downwards into the uterine cavity, causing a partial separation from the uterus with effusion of blood into the concavity of the arch, between the placenta and uterus. The pouring out of this blood caused by its pressure a still further increase of the arching process until finally the whole placenta separated and descended with its fetal aspect presenting. The other theory was that rupture of vessels played no part in the separation and expulsion, which were solely the result of the contraction and retraction of the uterus. The speaker thought both explanations were right in certain cases, the situation of the placenta as well as its extent determining the mechanism of separation and expulsion. When the uterine wall contracts, the placenta contracts also, it moves with, but not to the same extent as, the uterus. The placenta can be diminished in area by contraction about one-half on the average. Having reached the limit of its reduction in size, it remains rigid, while the uterus goes on contracting, and draws itself off from the placenta. Some authors believe this separation begins in the centre, some at the side. It was then explained how it may occur in either way. In studying the mechanism of separation it is important to remember that the whole uterus contracts, not the placenta only, so that not only does the placental surface decrease in size, but the whole uterus contracts and grasps it on all sides. The method of separation depends largely upon whether the uterus contracts upon the placenta evenly all around, or whether the contraction is irregular; and upon whether the placenta is uniformly adherent to the uterus or has some points at which it is more firmly adherent than others. Irregular uterine action and abnormal or pathological attachment of the placenta modify the mechanism of the separation and expulsion of the placenta.

Another point to be borne in mind is that there is not normally a true uterine cavity into which the placenta may bulge. As soon as the child is born, the uterus contracts and the anterior wall comes against the posterior wall. It

is this absence of an actual cavity which makes the theory of the arching of the placenta untenable in most cases; sometimes when it is situated directly over the fundus, its central portion may bulge down towards the os which is the point of least resistance. But if the placenta is situated upon the side of the uterus, arching does not take place, but the lower edge glides downwards and presents at the os. Coming then to the separation and expulsion of the membranes, it will be remembered that the portion over the lower uterine segment was separated during the first stage: the rest which constitutes about four-fifths of the whole is attached. The membranes are separated (1) by retraction of the uterus during the second stage and the beginning of the third stage. As the uterus is emptied, it retracts by drawing the uterine wall together; the membranes are thus thrown into wavy folds which are most marked close to the uterine surface or in the decidual layer. The crest of each of these folds in the decidua, tends to separate from the uterine wall, and a little hæmorrhage follows, which still further separates the membranes. This, however, is only capable of carrying the separation a certain distance, and the process has to be completed by the traction of the placenta which drags the membranes after it as it descends.

We have here a fair statement of the problem before us. The mechanism varies according to where the placenta is situated on the uterine wall, its extent, the existence of pathological adhesions, the uniformity of uterine contraction, the relative strength of the union between amnion and chorion as compared with that between chorion, decidua and uterine wall.

In concluding his introduction, Dr. Cameron hoped the discussion would be narrowed down to the two following questions: (1) Are drugs of any value, do they help us in the management of the third stage of labor, if so what are they? What are their indications and contra-indications? (2) Are manipulations of service; if so, what manipulations and when are they of use? What are their indications and their contra-indications?

Dr. H. L. REDDY then took up the drugs used in the third stage of labour, his paper on the subject will be published next month.

Dr. A. A. BROWNE took up the manipulative processes which might be required in management of the third stage. These were (1) Manual expression of the placenta by the hand externally, and (2) Removal of retained placenta by the hand in utero. He thought that after the child was born and the cord tied, gentle pressure should be made, the uterus followed down as it contracted, while the patient was allowed to rest and the placenta to become separated. In an absolutely normal labor the uterus would expel the placenta without further assistance in from 15 to 20 minutes; if it did not, expression was done probably best by the method of Credé. This is carried out in the following manner: The uterus should be grasped in the hollow of the left hand the ulnar edge being well pressed down behind the fundus, and when it was felt to harden strong and firm pressure should be made downward and backwards in the axis of the pelvic brim. If the first attempt were unsuccessful the manœuvre should be repeated at the next contraction, and on a second failure a vaginal examination made and the placenta, if found lying wholly in the vagina, withdrawn. If, however, it were still in the uterine cavity, he would again attempt to expel it by pressure and not by traction on the cord. The membranes were best removed by twisting and gentle traction.

