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Original Communications.

CASE OF PRIMARY CARCINOMA OF LIVER.*

By J. G. ADAMI, M.A., M.D.

Professor of Pathology, McGill University, Montreal, and Pathologist to the Royal Victoria Hospital.

During the last session of the Society I brought before the Montreal Medico-Chirurgical Society a case of true adenoma affecting the liver of a woodchuck, and arising primarily, as its structure amply demonstrated, from the parenchyma of that organ.†

I have now to describe you a case of very similar nature in the human liver, only here the adenoma has taken on a malignant character and secondary growths have developed elsewhere.

The specimen was obtained at a post-mortem made at the Royal Victoria Hospital on September 4th. The subject from whom it was obtained, J. B., aged 45, entered the hospital under Dr. Stewart, complaining of weakness and loss of flesh, with pain and swelling in the abdomen. He had been addicted to good living and excessive use of alcohol and there was a doubtful specific history. About a year before admission there had been a violent attack of jaundice, from which patient gradually recovered.

The liver dulness extended from the fifth rib to two

* Read in abstract before the Montreal Medico-Chirurgical Society, Nov. 2nd, 1894.

† *Vide* this Journal, Vol. xxiii., p. 55, July, 1894.

inches below the costal margin, the edge was sharp, while the anterior surface presented a nodular mass the size of the fist, movable with the liver.

This lump in the right side, noted now to be in connection with the liver, was first observed five months ago.

Without dwelling fully upon the condition of the other organs it may be added that there was much ascites. The patient was tapped twice and each time a blood-stained ascitic fluid was removed containing both red and white corpuscles and urea; it was highly albuminous.

With this history a diagnosis was made of cancer of the liver. The autopsy fully confirmed this diagnosis.

In connection with the liver within the substance of the right lobe was the large pale-coloured mass seen in the specimen handed round. Upon the surface were several semi-transparent nodules of new growth in the capsule, but upon section the only recognizable focus of new growth within the organ was the one large well-defined mass. This mass was 10.5 cm. broad and 14 cm. long sharply separated off from the surrounding liver tissue: it was placed anteriorly at the left extremity of the right lobe and to the left of the gall bladder. This last was greatly thickened and pressed to the right by the growth. Upon opening it was found to be full of thick brownish-grey pultaceous mass of mixed pus and bile, with such intense staining power that even now upon November 2nd the nail of my left index finger is stained from exploring the gall bladder of this case upon September 4th. In this mass lay several soft small facetted gall stones, which easily crumbled and broke down when handled. Two larger and firmer stones lay at the opening of the cystic duct and appeared to completely block it.

The great omentum was greatly thickened and of a deep blood-stained tint, very nodular and brittle. The small intestines presented numerous semi-transparent nodular growths upon their serous surfaces. There were further numerous small nodules scattered through the mesentery

and imbedded in the fat. There was no sign of new growth anywhere within the intestinal tract.

Beyond œdema of the lungs and interstitial nephritis, there was little calling for additional remark.

Upon microscopic examination the new growths here described were typically carcinomatous, of the medullary type. The great size of the mass in the liver, as compared with the minute nature of the nodules elsewhere, appeared to indicate that in the liver was the primary growth, and microscopic examination proved the correctness of this suggestion. More especially towards the growing free surface the mass could be seen to be composed of characteristic liver cells, large, tending to be cubical and pigmented, possessing a tendency to be arranged in an alveolar manner. Elsewhere, deeper down in the tissue, the cells became smaller and the collections were separated off from each other by well formed fibrous stroma. In parts there was a tendency for the cells to be arranged around a central lumen.

The sections, in fact, possessed all the characteristics of an adenoma, or new growths of the liver tissue which had taken on malignant characters. This malignancy was further demonstrated by the abundant new growths in the abdominal cavity.

Primary carcinoma in the liver may be of three types:

1. Generalized carcinoma, the cirrhosis carcinomatose, of Peres.

2. Localized carcinoma orginating from the liver cells proper.

3. Localized carcinoma originating from the smaller bile ducts.

A fourth form, not truly hepatic, invades the liver after primary origin in the larger bile ducts.

Here in this case we are dealing with the second form, that is to say, with a true liver cell cancer, which is of sufficient rarity to be placed on record.

Finally, it is interesting to observe the relationship that in this case appears to exist between the inflammatory dis-

turbance of the gall bladder, which dated back a year, and the cancer which has arisen in close juxtaposition to the inflamed bladder. The suggestion is that some relation exists between the two. It is noticeable that the gall bladder itself exhibits no cancerous growth; it is only chronically inflamed, but immediately outside it, in the region that is of congestion and over nutrition of the tissue has originated this new growth.

THE VALUE OF LOCAL TREATMENT IN SEPTIC INFECTION OF THE PUERPERAL WOMAN.

By David James Evans, M.D.

Demonstrator of Obstetrics, McGill University, Montreal.

This contribution is presented this evening in the hope that it will call forth a free discussion, and not because the writer has anything new upon the subject to bring to your notice, or a new way of presenting an old subject.

Elevation of temperature in the puerperal woman is not always due to septic infection, nor is the uterine douche invariably indicated in every case of sepsis. The cause of the elevation in this class of cases must be carefully searched for and, if possible, a clear diagnosis made before a definite course of treatment can be decided upon.

Many practitioners have but the haziest ideas as to the subjective and objective symptoms of septic infection in the puerperal woman, and these are scarcely less nebulous than their ideas of its treatment. In hardly any condition is an exact diagnosis more urgently called for, nor is the benefit of prompt and energetic treatment more brilliant than in so-called puerperal septicæmia. Delay and hesitancy, or the adoption of inadequate treatment, prove disastrous not infrequently, not only to the life of the patient, but also to the reputation of the physician.

One often hears the assertion made that out of such a number of cases of midwifery attended, there has not been a single case of septic infection. Perhaps there has not been a fatal case, but let any one examine the case books of any gynæcological clinic and he will note the number of patients who date the beginning of their sufferings to a certain confinement. I am sure the gynæcologists will bear me out in the statement that fully 50 per cent. of their cases are the result of careless midwifery. Gentlemen, if midwifery were practised as it should be, cases of

* Read before the Montreal Clinical Society, Nov. 10th, 1894.

mild septic infection promptly diagnosed when met with, and their treatment immediately undertaken, many a woman who is suffering to-day, would be well, and many a home brighter and happier. The advent of the baby would cease to be an event which is followed by more or less invalidism on the part of the mother, trouble and worry on the part of the father, and an increased income to the neighbouring gynæcologist.

Puerperal fever, as such, no longer exists, but has been relegated to the past along with milk and surgical fevers. Septic infection is the same whether it follows the work of the surgeon, gynæcologist or the obstetrician. Its forms vary with the site of the infection, the virulence of the infective agent, and the resistance of the organism attacked.

The French, German and English schools have all a more or less complete classification of septic infection in puerperal women. Some are too full, others scarcely complete enough. I venture to present to you this evening a table or classification which is the product of my reading and experience, and which can readily be carried in the mind.

The infection may be:

(1.) LOCAL.

(a) *Puerperal Ulcers.*

Greyish pseudo-membranous patches found wherever m.m. is torn. Lochia offensive. Smarting pain. Fever.

(b) *Endometritis*—Two forms,

I. Catarrhal.	*II. Pseudo-membranous.*
Vaginal m.m. red, swollen. Cervix œdematous. Os patulous. Slimy brownish lochia. Uterine m.m. covered with small cystic swelling. Fetid lochia remaining sanguinolent. Uterus well contracted. No tenderness. Abdomen flaccid.	All vaginal and cervical lacerations covered with greyish membrane, extending to endometrium. Lochia may be normal or fetid. Not much tenderness in uterus which is enlarged. Chills and fever not marked.

c *Metritis.*.

Extension along connective tissue.

d) *Peri or Para-metritis, Cellulitis.*

Extension along peri uterine connective tissue.

(2.) GENERAL.

(a) *Peritonitis.*
Extension along lymphatics.

(b) *Pyæmia.*
Extension along blood vessels.

(c) *Septicæmia.*
No local signs, general infection by micro-organism.

(d) *Bacillus Coli Communis (?)*

If *local* it may be in the form of

(a) *Puerperal Ulcers.*—These form on any part of the vagina or labia which has been denuded of epithelium, are irregular in outline and shallow, the surface being covered with a greyish diphtheritic looking exudation or membrane. Their edges are red and elevated, and the surrounding tissue often œdematous. They are usually found at the vaginal orifice and extending up the labia minora or over the perineum. The symptoms they cause are smarting, burning pain at their site, fetid lochia, or a fever, more or less marked. They are often associated with the presence of gonorrhœa.

(b) *Endometritis* is the result of infection of the lining of the uterus, and occurs in *two forms*, the simpler being the *catarrhal* form. Locally on making an examination of such a case, one would note the vagina red and swollen. The cervix œdematous, its mucous membrane, as well as the endometrium, being covered with a thick brownish slime; the endometrium, when uncovered, appearing as a mass of closely agglutinated rounded swellings, which, when ruptured, exude a purulent fluid. The uterus is generally well contracted and is not tender on pressure. The symptoms are, offensive lochia, often very marked. The lochia remains blood tinged longer than usual. Fever is remittent in type, and there may be a chill at the outset. This may be repeated at intervals, but not as a distinct chill, it taking the form of a sensation of goose flesh, and occurring at irregular intervals. After-pains are prolonged several days in these cases.