Dr. Browne divided retained placenta into two kinds: (1) Simple and (2) where due to morbid adhesions. The former might be caused by inertia, large size of the placenta, hour-glass contraction, traction on the cord, or ergot. The latter was due to endometritis before or metritis or placentitis during pregnancy.

He recommended introducing the hand into the uterus with strict antiseptic precautions, and separating the placenta gently with the ulnar side of the hand, making a to and fro motion, the back of the hand being towards the uterine wall. On any portions not coming away, they

might be peeled off by using the finger nail as a curette, but in many cases it was quite impossible to get all removed without using undue violence. Then it was better to give intra-uterine douches of hydrargyrum perchloride, followed by carbolic or creolin, and allow it come away by necrosis.

In conclusion, Dr. Browne spoke very strongly against the following methods of removing the placenta:—1. Dragging on the cord. 2. Forceful dragging out of the placenta by the hand in utero.

Dr. F. W. CAMPBELL even after hearing the previous speakers believed that his own experience of 32 years was as reliable as any knowledge he could acquire from the text books of to-day. He thought that the uterus itself by contraction and retraction expelled the placenta and had often found a cough or the application of a binder very useful. He desired to enter the strongest possible protest against the modern practice of employing chloroform. A few drops on a towel sufficient to partially stupify might be an advantage, but few women would be content with this, and very little more produced unconsciousness, with entire cessation of uterine contractions. Moreover, he believed it to be invariably followed by a tendency to hæmorrhage and he never gave it except when compelled to do so, and then only when the head had been pressing on the perineum for some little time. Quinine in full doses decidedly increased uterine contractions. As styptics, he preferred vinegar, ice, or hot water. With regard to the expulsion of the placenta, ten minutes he thought had been the average in his own cases, where he used manipulation, and traction when the placenta was in the vagina. He quoted Sir James Simpson's rules. Dr. Campbell separated an adherent placenta with the front of the hand towards the uterus instead of the reverse, as recommended by Dr. A. A. Browne.

Dr. G. A. BROWN used chloroform in the vast majority of his cases in the latter part of the second stage. It was contra-indicated in those who were anæmic, who suffered

from chronic uterine trouble, and who had weak pains and flabby tissues, as then it was apt to be followed by hæmorrhage after the expulsion of the placenta. He was inclined to think that during the third stage ether given by means of the Clover inhaler was preferable. Owing to the time necessary for absorption he now gave ergot immediately after the birth of the child instead of at the end of the third stage, and cited three cases in which a post-partum hæmorrhage occurring with the latter method in previous labours had been prevented at subsequent ones. He believed that if the accoucheur took the precaution of completely emptying the uterus, styptics could be to a great degree dispensed with; when necessary, he used hot water or the insertion of a piece of alum. He strongly objected to perchloride of iron, as it greatly increased the danger of sepsis. As a stimulant after excessive hæmorrhage, he used strychnine gr. $\frac{1}{60}$ hypodermically. He considered Crede's the only scientific method for expulsion of the placenta and in cases of retension followed the plan adopted by Dr. A. A. Browne.

Dr. LAPHORN SMITH strongly advocated the use of anæsthetics and employed the A. C. E. mixture, giving the bottle to the patient and instructing her to sprinkle a few drops on a handkerchief and inhale it as she required it. In this way the patient never became entirely unconscious, and the employment of the anæsthetic did not necessitate calling in another physician. He admitted that it prolonged labour and increased the tendency to post-partum hæmorrhage, but he felt no anxiety on this score, while he possessed the fluid extract of ergot, which he administered in hot water immediately after the birth of the child, to prevent it. He also believed strongly in quinine and strychnia for increasing and maintaining the tonicity of the uterus. The latter he gave, where possible, for a month previous to labour.