The subjective symptoms are slight, the patients com-

plaining of nothing, and often resenting interference in the early stage. The pulse is always rapid in all forms of septic infection and an increase in its rate may often precede the elevation of temperature. In this catarrhal form small bits of retained chorion are often found trailing through the os into the vagina.

The second form of Endometritis is usually found associated with puerperal ulcers, and is the result of the extention of the infection to the endometrium. It is known as the *Pseudo-membranous form.* On inspection any laceration of the vagina or cervix will be found covered with a membrane, as before described. The cervix will be œdematous, and through the os a purulent looking fluid exudes, which may or may not be malodorous. The fetid odor is not so marked as in the other form, on the whole I think.

The lochia may apparently be normal in quantity and quality, or may be scant or absent. Uterus will be found large and soft, and is more tender on pressure than in the other form. Subjective symptoms are about the same, but the chill and fever may be more marked.

Gonorrhœa predisposes to these forms of endometritis. In all cases where gonorrhœa is suspected at or before delivery, the urethra should be emptied by pressure from within outwards, and the resulting drop of mucous examined for the gonococcus. In either of the above forms of endometritis, the local symptoms may be so slight as to escape observation, and yet sub-involution, hydro- or pyosalpingitis are the sequalæ to be dreaded. It not infrequently happens that the fact that endometritis of either of the above forms was present during the puerperal period, is left for the gynæcologist to demonstrate, when after a brilliant cœliotomy, performed some months later, he presents the pus distended tubes before some medical society.

The course of both of these forms depends on the resistance offered by the patient, and the virulence of the infective germs. After a transient elevation of temperature she may

recover. Her puerperium may be somewhat slower than usual ; her after history one of pelvic pain, menorrhagia and sterility.

Or the infection may become general ; from which recovery may take place, but which generally results fatally. General infection usually takes place through the lymphatics.

Another form of local infection results in *Metritis.* The extention of the inflammation takes place in this form through the connective tissue of the uterus, and is usually the result of the infection of a lacerated cervix. Uterus will be found to be enlarged and tender, and the cervix torn, gaping, bleeding when touched, and œdematous. The endometrium may appear normal. Pain is complained of. Fever is marked but varies. Lochia remains sanguinolent and is pretty free, though I have seen it suppressed altogether in this form.

The last form of local infection on this table is *Para or Peri-Metritis or Celullitis.* This form is also the result of the spread of the infection along the connective tissue, but instead of passing up into the uterus it passes into the surrounding connective tissue, resulting in extensive peri-uterine exudation. On making a local examination, these stone like masses will be felt, and the uterus found firmly fixed to the pelvic wall.

Pain and tenderness is very marked. Fever may be high at first, but usually runs about 102°. The condition lasts from three to six weeks, and results in an abscess or in resolution of the exudate.

Now *General Infection* may be divided into three clinical forms, the first on the chart being the *Peritonitic form.* In this form the endometrium may appear healthy or may be but slightly affected. Extension to the peritoneum takes place through the lymphatics. It is a lymphangitis resulting in a peritonitis. The onset is rapid and the subjective and objective symptoms marked. I have seen but two cases of this variety, one died on the fifth day and the other recovered after a hard fight.

The next form of general infection noted is the *Pyæmic*, the result of extension along the blood vessels. This form is marked by the occurrence of marked rigors, sweating and fever. Both subjective and objective symptoms are marked as a rule.

I feel inclined to place phlegmasia alba dolens under this head, as its mildest and most attenuated form.

The last and most terrible form is the *Septicæmic* form. In this the local symptoms may be entirely absent. There is an acute intoxication of the whole organism, and the post-mortem may reveal no sign of the formation of pus, but cultures of either the streptococcus or staphylococcus, or both, may be obtained from the blood and tissues.

Bacteriologically considered, the most common infective agent is the streptococcus, then we have the mixed infection and most rarely the pure staphylococcus infection. Lately the bacilli coli communis has been noted as a cause of elevation of temperature during the puerperal period, and the theory of anto-infection from the intestinal canal is attracting considerable attention at present.

Septic infection by means of the mammæ should be borne in mind, and I have separated three forms in my mind, according to their clinical symptoms.

(1.) Extension of the germs along the membrane of the galactophorous ducts leads to the condition of galactophoritis. Slight symptoms manifested, but child suffers continuous loss of weight.

(2.) Extension by lymphatics either *superficial*, in which case the course of the inflamed glands can be seen passing over the breast in the direction of the axilla, or *deep*, in which case the deeper glands are affected and undergo inflammation and may either resolve, form an abscess, or pass into the next form, viz. :

(B.) Extension by the connective tissue resulting in parenchymatous inflammation, or true mastitis. The infective germs are the same as in infection through the genital tract.

This digression to the infection of the mammæ will, I trust, be pardoned, and we will return once more to the subject in hand.

In order to have a clear idea of the indications for treatment, a glance at the condition of the uterus and vagina, both before and after infection, will repay us.

In the normal condition there is an enlarged and congested uterus and vagina. The muscular layers are undergoing rapid fatty degeneration and absorption, the lymphatics are, so to speak, being worked at full pressure. The endometrium, with its shreds of charonic decidua, is being rapidly disintegrated and cast-off. Perhaps a blood clot occupies the cavity of the uterus, which has formed after the expulsion of the placenta. A small shred of retained membranes may pass through the os from uterus to the vagina. Perhaps a small portion of the placenta has been left behind. Here we have a perfect nidus for the development of putrefactive and infective organisms should they gain an entrance. This clot or piece of membranes may be expelled at the first action of the bowels or during micturition on the second or third day, and beyond a slight odor to the lochia for a few hours, nothing is noted.

Should infection of the endometrium take place, either along this piece of membrane or from the entrance of air to the uterus or by direct extention from infected lacerations of the vagina, the pathologists tell us that we would find a necrotic, brownish layer on the internal surface of the uterus, thick with putrefactive or infective micro-organisms ; below this a layer of round celled infiltration, leucocytes. This latter is nature's protective skirmishing line, dividing the infected areas from the healthy subjacent tissues.

In cases going on to general infection, the uterine sinuses and veins are plugged with leucocytes infected with these organisms. The cause of the general symptoms in cases of local infection only, is the absorption of ptomains in all probability, while in pyæmia, septicæmia, either infected

emboli or the organisms themselves are dispersed by the circulation.

Fever during the puerperium, as has been said before, is not of necessity of septic origin. It is not our purpose to discuss the various causes of rise of temperature in the puerperium which may simulate septic infection. Suffice it to call attention to the necessity of a careful examination of the patient and her environment, mental and physical, before venturing to make a diagnosis of septic infection.

Before such a diagnosis can be made, a careful examination of the genital tract must be undertaken. In order to make such an examination satisfactorily, the patient must either be placed on a table or her hips brought to the edge of the bed. The dorsal decubitus is most convenient, as the Sims position would favour the ingress of air and the return of infected lochia to the cavity of the uterus. The physician having sterilized his hands and all instruments he is likely to require, then inspects the vulva. The condition of the genitals, the odour, colour, quantity of any discharge present must be noted before cleansing the parts previous to making an internal examination. Then separating the vulva, any lacerations about the perineum or orifice of the vagina must be examined. If wounds sutured after labour are found to be infected, the stitches must be removed and the surface of the wound washed clean. The necessity of having any infected area about the external genitals or lower vaginal mucous membrane washed clean, at once is apparent when one realizes that the uterus may not be infected, and if one should pass in a speculum or introduce a uterine nozzle over such areas, it is more than likely that more harm would result than good from such local treatment.

Before exposing the cervix one should be prepared to carry out immediately whatever local treatment may be deemed necessary, and to do this one must have a clear idea of the indications for treatment.

Briefly one has to deal with a cavity, the lining mem-

brane of which may be more or less necrotic and infected with pathogenic organisms. The indications are first to clean the infected areas as thoroughly as possible, to bathe the surface left with some antiseptic which will either destroy or lessen the virulence of any micro-organisms remaining or finding their way into the cavity later, and to support the strength of the patient by easily digested food, stimulants, tonics, etc. At the same time the emunctories must be kept active, the action of the bowels, kidneys and skin being promoted.

Uterine injections of antiseptic solutions are no doubt of great value, but such injections may prove as potent of harm as of good. The antiseptic used should fill the following requirements: It should be cheap, of high microbicide power, potent in small doses, non-irritating, either to the patient's tissues or the physician's hands, its odour should not be disagreeable, nor should its retention or absorption by the patient lead to any toxic effects.

Time does not permit the discussion of the various antiseptics that may be employed, but I would take the opportunity to utter a word of caution in regard to the use of bichloride solutions, especially in the case of blends. I have seen two instances where I feel certain the toxic effect of the drug was obtained. Creoline in my hands has proved of service; from ½ to 2 per cent. solution may be employed. Permanganate of potash and iodine water are also valuable. The French use carbolic acid solution, and many Germans prefer lysol.