Dr. PROUDFOOT referred to the use of laudanum in labour, it diminished pain, acted as a strong tonic and prevented post-partum hæmorrhage.

Dr. ENGLAND endorsed Dr. G. A. Brown's method of giving ergot. He thought that in some cases the drug was not absorbed by the stomach, and therefore dependence should not be placed solely upon it. Chloroform, in his experience, in suitable cases accelerated rather than delayed delivery. He differed from Dr. A. A. Browne in his method of detaching a retained placenta keeping the pulp of his fingers towards the uterine wall, because he believed there was less danger of damaging it thus. As a styptic he considered the hand in the uterine cavity the best means of bringing about contractions, and after this injections of hot water.

Dr. A. A. BROWNE, replying to Drs. England and Campbell, said that if an adherent placenta were detached from above, their method would be most convenient. He, however, spoke of detaching it from below and working upwards, in which case he believed the best way was to have the back of the fingers towards the uterine wall and the pulp towards substance of the placenta, which was separated by a to and fro movement.

Dr. J. C. CAMERON, in closing the discussion, explained that in making the arrangements for dealing with the subject, different parts had been allotted to different speakers, and those to whose lot it had fallen to treat of the nervous aspect of the subject, had been unable to attend. He had no hesitation in putting himself on record as favouring the use of anæsthetics in the latter part of the second stage when the head was down on, and bulging, the perineum. It then not only relieved the pain, but rendered laceration less likely. He, however, would only use it to the obstetrical degree. Speaking of the employment of ergot, he said his own custom was to give it after the birth of the placenta; but he saw no very great objection to giving it earlier in some cases, (that is, after the birth of the child) especially when absorption is thought to be slow. It is a good rule not to give ergot until the uterus is empty, or can certainly be emptied in half an hour. In regard to this slowness of

absorption, he thought we would not hear so much about the worthlessness of ergot, if more care were to be taken to keep the patient's stomach reasonably empty. It is not at all hard to understand why the drug has no effect in some cases, when we consider the mass of stuff, in the way of food and drink, with which some patients load themselves during labour. As a prophylactic against post-partum hemorrhage, there were two classes of cases in which ergot should always be given (1) in *precipitate* labor, where the uterus acts in an hysterical sort of way, the uterine muscle not having attained its rhythmic power, and where relaxation and flooding are apt to set in as suddenly and acutely as the contractions did previously; (2) *prolonged* labor, when the uterine muscle is apt to become exhausted, and the relaxation results from weakness. If you wish to be sure of getting the full effect of ergot, it should be given hypodermically, because when given by the mouth its action is apt to be slow. Speaking of the spontaneous delivery of the placenta, he thought some seeming contradictions which had arisen during the discussion might be easily explained by a consideration of a few of the factors which play a part in the act. When the placenta is in the upper part of the uterus, the uterine muscle or the hand of the operator may serve to force it downwards; but directly it reaches the lower uterine segment, the action of these forces is much lessened. Its further progress depends then upon gravity, supplemented by the contraction of the voluntary abdominal muscles. It was through the action of these last that the cough, so favourably mentioned by Dr. F. W. Campbell, obtained its potency. So also the abdominal binder, by strengthening the lax abdominal wall steadied the uterus, and allowed it to act in a direct line, hence increasing its expulsive powers. A uterus wobbling about in a lax abdomen, could not be acted on so effectually by the abdominal muscles, as one that is steadied and kept in its proper place. Referring to traction on the cord, he said, of course when we are positive the placenta