The uterine nozzle may be of glass or vulcanite, but should have a large curve and blunt tip. A Bozeman's catheter of large size is very convenient. To expose the cervix I prefer an ordinary large sized Sims speculum.

The curette used should be blunt and have the scraping surface at an angle with the shaft, which should be long. A pair of uterine forceps, two uterine brushes and a vulcellum forceps completes the equipment.

Two wire applicators for holding cotton swabs are of

service. Iodized phenol or zinc chloride solution 50 per cent. and iodoform bougies should be at hand.

Having carefully cleansed the perineum and lower part of the vagina, the speculum may now be introduced, so as to catch the cervix and expose it. If the latter appears healthy and the discharge from the os normal the speculum may be withdrawn, a vaginal douche given and any infected surfaces which have been cleaned may now be touched up with iodized phenol or zinc chloride solution, and the parts dusted with boro-iodoform and a pad applied.

Having first cleaned off the lower parts there is no fear of infection having been carried up by the nozzle or speculum.

Should the cervix be found infected and the endometrium abnormal, then the curette must be carefully used, followed by the brush. A good hot antiseptic douche is now in order, after which a pencil of iodoform should be introduced high up into the uterus and left there. In order to curette and douche the cavity of the uterus properly the anterior lip of the cervix must be seized with a tenaculum and drawn down, thus straightening out the uterus. Any lacerations about the cervix should be touched with iodized phenol before withdrawing the speculum. This operation can nearly always be performed without an anæsthetic, for it does not as a rule give rise to very great pain.

A great deal has been written against the use of both curette and brush in puerperal cases, but if one considers the state of the endometrium, it is apparent that a stream of water is quite inadequate to thoroughly remove the infected surface. The curette must be used with great care, as the uterine tissue in badly infected cases may be quite soft in areas. The brush I find of value as it entangles in its meshes any bits of tissue which may have been only partially loosened by the curette and are still too firmly attached to be removed by the succeeding douche.

The uterine douche may be repeated in 12 hours, and

another iodoform pencil inserted into the cavity. In some cases a second curetting in from 24 to 48 hours is required. Should there be any evidence of infection of the tubes, pain in one or both groins, etc., the ice-bag must be kept applied to the hypogastrium.

After this treatment patients may complain of cramp-like pains due to uterine contractions. In certain cases any uterine interference is succeeded by a chill, and in these cases care must be taken to disturb the patient as little as possible. It is wise to administer a stimulant before each douche also in these cases.

In metritis the curette is not of much importance, but the condition of the endometrium is the indication for its use. In this form, two or three prolonged hot antiseptic douches daily, and the scraping and cauterizing of the cervical laceration, constitute the local treatment. The same holds good for the treatment of para-metritis or cellulitis.

In Paris I have seen the constant irrigation of the uterus carried out with success. Here a constant flow of a 1 per cent. solution of carbolic acid is kept up for days until the temperature drops, or until the urine is black. Then instead of carbolic, a boracic solution is employed. The treatment is valuable but entails great trouble to carry out properly.

Now, gentlemen, I do not for one moment claim that if the course of local treatment here outlined be carried out, that fatal cases of septicæmia will not occur, or that pus tubes and sub-involution will become things of the past. I venture, however, to think that the physician with a clear idea of the condition present in the case before him, and a sound view of the treatment to be adopted, is in a better position to render assistance and perhaps save a patient's life, or save her from chronic invalidism, than he whose ideas of septic infection and its treatment are crude and uncertain.

The table of classification may not be perfect, but it forms a good working basis on which to outline a diagnosis.

Of course the types may be mixed, or may pass rapidly from one to the other, but with these types clear in the mind, one will probably soon grasp the conditions present in the case before him.

To sum up :—Elevation of temperature during the puerperium is not always an indication of septic infection.

Considerable care must be taken to thoroughly investigate the environment, mental and physical, of each case before venturing on a diagnosis.

An acquaintance with the different forms which septic infection may take in the peuperal woman is necessary for all physicians attending midwifery cases.

Prompt and energetic treatment by means of the curette, brush and douche is of great value.

AN EPIDEMIC OF "PARALYSIS IN CHILDREN."*

One Hundred and Twenty Cases.

By Andrew Macphail, B.A., M.D., M.R.C.S., Eng.; L.R.C.P., Lond.
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ABSTRACT.

During the past two months, through the intervention of Dr. C. S. Caverley, President of the Board of Health, and his colleague, Dr. H. H. Swift, I was able to make some observations upon an epidemic of "paralysis in children," which occurred in the State of Vermont. The epidemic commenced late in June, increased in July and culminated in August, and though new cases are cropping up, the malady has now almost abated. I obtained the notes of ninety-one cases out of one hundred and twenty which were affected.

At first the belief was held that the outbreak was one of cerebro-spinal meningitis, and there were several cases presenting the characteristics of this disease. But on examination it appeared that such cases were very few, and in many there were no symptoms at all beyond paralysis. There was a general absence of retraction of the head and flexing of the trunk. The sensory symptoms were not prominent, the headache was chiefly frontal and beyond some slight delirium of the ordinary febrile type there were no psychical manifestations. The cutaneous symptoms were absent or unimportant, and while in many cases there were indefinite rashes, in only one were there petechiae, in none herpes-labialis mottling, purple spots or the other undoubted cutaneous manifestations of "spotted fever."

The sequalæ and complications were also different. There was no account of pleurisy or pericarditis, and in only one case pneumonia. Neither the auditory nor any of the

* Read before the Montreal Medico-Chirurgical Society, October 19, 1894.

cranial nerves were permanently affected. The eye symptoms were wholly of central origin, no ophthalmia, no conjunctivitis, no keratitis, no permanent impairment of vision. From an examination of the records of all the epidemics of cerebro-spinal meningitis, and an estimate of such authorities as Randolph, Wilson, Niemeyer, Knapp and Kreitmair, it would appear that the eye symptoms alone were sufficient to differentiate the present malady from cerebro-spinal meningitis. Indeed Hirsch affirms that "Conjunctivitis is almost always a constant condition."

I will set down brief notes of a few cases typical of groups into which the series seemed to fall.

S. C., a boy five years old, complained 17th June of headache, chiefly frontal, with nausea and vomiting, a temperature of 102 degrees and a pulse of 115. This continued for twenty-two hours and was succeeded by soreness in the arms and legs, loss of reflexes, with generally increasing paralysis, culminating after twenty-four hours in a completely powerless condition of both lower and both upper extremities which still persists.

A. B., a delicate girl of twelve years, with a slight left lateral spinal curvature, fell sick of an attack resembling indigestion, with coated tongue and marked constipation. Gradually, without alarming symptoms, paralysis supervened, and in two days both arms and legs were useless. After five weeks there is no sign of improvement.

In this case there was a real arthritis quite as intense as in an ordinary attack of acute rheumatism, the pain not merely "supposed to be in the joints." (Gowers.)

Boy, seven years old. 4th July had a temperature of 103 degrees, and a pulse of 120 for three weeks. The temperature suddenly dropped to 97, and the pulse to 50. The knee joints now became painful and swollen, as well as the elbow and shoulder, paralysis of the left upper and left lower extremities followed and still persists.

In this case the preliminary symptom was double vision. A girl, eleven years old, suddenly developed this condition

and for three days was slightly unwell. Next morning she was unable to get out of bed on account of complete paralysis of the left arm and leg. Fever with delirium followed for four days when the symptoms abated, and now the limbs show some improvement. In this case the menstrual function was established during the progress of the disease.

In other instances there were no premonitory symptoms and without warning, the children would "stumble," and on examination one or other of the limbs would be discovered in a paralytic condition.

The following may be taken as types of the fatal cases:

S. G., an Italian boy of four years old, on the 21st July became sleepy and complained of headache. He was found to have no fever, but with a pulse of 45 slow, hobbling in character and intermitting every fifth beat. This continued for four days, when a slight improvement was noticed, internal strabismus occurred, but the child made a complete recovery, so far as symptoms were concerned, on the the seventh day. He was then allowed to divert himself in the hot sun in company with a goat, when all the original symptoms returned, headache, squint, halting pulse and drowsiness. This was the last of August, by the first of September he was worse than at any previous time, but yet had no fever. Next day the knee-jerk was absent, but the plantar reflex was retained, as well as the cremasteric. The legs now became paralysed, and by the third of September the paralysis was general, the eyes half closed, the pupils dilated and unequal, a temperature of 105 degrees The child died at three o'clock the same afternoon.

Hilding A., a Swedish child, twenty months old, on the 31st August was stricken with fever of 103 degrees and pulse of 120. The restlessness was extreme, the child moaning and tossing its limbs, but quite conscious. The head was slightly retracted, and the pupils contracted unevenly. Next day the general symptoms were improved, but the child continued restless and in a highly excitable

condition. The second of September the fever had disappeared, but the restlessness increased with clonic spasm, strong grinding of the teeth and paralysis of the left leg. Next day the temperature rose to 104, the spasm increased and general paralysis supervened. The child died in the afternoon.

In view of the fact that in many cases of cerebro-spinal meningitis the lance shaped coccus, similar in all respects to the pneumococcus, has been found, which Corneil and Babes regard as the cause of both diseases, it is worth remarking that pneumonia was present in only one case.

E. F., a boy aged four years, was affected on the 8th of August, after a slight preliminary illness, with paralysis of both legs, and two days later developed pneumonia. Both conditions subsided and now the child is in a fair way of recovery.

In a few the onset was accompanied by symptoms of transient meningitis. Gowers believes that such condition must be regarded as a coincident effect of a common cause.

I have also notes of six cases in adults, of which three were fatal, in two the paralysis persists, the other, a man of seventy, recovered.

The ages were nineteen, twenty-four, twenty-seven, thirty-five, thirty-six and seventy years.

For example : S. J., a lad 19 years old, complained of pain the head and back, a pulse of a 100 and a temperature of 102 degrees. The fever subsided on the fourth day, the pulse fell to 56 and all pain disappeared. The right arm now became paralysed, and by next morning the pulse was at 38, the temperature 97, the extremities cold. Complete paralysis developed during the day, and in the afternoon the young man died.

The muscles in every marked case showed the degenerative reaction in a characteristic manner. The loss of faradic irritability was observed, and in many cases absolute, while the reaction to the constant current was increased. The muscles were variously affected. In some

cases the whole arm was paralysed, in some only the intrinsic muscles of the palm, but the combinations of the different groups affected were endless. After an exhaustive tabulation of the muscles and groups affected, I was unable to discover any combinations which seemed to preserve any definite order. In the legs the extensor group was injured most frequently, and sometimes there was a functional association. The paralysis in every case was motor, and the only disturbance of sensation was hpyeræsthesia.

The distribution of the paralysis was as follows, reduced to percentage :

Left arm alone	2.
Right arm alone	4.
Both arms alone	2.
Right leg alone	7.
Left leg alone	26.
Both legs alone	45.
Left leg and left arm	8.
Right leg and right arm	3.
Both legs and left arm	2.
Both legs and both arms	4.
Right thigh	2.

The infection was confined to a definite area fifteen miles long and twelve in breadth, with the range of the Green Mountains on the east, but no natural boundary on the other side. The city of Rutland is in the centre of the area It would be hard to discover a region in which a disorder had less license to become epidemic; the whole district lies upon a series of terraces, and increased safety did not come with elevation. Indeed, four cases occurred on the very ridge of the Green Mountains, at an elevation of 1,500 feet, and the line of the four dwellings extended over half a mile. The water supply was different in each of the four cases, namely from springs out of the mountains. The range referred to definitely limited the infected area, which occurred in a region with faults and dislocations in the earth's crust and profound breaks in the whole strata, while on the other side of the mountains the country is level and unfaulted. Neither overcrowding of habitations nor any of the evils usually accompanying or flowing from this

condition were factors in the present case, since only in four families was more thon one member affected. It was quite usual for children to sleep with those who were affected and themselves remain entirely free from the disease. No isolation was practised, nor did such precaution appear to be of the slightest value. Indeed the brunt of the disease fell upon the purely rural portion of the community. There was nothing discoverable in the domestic and personal hygiene of those attacked. The houses were all detached, and in most cases there was nothing in the nature of privy or cess pool. Nor had penury any part in the epidemic. The district is one of the most thriving in the United States and has been settled for a century and a half. The food, water and milk supply were examined and were found above reproach. The food and milk is drawn from the neighbouring farms or from the farms in which the patient's lived. The veterinary surgeons have remarked no unusual occurrence amongst the cattle, but twelve horses died of what was called cerebro-spinal meningitis. I was unable to procure any reliable account of these cases. The summer was dry and hot, the springs scanty and the surface water low. The rainfall for the three months was only 6.58 inches, against 11.95 last year, and 15.04 the year before, or an average of 11.2 for the last 47 years. The average temperature was 64.3 degrees, last year 64.4, the year before 65.2, and 65.4 on an average for the last 47 years. Cases were found amongst children of American, Swedish, Italian, French, Irish and Jewish parentage, so that nationality appeared to have no bearing. There is in one place a colony of a thousand Italian marble cutters, but amongst them there were only two cases.

The following table shows the results reduced to percentages :

Fatal cases	13.
Recovered	25.
Improved	30.
Unimproved	32.

Conclusions.

In the outset one has to make the humiliating admission that no useful pathological results were obtained. In no case was an autopsy permitted, and there is no authority in the State of Vermont to enforce the demand. The examination of the blood and excreta was negative.

The diagnosis is yet uncertain, as most diagnoses are which are based upon clinical considerations alone and unsupported by the results of a pathological examination.

It must rest between cerebro-spinal meningitis, multiple neuritis, poliomyelitis, or a combination of the last two.

1. Cerebro-spinal meningitis may, I think, be set aside at once under the force of the facts already alluded to. Epidemics of this disease are common enough, and its general course is definite with a special symptomatology. In the present case there was an almost entire lack of those symptoms and there were, besides, manifestations which have never been noticed in epidemics of cerebro-spinal meningitis.

2. H. Openheim, Berlin, in his work on diseases of the nervous system, emphasizes the view that poliomyelitis is due to an infective micro organism, and in the present epidemic there was much evidence pointing in the same direction. Indeed, Medin, of Stockholm, has reported what he considers as an undoubted epidemic of poliomyelitis, there being 44 cases. There is a strong temptation to regard the present outbreak as of a similar nature. Clinically the course of the disease much resembled poliomyelitis, as a reference to the cases makes clear. There was the initial feverishness, aching pains, abrupt paralysis of the nature commonly known as "infantile," indeed the distribution of the paralysis is highly characteristic If it were not for the disturbance in the vagus, one would have no hesitation, on clinical grounds, in pronouncing the epidemic one of poliomyelitis. The mode of onset, the paralysis itself, the age of patients, the season at which the epidemic occurred, the distribution of

the paralysis and the subsequent behaviour of the muscles, all point to this disease. Besides it is not uncommon to have cerebral disturbance in Poliomyelitis, convulsions and coma, and even diplopia has been noted. In the cord of a child dead of this disease, the lesion is not confined to the cells of the anterior horn; there may be a general hæmorrhagic myelitis and even obvious meningeal involvment. There may also be pain referred occasionally to the course of the nerves and simulating a peripheral neuritis. In an epidemic, including so many cases, it is not probable that they would all adhere to the classical standard, and it is to be expected that some would overflow into the class of neuritis or cerebro-spinal meningitis.

3. The evidence in favour of the outbreak being due to peripheral neuritis, rests upon the disturbance in the vagus. But if one regards, with Gowers, "Symmetrical weakness of the anterior muscles situated in the forearm and in the corresponding muscles in the lower limb," as the leading motor symptom, then it will not explain the present malady since it was absent in 55 per cent. of the cases. Indeed the paralysis was "characteristically random in distribution" that is characteristic of poliomyelitis, and Gowers further affirms that the nerve trunks are sometimes probably inflamed in the latter affection.

Finally, one is driven to the conclusion that the cases constituting the epidemic mainly followed the type of poliomyelitis, but that in some there were elements strongly suggestive of multiple neuritis, either as an independent affection or the common results of a common cause.

Hospital Reports.

MONTREAL GENERAL HOSPITAL.

Dr. Armstong's Wards.

[Reported by Dr. Bazin.]

Appendicitis with Median Abscess Tumour.

Female, aet 17. Gave history of illness dating back twelve days, beginning with abdominal pain, general at first, but afterwards localized to the right iliac fossa. Vomiting occurred the first two days. Constipation has been the rule with a slight diarrhœa at the end of the first week. The abdomen became suddenly distended during the first two days.

Past History—No attack similar to the present. For past six months has not menstruated, but one week before her illness she had a copious bloody discharge from the vagina. She is also of questionable character.

Examination shows a fairly nourished, rather anæmic young girl. Expression is anxious, intelligence of a low order.

Abdomen is prominent over the hypogastric area, simulating a six months' pregnancy. The tumour is resistant, but a subtympanitic note is obtained all over that area.

There is very slight tenderness on deep pressure in the right iliac fossa.

Vaginal examination showed the uterus to be crowded downwards and backwards. The vaginal walls were pressed upon by a fluctuating mass which persisted after catheterization and bimanually was in connection with the abdominal tumour, which in the examination under ether appeared to be notched in the median line and extending more to the right than to the left.

The finger in the rectum showed its anterior wall to be pressed backwards almost to the point of protrusion through the anus and the posterior cul-de-sac entirely filled by the same fluctuating mass.

In catheterization a large amount of urine was withdrawn, but at its completion the catheter could still be passed far up the bladder.

The patient was operated on the day after admission. On opening the abdomen the bladder was found adherent to the anterior abdominal wall for about four inches above the pelvis. On entering the abdominal cavity above the bladder a large pus cavity was discovered which contained from 30 to 40 ounces of dirty pus with a heavy fæcal

odour floating free, in which was found the fæcal concretion usually present in cases of appendicitis.