is in the vagina, no possible harm could arise from gentle traction on the cord ; but it is the possibility of making a mistake in this regard that is dangerous, and he believed that a placenta which was still in the uterine cavity might sometimes be erroneously thought to be in the vagina, and the traction upon the cord would be a mischievous practice. Of the danger of drawing on the cord while the placenta was still attached to the uterine wall, he need not speak : and in no case should any but the gentlest traction ever be employed. As to cases of retained placenta, he believed that most of our cases of retention occurred in the early days of our practice ; and as experience ripens, they become rarer. Retention is very often caused by undue haste in trying to expel the placenta, or to improper manipulation. Referring to the method of dissecting off the placenta, it seemed to him that the one mentioned by Dr. A. A. Browne was the right one. A careful dissector always dissected towards the debris, and from the tissue he wished to save, in like manner a careful obstetrician should work from the uterine wall which he wants to save towards the placenta which he does not care to save. Then as to the difficulty experienced in separating and removing the placenta, he believed it was due to the fact that the operator did not commence his work in the right place. He should remember that the line of cleavage is in the decidual plane, and to reach this it is necessary to get down to the uterine muscle. Most men commence the operation of digital separation by following the cord. This brought them, of course, in contact with the fetal surface of the placenta, and the only way to separate it easily from this point was to push the fingers right through it until the uterine wall itself was reached, and then commence the "peeling off" process. It would be better to begin at the edge of the placenta rather than at the attachment of the cord, or better still, to follow up the membranes, which it will be remembered were separated from the lower uterine segment during the first stage of labour. By passing the finger beneath them, the edge (not the centre as in the

case of following the cord) of the placenta may be reached in the plane of natural cleavage, and then the process of peeling off will be comparatively easy. If these points were kept in mind, he believed the breaking up of the placenta into pieces during its removal, with the consequent danger of leaving some bits behind, would not so often occur. Coming then to the expression of the placenta, and the question of how long should we wait before doing so? It should be remembered *why* we wait. We wait to give the uterus time to separate the placenta. To do this requires pains; and the number will depend on their strength. A man's clinical experience, therefore, upon feeling the uterus, should always inform him where the placenta is, and when and how he should interfere. Above all, manipulation should not be applied to "separate" the placenta, but to expel it, unless the uterus is incapable, or the placenta abnormally adherent. A little thought, and a thorough knowledge of what we are doing, was all the speaker believed necessary to guide one in such cases. As to the position of the patient in expelling the placenta, he preferred the dorsal; the lateral allowed the uterus to topple to one side and pressure cannot be applied so correctly in the axis of the pelvis. The Crede method of manipulation is by all means the best method; but it is not so generally practised as one would think; many only imagine they are using it, while only the few really fulfil all its conditions. The fingers should be got well behind and thumbs in front of the uterus, grasping and compressing the fundus before downward pressure is made. If you simply press upon the organ, as a whole, without compressing the fundus, you will only flatten out the fundus and fail to move the placenta. Speaking then more particularly of the membranes, he remarked that if they are ruptured too early, separation from the lower uterine segment does not wholly take place, owing to the dilatation of the cervix being completed by the head of the child; they are then likely to remain attached even after the delivery of the

placenta. In such a case the fingers should be passed up, to separate them from around the internal os, taking care that all are removed. In closing, Dr. Cameron made an appeal for gentle manipulation of the uterus during the third stage, saying it was one thing to support, another to injure the fundus; and that a great deal of harm was often done by rough handling of the uterus and its peritoneal covering.

Selections.

The Cause of Migraine.—There is probably no functional disorder which has given physicians more annoyance and less satisfaction in its treatment by the application of therapeutic agents than migraine. Antipyrin, antefebriin, phenacitin, acetanilid, and other recently discovered members of the aromatic series of coal-tar products have afforded very little palliation in this class of cases; for every physician who has had much experience in the treatment of migraine knows, to his sorrow, that the apparently beneficial effects of these drugs are very transient indeed. Most of them are capable of affording relief only for two or three times, and all ultimately fail to palliate suffering except by the use of doses so large as to be absolutely dangerous through their depressing effects upon the heart.