The boundaries of the cavity were, below and posteriorly the true pelvis; laterly, on the left the rim of the true pelvis, on the right the ilium; anteriorly the bladder and anterior abdominal wall to the level of one inch below the umbilicus; above the greatly thickened omentum and the transverse colon, together with the small intestines, mesentery thickly matted together.

The cavity was irrigated and packed with iodoform gauze.

Plaster of Paris Applied in Direct Apposition to the Cutaneous Surfaces in Cases of Fracture as Recommended by Bardeleben.

Case I.—Male, aet 63. Fracture of fibula four inches from malleolus. No deformity or displacement.

Put up in plaster bandaging on third day, exit eight days later with the splint still in position, fitting perfectly, causing no discomfort from the absence of padding.

Case II.—Male. aet. 32. Compound fracture of right libia, midway from knee to ankle. Severe comminution of upper fragment.

Patient had travelled 60 miles by rail with leg in straight splint and there was enormous swelling of the limb.

Plaster applied on third day, leaving a window opposite the wound and the leg was slung on a cradle.

Instead of the ordinary dressing being applied over the wound the method adopted by Trevés, of London, was followed, loose powdered iodoform being heaped up over the break in the skin and renewed when necessary.

Nine days later the plaster was renewed, as the swelling had so diminished that the leg was loose in the bandage,

The temperature throughout has been most satisfactory, the first three evenings being 100½°, for the succeeding six days being 99½°, since which time never being above 99°.

GONORRHŒAL CYSTITIS.

Male, aet. 28; admitted October 8.

Complaints—Pain and frequency of micturation with hæmaturia.

History of contracting gonorrhœa four years ago which lasted eight months in an acute state, subsiding into a gleet, which continued till February, 1894, when a second infection took place, and a third in June, 1894. Since the last he has received no treatment and the discharge is still profuse.

Since the last infection he has been drinking heavily.

On Thursday, October 4, the present symptoms began, patient passing urine about every 10 or 15 minutes, and after each act passing a small quantity of clotted blood.

Examination showed the purulent urethral discharge and about 1½ inches from the meatus a hard fibrous mass surrounding the urethra for ¾ inch of its length. This admitted a 6 sound. About 7 inches from the meatus and presumably in the bulbous urethra there existed another stricture admitting a 4 sound. The passing of a catheter caused great pain. The hypogastrium was slightly tender on deep pressure.

Rectal examination showed no prostatic enlargement or tenderness.

Urine slightly acid in reaction, abundant deposit of pus cells. It contained a small quantity of blood when passed naturally, but when drawn off by a catheter was perfectly free from blood. About half an hour after the catheter was withdrawn the patient would pass about ʒii of clotted blood, accompanied by great pain and much straining.

Treatment—Ac. boric, internally.
Ice bag to perineum.
Daily irrigation of bladder with sol. ac. boracic.

Nov. 12.—No further hæmorrhage, so ice bag discontinued. As there was still great pain and frequency of micturition the ac. boric internally and locally to the bladder was discontinued and the following substituted:

Internally—Tr. hyoscyamus and pot. bicarb.

Locally—Hot fomentations to hypogastrium.

Injection into the bladder once a week of the following emulsion: Iodoform 1 part, glycerin 20 parts, ʒi of this solution to the litre of water. Sterilized as recommended by Schede.

As much as possible was injected and the patient instructed to retain it.

The relief from this mode of treatment was immediate and rapidly progressive.

At the first injection ℥viii were retained for 7 minutes; at the second ℥xii were retained for 35 minutes, and following this there was no further pain during micturition and the frequency was greatly diminished. At the third injection ℥xvi were retained for 2 hours.

Nov. 16.—Patient discharged. No tenderness, no pain during micturition. Passes urine only 4 or 5 times in the 24 hours. There is still a slight purulent discharge from the urethra. Patient declines to have strictures treated.

Case Reports.

THREE CASES OF CŒLIOTOMY.

By A. LAPTHORN-SMITH, B.A., M.D., M.R.C.S.

Gynæcologist to Montreal Dispensary; Surgeon to Western Hospital.

Case I. Hæmatoma of Ovary with Double Pus-tubes.

Miss C. was referred to me as a case of fibroid tumour of the uterus and as being suitable for electrical treatment. This diagnosis was not without some foundation, for on placing the hand on the abdomen one could detect a tumour or enlargement of the uterus, extending nearly to the umbilicus. By bimanual palpation the cervix was found to be small, but the uterus appeared large and wedged in the pelvis, and quite immovable. The tubes and ovaries could not be felt. On firm pressure the tumour was felt to be solid, or in places slightly elastic. The history rather supported the diagnosis. She was 26 years of age; had begun to menstruate at the age of fourteen, the flow always having been profuse. It had never been painful until six years ago, since which the pain of the periods had been gradually growing more severe, until she was at length compelled to go to bed every month. Latterly the pain had been much worse a week after the periods than it was during the flow. She had had several attacks of pelvic peritonitis during the last year. Electricity was discontinued, as the patient did not improve. Nothing remained for me then but to open the abdomen and remove the appendages which would stop the pain, and, it was hoped, arrest the growth of the tumour and the hæmorrhage. Preparations were also made for extirpating the uterus should the necessity for it arise. The abdomen was opened, after the usual preparations, on the 7th September. On introducing my fingers to search for the appendages, the latter could not be felt: the tumour was adherent to the pelvis, and it was covered to a large extent by adherent intestines. The adhesions were broken up, when for the first time it became apparent that the tumour was made up of several different elements. After some difficulty a pus tube was brought out, which was tied close to the uterus, but was so disorganized that the ligature cut through. I then came upon a slightly fluctuating mass, the size of an orange, which was also dissected out, proving to be a hæmatoma of the left ovary, but it broke while being delivered and its dark grumous contents escaped, welling up out of the incision. This was carefully sponged away and the ovary was tied and removed. A large pus tube was then removed from the right side, and finally the right ovary which was somewhat enlarged. Nothing now remained of the tumour but a normal sized uterus, from which the peritoneum was completely removed, and from which there was a good deal of oozing. When this had been stopped, a glass drainage tube was

inserted, and the abdomen closed by through and through silk worm gut sutures which were left in one month. Six ounces of bloody serum were pumped from the drainage tube, when the liquid becoming paler the tube was removed in forty-eight hours. The patient declared the following day that the pain which she had suffered for several years was entirely gone, and the pain of the operation was nothing compared to it. She was up in two weeks, and went home on the twenty-third day.

This case was especially interesting to me for several reasons. First, it bore out the truth of Apostoli's assertion that a patient who cannot bear moderate doses of electricity has diseased tubes, and should be treated by surgery. Second, it bears out the truth of Lawson Tait's assertion that one can never be sure of what he will find in the abdomen until he has his fingers in it, indeed I might add the words, "and sometimes not even then." When we remember that Lawson Tait has opened the abdomen more often than any other man who has ever lived, and when we consider what enormous experience that meant no one should consider himself infallible in this respect.*

Case II. Pus tubes removed during an acute attack of peritonitis. Recovery,

The patient was twenty-six years of age, married at twenty and had three children. She had never been well since her marriage, but had been getting very much worse since two years. Her last child was a year old, and she had no miscarriages. While pregnant with her last child she had suffered a good deal, and had had a bad recovery. During the past year she had had several attacks of peritonitis, confining her to bed for several weeks each time. Two weeks before she was taken with an unusually severe attack, from which her physician did not expect her to recover. She was very emaciated, was constantly crying out with pain in spite of large doses of opium, while her abdomen, which was covered with poultices, was very much distended, her pulse being thready and fast, and her temperature high. She was at once put on salines and large doses of quinine, with almost immediate relief of the pain and distension. But her temperature remained at 103. On examination, per vaginam, Douglas cul-de-sac was found to be full of exudation, which was thought to be due to pus tubes and ovaries. As it was the opinion of all that she could not continue very long as she was doing, it was decided to operate that afternoon. The patient absolutely refused to leave her house, so the operation was performed there. Both tubes were dug out with great difficulty being imbedded in layers

* Since writing the above, a paper by Dr. J. F. W. Ross, of Toronto, has appeared in the *American Journal of Obstetrics*, in which he reports several cases in which he removed large pus tubes from women who had been sent to him for fibroid.

of exudation in various stages of organization, but without rupturing them. One tube tore out of the ligament while extracting it, and both cut like cheese when the ligature was applied. Notwithstanding this, there was very little oozing. Owing to the very large area from which the peritoneum was stripped off, I thought it best to put in a drainage tube which was left in only one day. The temperature took three days to fall to normal, and the pulse improved steadily, although she was not able to leave her bed for five weeks. When last heard from she was improving steadily.

Case III. Hydrosalpinx and bound down tubes and ovaries, causing severe dysmenorrhœa. Removal. Recovery.