The immediate cause of pain in migraine is a question which has been the subject of much discussion. Dr. Bois-Raymond, who was himself a serious sufferer from migraine, regarded it as due to spasms of the muscular coats of the vessels, the result of the disturbance of the sympathetic. He located the disease in the cervical sympathetic; and evidence of the correctness of his theory is to be found in the cord-like feeling of the temporal arteries during an attack of this disease. But Guttman has recently reported cases in which the vessels of the affected parts are relaxed, passive congestion being present.

It is thus apparent that the pain may result from both causes. In the first class of cases it is doubtless due to pressure of the contracting muscles of the vessel walls upon the nerves ramifying among their fibres; while in the second class of cases it results from the pressure of the distended vessels upon nerves lying outside of them. The important point for consideration is, what is the ulti-

mate cause of migraine? The transient and irregular appearance of the disease affords evidence that it is not to any organic change either in the sympathetic or any other portion of the nervous system, but must be the result of some temporary cause which is irregular in its operation.

The researches of Glenard during the last twelve years have thrown much light upon this most interesting subject. Glenard, Trastour, Dujardin-Beaumetz and other eminent French investigators have repeatedly pointed out the fact that prolapse of the stomach, intestines, liver, kidneys and other abdominal viscera is a most active and frequent cause of vaso-motor and sympathetic disturbances of the most varied character. Trastour has called attention to the fact that migraine is a prominent feature of cases of enteroptosis. Within the last four or five years the writer has made careful note of the physical condition of the abdominal viscera in cases of migraine, and has been able to verify the observations of Glenard and Trastour in almost every case.

Dilatation of the stomach, prolapse of the stomach, in most cases also prolapse of the bowels, and not infrequently prolapse of the right kidney have been found; and the existence of an extremely hyperæsthetic condition of the lumbar ganglia of the abdominal sympathetic, associated with static disturbances referred to, have seemed to be amply sufficient to account for the attacks of migraine. In a considerable proportion of cases, when the patient has spoken of recent suffering from migraine upon one side of the head, we have been able, without questioning the patient, to determine the side upon which the attack occurred, by a simple examination of the abdominal sympathetic. If the left lumbar ganglion was found to be most sensitive, the patient almost invariably testified to having had a recent attack of migraine upon the left side of the head. When both ganglia have been found very sensitive, and equally so, patients subject to migraine described the disease as either beginning upon one side and

rapidly extending to the other, or occurring simultaneously upon both sides of the head. We feel confident that this disease is not confined to the cervical sympathetic, as suggested by Du Bois-Raymond, but that the primary seat of the malady is the abdominal sympathetic; hence remedies, to be of permanent utility, must be addressed to the abnormal hyperæsthesia of the abdominal sympathetic which will be found to exist in every case of this sort.

The question next arises, what is the cause of this extraordinary hyperæsthesia of the abdominal sympathetic? One cause has already been referred to, viz., prolapse of the abdominal viscera, resulting in a mechanical strain upon the abdominal sympathetic through stretching of the nerve branches distributed to the viscera, thus dragging upon and irritating the nerve centres in which they originate. This cause might be considered amply sufficient; but that something more is necessary is evidenced by the fact that although the enteroptosis and the strain occasioned by gravity is continuous, the patient suffers only occasionally from severe attacks of migraine, sometimes only at intervals of a month or two, at other times at intervals of one or two weeks or a few days, although we have occasionally encountered cases where it was of daily occurrence.

The hyperæsthesia of the abdominal sympathetic is, then, only a predisposing cause of migraine; an exciting cause must be superadded. This, in the opinion of the writer, is most frequently toxæmia, resulting from the retention of the stomach contents, and decomposition resulting in the production of ptomaines or other toxins which, when absorbed into the blood, irritate to an excessive degree the already over-excited sympathetic, and thereby set up a morbid reflex action, which results in an attack of migraine or nervous headache.