Miss B., 30 years of age, had been under my care for several years for severe dysmenorrhœa, and almost constant pain between the periods. Palliative treatment having proved of little avail, removal of the appendages was suggested, and she readily agreed to have that done. Coeliotomy was performed on the 13th October. Although the ovaries and tubes were covered with adhesions, the latter were easy to break, and both tubes and ovaries were removed, and the uterus attached to the abdominal wall. No drainage tube was used. The fascia was sewed with catgut and the silk worm gut previously introduced was then tied. She made a successful recovery, being up in two weeks. On examining the tubes they were both found to be distended with fluid which could be squeezed out of their uterine ends in a clear stream, but it was impossible to introduce the finest filiform bougie into the uterine ends at all, and only a distance of half an inch into the fimbriated ends. The tubes were bent by adhesions so as to form a number of knuckles, which were probably the cause of the severe pains every month. One ovary had a cyst in it, which ruptured while removing it, and into which one can introduce the end of the thumb. It apparently contained clear fluid. The other ovary has a thick hard surface, due apparently to chronic inflammation of the peritoneal coat. When the ovaries and tubes when first removed were placed in water they were found to be covered with fringes of shreds representing the torn adhesions. Dr. Joseph Price had a quaint way of saying to his assistant, when he removed appendages like these, "don't let these tramps out until they have seen the specimens in water for fear they will go away saying that they had seen healthy ovaries removed."

It will be admitted that if one cannot relieve a woman in these circumstances by the means which were employed during three years of treatment, and if, at the end of that time, she is not able to keep a situation from this cause, we are fully justified in removing the appendages. My experience of tearing the appendages loose and leaving them to contract fresh adhesions has not been favourable, and I have never tried to save distended tubes by opening them

and sewing them up again, as I feel sure that fresh adhesions would continue to worry the ovaries, and the tubes would refill. Pozzi and Polk have been doing it, but from recent reports of Polk's cases the result has not been satisfactory.

Reviews and Notices of Books.

Medical Nursing.—Notes of Lectures given to the Probationers at the London Hospital. By the late JAMES ANDERSON, M.D., F.R.C.P., etc.; edited by Ethel Lamport, Associate of the Sanitary Institute, etc., with an introductory biographical notice by Sir Andrew Clark, Bart. London: H. K. Lewis. 1894.

This book has been compiled from the notes used by the late Dr. Anderson in his lectures on Medical Nursing given to the nurses of the London Hospital. On reading these lectures one can only regret that such a good friend has been lost to the nursing profession, for his introductory lecture shows what a nurse should be, in his opinion, an opinion evidently founded on experience.

He divides his subject according to the various systems of the body, commencing with the digestive system, and takes up the physiology of each along with diseases each is subject to and the appropriate nursing.

We most cordially recommend the work to all nurses for perusal and study. They will find it most entertaining reading, as well as most profitable for study.

Travaux D'Electrotherapie Gynecologique. Par le Dr. G. APOSTOLI, Paris.

Dr. Apostoli begins his work by a series of observations, in number 106, upon his method of treating fibroid tumours of the uterus by electricity. These cases are exceedingly interesting to read in the account given of them, and reflect great credit on the well-recognized ability of this world-famed apostle of electricity in the treatment of uterine diseases.

The work then gives the experience of Thomas Keith, M.D., in the same direction. Also quite a space is given to the experience of Sir Spencer Wells in the same direction. Then the work takes up the transactions of the late Brighton meeting relating to the treatment of fibromata of the uterus with electricity (May, 1888).

Dr. Apostoli also brings in the experience of Americans—Dr. Lawson Tait, now of London, Inglis Parsons, Robert Bell, Grailey Hewitt, Braithwaite, Routh, Madden, Imlach, Horrocks and a host of others too numerous to mention.

Dr. Apostoli's work is a most complete one and contains everything which can be desired by the most fastidious upon matters relating to the electrical treatment of neoplasms of the uterus. We can highly recommend it to such.

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—OCTOBER, 1894.

ONTARIO MEDICAL JOURNAL.

Inflammation of the middle ear extending to the mastoid cells and meninges; subdural abscess at base—A. J. Horsey, Ottawa, p. 81.

CANADA MEDICAL RECORD.

Psoriasis, a clinical lecture—W. S. Gottheil, New York, p. 1.

L'UNION MÉDICALE DU CANADA.

(1.) Traitement de la blennorrhagie par les lavages au permanganate de potasse—A. Lemoyne de Martigny, Paris, p. 505.

Notes sur un cas d'accouchement chez une femme albuminurique—H. E. Desrosiers, Montreal, p. 526.

NOVEMBER—1894.

CANADA LANCET.

Treatment of Placenta Prævia—J. Algernon Temple, Toronto, p. 69.

Treatment of Hernia—Alexander Dallas, New York, 72.

MARITIME MEDICAL NEWS.

(2.) The use and abuse of the various cautery agents in the treatment of nasal affections—E. A. Kirkpatrick, Halifax, N.S., p. 411.

(3.) The present status of asthenopia—F. Buller, Montreal, p. 474.

Cases from practice—Stephen Dodge, Halifax, N.S., p. 418.

DOMINION MEDICAL MONTHLY.

(4.) The antitoxine treatment of diphtheria—J. J. Cassidy, Toronto, p. 141.

(5.) Fæcal intoxication—William Graham, Brussels, Ont., p. 148.

A Medico-Legal Romance—J. N. Steeves, St. John, N.B., p. 151.

(5.) Ocular headaches—G. Sterling Ryerson, Toronto, p. 165.

L'UNION MÉDICALE DU CANADA.

(4.) Le nouveau traitement de la diphtérie—E. P. Benoit, Montréal, p. 561.

Le traitement des maladies des trompes de Fallope et des ovaires—A. Lapthorn-Smith, Montreal, p. 567.

(1.) This article, which is the author's "Thèse inaugurale, Paris, 1894," sets forth the value of the treatment of gonor-

rhœa by irrigations with solutions of permanganate of potash. This salt in very weak solutions has almost a specific action in this disease, for after a single irrigation of 1.2000 the gonococci are observed to be greatly diminished in number. How this occurs is not certain; it is not due to its bactericidal action, for strong solutions produce a rapid increase in the number of the gonococcis, but probably, by solutions of 1.4000 to 1.1000 producing an œdematous swelling of the urethral mucous membrane, accompanied by a free serous discharge, which seems to be an unfavourable medium for the growth of the micro-organism. The apparatus employed is a blunt pointed glass nozzle connected by a rubber tube to an elevated reservoir. The strength employed is for the anterior urethra 1.4000 to 1.500 and the posterior 1.4000 to 1.1000, of this half a litre is required for the anterior urethra and one litre for the whole canal. The temperature may be hot, warm or cold, the author preferring the latter as less liable to produce a feeling of weight in the pelvis and less tenesmus. The height of the reservoir should be for anterior urethra 50 to 60 centimetres, but for the posterior 1.10 to 1.50 metres, in order that the pressure may overcome the resistance of the sphincter.

Method of using the irrigation: After urination, the penis is thoroughly washed and the nozzle inserted into the meatus. The canal is then distended and emptied alternately until the quantity of the solution is exhausted. If it is necessary to irrigate the posterior urethra the reservoir is gradually raised to the maximum height and kept there until the resistance of the sphincter is overcome by the pressure and the fluid runs into the posterior urethra. The bladder contracts more or less sharply, but if the nozzle be held in the meatus the fluid soon begins to flow again and there is no more trouble. If, however, the pain becomes severe and the desire to urinate strong it is well to let the patient do so and commence again. At the end of the irrigation the patient should thoroughly empty his bladder.

In gleet the irrigation should be carried out once a day, beginning with 1.3000 and increasing to 1.1000. In a week the discharge will cease.

In the declining stage of acute gonorrhœa it is well to irrigate twice daily, increasing the strength gradually from 1.4000 to 1.1000. The gonococci should be searched for daily until they have disappeared altogether.

Contra-indications for the treatment are orchitis, epididymitis, stricture and hypertrophy of the prostate.

Although this form of treatment gives admirable results there is danger of peri-urethral abscess, free hæmorrhage, &c., when improperly used, the causes of these complications being (1) irrigation with too strong solutions, (2) too frequent irrigations, (3) incomplete irrigations, (4) beginning irrigations after the symptoms have been rendered too acute by santal.

(2.) The author desires to sound a note of warning against the too prevalent practice of frequent and long continued applications of the cautery agents in the treatment of nasal affections. He refers to the delicacy and importance of the nasal mucous membrane, and that it was often the subject of too harsh treatment. Caustics were used, perhaps, more for hypertrophic rhinitis than for anything else, and often too severely. By their injudicious use he had seen the mucous membrane destroyed and in some cases very serious sequelæ, such as loss of hearing and mastoid disease, follow. He confines himself to the use of three agents, chromic acid, tri-chlor-acetic acid and the electro-cautery. The chromic acid he prefers as an application to the anterior nares, reserving the electro-cautery for posterior hypertrophies.

(3.) This paper appeared in the September number of this JOURNAL.

(4.) These communications are *resumés* of Dr. Roux's paper on the prophylaxis and treatment of diphtheria read at the International Congress of Hygiene at Buda Pesth, when he gave the results of his new treatment by the antitoxine

Out of 169 diphtheritic anginas treated by serum there was a mortality of 21, or 12.4 per cent.