The patient most frequently attributes the attack to over-work. The clergyman complains of having nervous headache on Monday morning after his Sunday sermon. Ladies frequently complain of an attack of headache fol-

lowing an unusually severe round of social duties. Other similar causes are assigned. A careful study of these cases, however, shows that, associated with the over-work, there will always be found symptoms of indigestion; and if not apparent to the patient, the condition of the stomach readily becomes apparent by the administration of a test breakfast and a careful analysis of the stomach fluid by the quantitative method. We have never failed to find in these cases either a high degree of acid fermentation or an excessive quantity of neutral chloro-organic compounds. In both conditions the stomach contents contain a vast quantity of toxic substances which, when absorbed into the blood induce a veritable toxæmia. Intellectual activity is an exciting cause of the disease only through the fact that, by a morbid reflex downward, it increases the hyperæsthetic condition of the abdominal sympathetic, and at the same time retards the digestion; and so favours both the production of toxins, which are the direct cause of the disease, and the susceptibility of the sympathetic to the action of the poisonous substances.

Viewed from this standpoint, migraine is no longer a complex or mysterious malady, but simply a state of systemic poisoning, the origin of which is decomposition of food products in a dilated or prolapsed stomach which, through motor insufficiency, is unable to unload itself of its contents with sufficient promptness to prevent septic and putrefying processes. Hence the remedy is to be sought, not in the discovery of some drug which will temporarily paralyze the nervous sensibility, reduce blood pressure or raise it, as may be required in the individual case, but by the removal of the real cause of the disease. The writer believes that every case of migraine is capable of being radically cured. He has had the good fortune to restore several scores of patients suffering from this malady, by the following simple means:

1. Antiseptic dietary arranged very nearly in accordance with the well-known formula which Dujardin-Beaumez has adopted.

2. The patient's stomach is washed out regularly and with such frequency as the severity of the case may require; usually the administration of lavage two or three times a week is amply sufficient, but in cases in which the attacks occur daily the lavage must be practised every day, and in some cases, for a short period, the stomach must be emptied and thoroughly washed twice a day. We find the best time for cleansing the stomach to be at night, five or six hours after the patient's last meal. This gives the stomach rest during the night, and relieves the kidneys of the labor of removing a vast quantity of toxic substances which, being absorbed in the blood, would seek an outlet through the kidneys, if they were allowed to remain in the stomach.

In addition to the above, tonic measures are employed by which the patient's general health is improved; galvanism, the sinusoidal current, fomentations and the moist abdominal bandage at night are employed as means for relieving the hyperæsthesia of the abdominal sympathetic. When considerable enteroptosis exists, a proper abdominal supporter is worn until the patient has, by gymnastics, massage and manual Swedish movements, acquired sufficient strength in the abdominal muscles to be independent of artificial support. The results of this method of treatment have been most gratifying, as the following case will illustrate:

A lady thirty-five years of age, who had suffered for ten or fifteen years from frequent attacks of migraine, came under the writer's care about a year and a half ago in a condition of extreme weakness and exhaustion, the result of daily attacks of migraine of the most violent character, these having gradually increased in frequency, until, from occurring monthly, they came to be almost constant. The patient was, in fact, at no time entirely free from pain. The test breakfast gave the following result:

| | | | |
|--|--------------|-------|-------|
| Total acidity..... | (M M of HCl) | | .216 |
| Total chlorine..... | " " | | .312 |
| Free HCl..... | " " | | .048 |
| Combined chlorine..... | " " | | .168 |
| Coefficient (normal .86)..... | " " | | 1.000 |
| Acidity due to normal elements (free HCl. and combined chlorine. | | | .192 |

From the above figures it was evident that the patient was suffering from acid fermentation. This, in fact, was the only pathological condition present. Physical examination showed dilatation of the stomach, which was doubtless the cause of the acid fermentation, from the food being too long retained in the stomach.