		Deaths.	Mortality.
Pure diphtheritic angina	120	9	7.5 per cent.
Associated anginas	49	12	24.5 "
Anginas associated with micrococci	9	..	.... "
" " staphylococci	5	..	.... "
" " streptococci	35	12	34.2 "

(5.) These two papers deal chiefly with headaches, but from very different causes. The first refers to that very large class of sufferers whose headache is associated with a well marked train of symptoms as depression, sense of fatigue, buzzing in the ears, disturbance of sight, vertigo, loss of appetite, sallow complexion and constipation, and is, due to the absorption of poisons from the intestinal tract. Severe diarrhœa in infants, low spirited hypochondriasis, many forms of so-called neuralgia, chloranæmia and some forms of eclampsia are but cases of poisoning by absorption of putrefactive toxines from the intestines. Such cases are always benefited or cured by active purgation, followed by laxatives and tonics.

The second paper draws attention to headaches caused by (1) refractive errors; (2) anomalies of the muscular apparatus; (3) functional disturbance of the eye, and urges that, in all cases of headache, the refraction and the state of the ocular muscles should be investigated where it is possible, and that these very frequent causes of headaches must be eliminated before a positive diagnosis can be given.

Society Proceedings.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Fracture of the Skull, with Pulsating Tumour—Dr. F. J. Shepherd.
Tubo-Ovarian Pregnancy—Dr. T. Johnson-Alloway.
Ovarian Cyst—Dr. T. Johnson-Alloway.
Uterus Bicornis—Dr. T. Johnson-Alloway.
Double Pyosalpinx—Dr. T. Johnson-Alloway.
An Intra-ocular Tumour—Scopalamine as a Mydriatic—Dr. F. Buller.
The Pulse and Respiration during Ether Anæsthesia with Clover's Inhaler—Dr. G. Gordon Campbell.
Goring by an Ox with Wound of Bowel—Dr. F. J. Shepherd.
Case of Medico-Legal Interest—Dr. Springle.
Polydactylism—Dr. J. Chalmers Cameron.
Excision of Maxilla—Dr. Armstrong.
Monstrosity, Missed Abortion, Maternal Impressions—Dr. Gurd.
Paralysis in Children—Dr. Macphail.
Ovarian Cystoma—Dr. A. Lapthorn Smith.
Tubal Pregnancy—Dr. A. Lapthorn Smith.
Hæmatoma of Ovary—Dr. A. Lapthorn Smith.
Primary Cancer of the Liver—Dr. Adami.
Phlebolith of Prostatic Plexus—Dr. Adami.
Primary Cancer of the Kidney—Dr. Martin.
Embryo in Sac—Dr. J. Alex. Hutchison.
Diaphragmatic Hernia—Dr. Adami.
Pus tubes and Hæmatoma in the Same Patient—Dr. A. Lapthorn Smith.
Pus tubes Removed during an Acute Attack of Peritonitis—Dr. A. Lapthorn Smith.
Double Hydrosalpinx, Causing Severe Dysmenorrhœa—Dr. A. Lapthorn Smith.
Primary Carcinoma of the Kidney—Dr. J. G. McCarthy.
Secondary Enchondroma in a Bitch—Dr. Adami.
The late Dr. Ed. A. McGannon.

Stated Meeting, October 19th, 1894.

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

Drs. Elzear Pelletier, F. J. Hackett, C. F. Wylde, H. Tatley and W. E. Deeks were elected ordinary members.

Fracture of the Skull with Pulsating Tumour.

Dr. SHEPHERD showed a little girl nine years old, who

in 1889 had been under his care at the Montreal General Hospital. The following is a brief account of the case:

Florence C., age four years, admitted September 9, 1889. Ambulance case. Fell from second story window on to stone pavement. Picked up unconscious and continued motionless for half an hour. Condition on entry, unconscious, pupils unequal, swelling over the right orbit with a semi-fluctuating feel, purposeless movements of the limbs, Cheyne-Stokes respiration. Her whole forehead and eyelids were greatly swollen, and at 12 p.m. that night her temperature rose to 103°. Three days later she seemed to be conscious, but she was unable to open her eyes from œdema. Eight days after her admission she spoke, asking for food, her condition then was slowly improving. She had then a fluctuating swelling over the right eye which pulsated, and running upwards and backwards from this was a fissure. Over the right parietal bone there was another fluctuating swelling, large and flat, but not continuous with the one in front. The fissure, however, ran into it. The hole over the orbit is still present and one can feel the pulsation of the membranes through it. The line of fracture running up from this, corresponding to the fissure mentioned above, can still be made out with the finger. The swelling over the parietal bone has disappeared. The child's intelligence has not been good; her mother thinks her different from other children and not bright.

Dr. GORDON CAMPBELL remembered the case very well, especially so as he had given an absolutely bad prognosis after examining her condition on entry.

Dr. KINGHORN, House Surgeon for Dr. Alloway, read the following reports.

(1.) Tubo-ovarian Pregnancy

Patient, aged 31, complained of metrorrhagia, dysmenorrhœa, pain in the lower part of the abdomen and pain in the back. Menses commenced at 13 years and continued normal till 2½ years ago, when her last child was born.

Since then the above symptoms have gradually developed. Examination revealed lacerated cervix, leucorrhœa, anteversion and a mass in the posterior fornix. Cœliotomy recommended and performed. Upon opening the abdomen a mass about the size of an orange was observed lying in the left half of the pelvis and behind the uterus. The mass was united by strong adhesions to the posterior wall of the pelvis, to the left broad ligament, to the whole extent of the rectum, and to the posterior face of the uterus. The adhesions were separated with difficulty by the finger, but not before the mass had been ruptured and dark coloured clotted blood escaped. There was very little bleeding and none of the neighbouring viscera were injured. The pedicle of remains of tube and ovary of left side was tied off in the usual way. The abdomen was washed out with boiled water and wound closed without drainage. It is now the fifth day since the operation and the patient has been doing perfectly well.

Dr. ALLOWAY, commenting on the specimen, remarked that after removing the mass he noticed it embraced within its limits the ovary and the fimbriæ of the left tube, and the thought occurred to him that its situation suggested a tubo-ovarian pregnancy. The sac, which was really a distended ovary and contiguous portion of the tube, was filled with blood, etc., a condition not unusual in extra-uterine pregnancies. The specimen was submitted to Dr. Wyatt Johnson for microscopical examination, and his report confirms this view. Thickened and altered chorionic villi were found in that portion of the mass which corresponded to the dilated end of the left tube; no signs of a fœtus were detected.

(2.) Ovarian Cyst. (Marsupialization Method Adopted.)

Patient complained of pain over sacrum, in the left groin and hip, painful micturition, dysmenorrhœa and sterility. Menses commenced at 14 years, married at 19 years; no children, no miscarriages; irregular and painful menstruation, especially marked during the past two years. Ex-

amination revealed tenderness in both iliac regions, more marked in the right: tenderness extending down the right leg to knee-joint. Anteversion of uterus, being firmly fixed behind the pubic bone; a large semi-pultaceous mass occupied the left pelvis, projecting into Douglas' pouch of that side and firmly fixed to the uterus in front. Cœliotomy recommended and performed. On opening the abdomen the omentum was found to be adherent to a mass beneath it. The mass proved to be a large cyst containing clear fluid, and grew from the vicinity of the right ovary. It was connected with nearly all the abdominal viscera by adhesions so dense that the attempt to separate them had to be given up. From this large cyst sprang a number of daughter cysts. There was nothing left to do but drain off the cyst contents. Their cavities were converted into one main cyst, then washed out with boiled water and the wall of the cyst sutured to the peritoneum. The cavity of the cyst then opened into the wound and thus constituted a condition somewhat similar to that found in the marsupialia. After thoroughly drying the cyst walls with sterilized gauze, its cavity was packed with iodoform gauze, which acted as a drain. Every other day the iodoform gauze was changed. On the 20th day this was discontinued and the opening allowed to close.

(3.) Uterus Bicornis.

This condition was met with accidentally in the course of an abdominal section for removal of the appendages. Upon opening the abdomen the uterus was seen to consist of two corpora with only one cervix, the bodies being separated from each other by a well-marked sulcus. The right one was larger than the left.

Dr. ALLOWAY showed a wax model of the condition which he said resembled very closely the pelvic organs as they appeared *in situ*. His object in operating was only to remove the appendages, and the condition was thus noticed. Bicornate uteri, he thought, though heretofore regarded as very uncommon, would in the future be more often met

with, owing to the increased frequency of abdominal sections. This condition was due to the non-fusion of that part of the Mullerian ducts which go to form the body of the uterus.

(4.) Double Pyosalpinx.

Patient complained of menorrhagia, weakness, dyspareunia, pains in the back and lower part of the abdomen and left leg. Menses commenced at 16 years, she was married at 27 years, had one child and one miscarriage. The pain in the back and dyspareunia had existed for the past three (3) years. Examination revealed uterus retroverted and bound down by adhesions, which inclined it somewhat towards the right side. Removal of the appendages was recommended and performed. On opening the abdomen the right fallopian tube resembled a small sausage, the fimbriated extremity had closed in, giving the appearance of an inverted cone ; the ovary was embedded in the tube which was attached by strong adhesions to the intestines. The left ovary was united by dense adhesions to the fimbriated extremity of the corresponding tube, which bore a close resemblance in appearance to the right, and was also attached by adhesions to the sigmoid flexure. The left ovary proved to be transformed into a large blood cyst. The uterus was so firmly bound to the sacrum by adhesions, that these had to be ligatured and cut before it could be released. It was then attached to the anterior abdominal wall. Both ovaries and tubes were removed.