Lavage was ordered daily; an antiseptic diet was prescribed, together with lavage and other measures in accordance with the plan we have outlined; and the result was that the patient's attacks ceased almost immediately. Only one or two slight ones occurred after the beginning of the treatment, and these were quickly checked by the administration of lavage. The patient made an excellent recovery, although it has been necessary for her to continue the use of the stomach tube at intervals, as the result of digressions in diet, as she has marked dilatation of the stomach and extreme enteroptosis.

The second examination of the stomach fluid, made seventeen days after the first, gave the following result:

| | |
|---|------|
| Total acidity..... | .260 |
| Total chlorine..... | .372 |
| Free HCl..... | .012 |
| Combined chlorine..... | .202 |
| Coefficient..... | .840 |
| Acidity due to the normal elements..... | .268 |

This analysis shows a very close approach to the normal condition. The normal coefficient being .86, it is evident that the acid fermentation has been suppressed, and the chemical test showed lactic acid to be absent.

The free HCl. is diminished, but this is more than compensated for in the increased amount of combined chlorine. The figures show a slight degree of hyperpepsia, but this is due to the increase in combined chlorine rather than to an excessive amount of free HCl.; and as the product is normal in character, as shown by the practically normal coefficient, the condition could scarcely be considered as pathological, but rather as an exaggerated normal state—what might be termed a physiological hyperpepsia, the result of which was a rapid gain of blood and tissue change.

which improved the patient greatly within a very short time.

Some physicians may be glad of the suggestion that most attacks of migraine may be cut short almost immediately by the administration of a thorough stomach washing. If the lavage is applied as soon as the first symptoms make their appearance, the attack may be aborted with almost absolute certainty. If, however, it has had a start of several hours, the most that can be expected is a mitigation of the symptoms and a very considerable abbreviation of the duration of the headache. We have frequently noted the curious fact that patients suffering from migraine are greatly relieved by lavage, even when the stomach seems to be entirely empty, or to contain nothing but a quantity of mucus with a sour or rancid odor.

In some unusually rebellious cases we have found the use of the following simple antiseptic remedy of value: Three parts of charcoal (preferably wheat charcoal), one of sulphur, and one-half part of salicylate of bismuth, taken in drachm doses. The recently introduced sub-gallate of bismuth, in five to ten grain doses, taken either just before or just after eating, has also proven a very efficient remedy.—*La Modern Medecine*.

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THE MEDICAL FACULTY OF MCGILL UNIVERSITY

The formal opening of the new buildings of the Medical Faculty of McGill University will take place on Tuesday, January the 8th. The Governor-General has very kindly consented to be present at the ceremony. Dr. William Osler will deliver an address.

A cordial invitation is extended to all members of the profession to be present at what promises to be a very interesting ceremony.

Four hundred students are enregistered in the Medical Faculty, an increase of 50, as compared with the session of 1893 and 1894. This marked increase, considering that the sessions have been extended to nine months, must be taken as evidence that students are now more than ever alive to the necessity of preparing themselves thoroughly for their professional work. The marked increase in the number of medical students entering McGill University during the past two or three years is, we believe, mainly owing to a general recognition of the necessity of an extended practical training in all branches of the medical curriculum. This McGill, through the wise generosity of her benefactors, is able to offer. The laboratory and hospital facilities for carrying this out are very complete. There are now well furnished laboratories for Chemistry, Physiology, Pathology, Histology, Pharmacology and Hygiene.

The hospital advantages leave nothing to be desired.

THE DIPHTHERIA ANTOKIN.

The marked attention now given to the treatment of diphtheria by means of the diphtheria antoxin will soon make clear to what extent it is useful. From all sides reports are coming which on the whole are favourable. The latest which we have access to is published in *Le Progrès Médical* for the 22nd of December last. It is on account of the cases of diphtheria treated in the Children's and Trousseau hospitals of Paris. The serum therapeutics was begun in the former institution on the 1st of February last and in the latter on the 13th of September. In all 1,027 cases were admitted, of whom 203 died, a mortality of 19.76 per cent. In the same institutions during the seven previous years the mortality ranged between 50.14 per cent. (1892) and 64.66 per cent. (1888) the average for the seven years being slightly above 57 per cent. The mortality under the older methods is almost exactly three times greater than under the new in the two great hospitals for children in Paris. It should be noted that the number of cases of diphtheria admitted to the above hospitals during the months of October and November, and treated by diphtheria antoxine was somewhat greater than the number in any of the corresponding months of the previous seven years, as the following table shows :

| | Average of 7 yrs (1887 to 1893 incl.) | |
|----------------------|---------------------------------------|-------------------------------|
| | October. Old Treat. | November. Old Treat. |
| Number admitted..... | 122 | 146 |
| Number died..... | 71 | 74 |
| | October, 1894. New Treat. | November, 1894. New Treat. |
| Number admitted..... | 228 | 192 |
| Number died..... | 30 | 35 |

We have also indicated the corresponding number of deaths in the two periods.

It is clear, we believe, that even making a due allowance for the increased number of presumably lighter cases treated in October and November, 1894, that the treatment by the new method was found to be of decidedly greater value than the old.

It is, however, as yet too early to speak with any definiteness on this point. We will not have to wait long before the question of the value or otherwise will be thoroughly tried and decided on. The great number of eager and able workers now in this field will soon place our knowledge on a firm basis. Let it be hoped that scientific medicine has added one more strong barrier to the ravages of a cruel disease.

AN UNJUST TAX.

We believe that the Canadian Government stands alone among the Governments of the civilized world in exacting a duty on the diphtheritic anti-toxine. It is difficult to understand the short-sighted policy of instituting such a tax. We are informed that a few of the first importations of the diphtheritic anti-toxine were admitted free, but that the officious officials decided that a duty of 50 per cent. should be levied in future.

It is to be hoped that this and similar unjust taxes will soon be done away with. Now that the Cabinet have a medical man among their number this hope may be realized. The taxing, and that heavily, of nearly all instruments, appliances and apparatuses used in the investigation and treatment of disease is a matter that has been repeatedly brought to the notice of the Canadian Government, but without any result. Such a tax is a great hindrance to the advance of the profession. It is not only felt by practitioners in their private work, but also by hospitals. All suffer—the rich as well as the poor.

Obituary.

VERNON S. HALLIDAY, M.D.

It is with regret that we chronicle the untimely death of Dr. Vernon Halliday, in the 25th year of his age. He was pursuing his studies in New York when he was taken ill with diphtheria. He was removed to the Willard Parker Hospital and was treated by the new anti-toxin with apparent success, for he rapidly became convalescent from the illness, but on November 26th he was stricken with paralysis of the heart and died instantly.

The deceased graduated from the Medical Faculty of McGill University in 1892 and for a short time acted as house surgeon in the Montreal General Hospital. Finding that practice in his native town of Peterboro did not agree with his health ~~he went~~ to New York and at the time of his death had been prosecuting his studies in some of the special branches.

He was greatly esteemed by all his fellow-students and both in class-room and campus was always a prominent figure. By his death a most promising career has been cut short.

Personal.

Drs. W. H. B. Aikin, A. B. Atherton, J. Ferguson, J. H. Burns, A. A. Macdonald and Geo. Sterling Ryerson have severed their connection with the *Dominion Medical Monthly*.

Medical Items.

—Prof. Kohlrausch, of Strasburg, has been appointed successor to the late Prof. Helmholtz.

—Dr. Withers Moore, of Brighton, and ex-president of the British Medical Association, died on the 5th ult.

—We regret to have to record the death of Dr. Duquette, Medical Superintendent of the Longue Pointe Asylum.

—Dr. John Chapman, for many years a prominent medical man in the English colony of Paris has passed away. He is best known as the introducer in practice of the spinal ice and hot water bags.

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