Dr. ALLOWAY, commenting on the specimen, said it was chiefly of interest as showing so clearly the cause and manner of the collection of fluid in a tube, as was the condition here, the initial point being the cementing of the abdominal end of the tube by a process of inversion of the fimbriæ. This inversion and cementing was most beautifully demonstrated in the present specimen, and he had never seen one where this pathological truth was so perfectly exhibited.

Dr. ADAMI had found bacilli in the specimens submitted

to him, but not tubercle bacilli. They were both shorter and more stubby than the latter. The condition was purely one of chronic inflammation, but it showed that curious proliferation of the lining membranes of the tubes, (forming various folds, and a fusion of these folds so as to look like a cancerous condition), which is the result of long standing chronic congestion and consequent overgrowth of the parts.

An Intra-ocular Tumour—Scopalamine as a Mydriatic.

Dr. BULLER presented an ordinary intra-ocular sarcoma growing from the choroid, pigmented as usual, and nearly filling the scleral cavity. So far as the growth itself was concerned, he did not know that it presented any points of special interest, but merely brought it to notice as an illustration of the diagnostic difficulties which these intra-ocular growths sometimes offered, difficulties which are rather augmented than diminished by the patient's version of his troubles. The eye was removed a few days before from an old man of 75 years, who stated positively that he had never found anything wrong with the eye until about the middle of last April, when he suffered a slight injury from a piece of brushwood. After this the eye was sore for a few days, but apparently recovered perfectly. Some three or four weeks later he noticed it had become blind. The blindness continued without pain or inconvenience till about four weeks ago, when without assignable cause the eye became inflamed and intensely painful. The pain was that of a periorbital neuralgia, as well as in the eyeball, and did not yield in the least to any palliative treatment suggested by friends or prescribed by his physician.

On examining the eye it presented a moderate degree of pericorneal congestion, resembling that of subacute glaucoma. The intra-ocular tension was only slightly increased, the cornea being perfectly clear and bright. The iris appeared somewhat thickened, and presented visible blood vessels in considerable numbers. The pupil could not be dilated in the least by atropine or scopalamine, nevertheless he was able to make out with the ophthalmoscope a small portion

of one retinal blood vessel on a yellowish surface close behind the lens and inferred from this a total detachment of the retina. This, together with the fact that the pain was out of all proportion to the inflammatory phenomena, the loss of vision complete and the tension somewhat increased, rendered the diagnosis of intra-ocular sarcoma extremely probable, notwithstanding the patient's statements in regard to the comparatively recent origin of the blindness. Dr. Buller stated that it was likely that the growth was of much older date than last spring; two or three years at least must have elapsed since it commenced, and no doubt the blindness, more or less complete, existed long before the injury, but was unnoticed by him until particular attention was called to the condition of the eye at that time. There was one other point of interest about this case. Finding that the pupil would not dilate with atropine, he used the new and stronger mydriatic scopalamine. Two drops of a four grain solution were used in the morning at an interval of about an hour and caused some vertigo, but a third drop about 5 p.m., was followed by mental hallucinations and a sort of stupor which lasted for several hours. The patient was inclined to be garrulous, but talked incoherently and did not seem able to recognize any one about him; there was also almost complete loss of co-ordination of ordinary muscular movements, the face was somewhat flushed but of a good color, both respiration and pulse were about normal, and after a night's sleep he awoke the next morning in his usual health.

In this case the toxic effect of the scopalamine was very marked, but apparently not of a dangerous character.

The Pulse and Respiration During Ether Anæsthesia with Clover's Inhaler.

Dr. GORDON CAMPBELL read a paper with the above title and showed a number of charts which had been prepared by Drs. Cameron, Brown and himself from notes taken during anæsthesia. The normal or usual effect was shown to be a very considerable quickening of both pulse and

respiration at the outset, then gradual slowing of the pulse down to the normal rate, but continued rapid respiration while the anæsthesia lasted, so that the pulse-respiration ratio was altered. The rate of the breathing was still further increased reflexly by certain manipulations on the part of the operator. These were: stretching the sphincter ani and working with the mucosa of the rectum, sometimes stretching the perineum, rough handling of the peritoneum especially breaking down adhesions and working with the ovaries and testes. The pulse rate was increased by hæmorrhage, and both pulse and respirations by an overdose of ether. This latter observation had been worked out experimentally. The practical points were to watch both pulse and respiration carefully. Quickening of respiration alone was accounted for reflexly, and a less amount of ether should be given, as otherwise the increased rate of breathing would lead to an overdose. Quickening of both pulse and respiration meant an overdose; quickening of the pulse alone meant hæmorrhage. The results were obtained by tabulating the notes of one hundred cases.

Dr. KENNETH CAMERON since last Christmas had kept records of forty cases in which he had administered ether by Clover's inhaler. The cases were all gynœcological and his results were almost identical with those of Dr. Campbell. He had noticed that the respirations were always increased by what might be called intra-abdominal reflexes, such as handling the peritoneum, as in tearing adhesions, tying off the ovary and its appendages, washing out the abdomen and pulling on the round ligament. He had had no experience of reflexes arising from manipulations about the rectum. An excess of ether was another cause of increasing the rapidity of the respirations as well as the pulse. The pulse showed the same initial rise with the gradual fall as the administration proceeded. The chief cause for increased rapidity of the pulse was hæmorrhage.

The lesson to be learned from the investigation was that when the respirations were increased, without any of the recognized reflex causes being present to account for it, the anæsthetist should suspect an excess of the ether and remove the inhaler.

Dr. GEORGE A. BROWN had given ether for Dr. Alloway for about three years, during which time he kept records, similar to those of Dr. Campbell, of his cases. He had used Allis' inhaler for the first year and a half, after that he employed Clover's inhaler. His results closely resembled Dr. Campbell's. As to the relative merits of the two inhaler's, he thought Clover's had the advantage, inasmuch as you could more accurately ascertain the quantity of ether being administered. Working with Allis' one was apt to give too much of the drug at the start, and as a consequence did not get the sharp fall in the pulse that ought to follow the initial rise, and in fact the anæsthetist often discovered that he had his patient deeply anæsthetized when a lighter degree would suffice. Still he believed as one became accustomed to the use of Allis' apparatus he would be able to judge of the proper amount to give at the commencement, and the results of both inhalers would then be practically alike. He agreed with Dr. Campbell as to the effect of intra-abdominal reflexes upon the respirations, and had had one opportunity of noticing the truth of Dr. Cameron's observation as to the effect of pulling on the round ligament.

Dr. GURD, as an anæsthetist of some fourteen years standing and of very considerable experience, had used Clover's inhaler, but not exactly in the manner of the previous speakers. As to the existence of certain regions which, when irritated, reflexly stimulated the respiratory centres, he thought there could be no doubt; and he believed that every anæsthetist must perforce soon become aware of the location of these places of extra excitability. It was his custom never to use the bag of Clover's inhaler, except when the operator was manipulating in these

regions, and he used it then for the purpose of quieting the increased movements of the limbs, which were apt to be thus set up. Apart from this he never felt justified in using the bag of the inhaler, as he believed that pure ether was much less injurious to the patient's system than a mixture of ether and respired air, with all its impurities, which the application of the bag implied. So far as the convenience of the anæsthetist and of the operator was concerned, there could be no doubt that there was an advantage, as by its means the patient was much sooner rendered unconscious; but he thought that this was accomplished at the expense of the patient's vitality.

Dr. WILLIAM GARDNER stated that the only points in Dr. Campbell's paper which he was in a position to confirm were those which related to the reflexes set up while working on the peritoneum. He was especially impressed with the fact brought out concerning the danger of giving too much ether during these moments of unusual respiratory excitation. The patient then breathes more quickly, and hence is apt to take more of the drug, which might easily constitute an excess if the anæsthetist be not on his guard. He further expressed his satisfaction at the evidence of the popularity of Clover's inhaler in Montreal, as he considered himself as chiefly responsible for its introduction here.

Dr. ALLOWAY remarked that in the days of the old-fashioned cone and sponge it was a matter of considerable anxiety to the surgeon as to what was going to take place before the patient was fully anæsthetized, and that throughout the whole operation his attention was more or less distracted from his work by the possibilities of danger arising from the anæsthetic. Now all this was changed. He knew that the quantity of the drug administered was accurately measured, and he felt the same safety in its use as does the physician in prescribing within the limits of the pharmacopœial dose. The only occasion now on which he has to inquire into the department of the anæsthetist was the blocking of the respiratory passages by mucus, and here

the best plan is to stop the administration and allow the patient to vomit, which may be assisted by irritation of the fauces.

Dr. EVANS referred to an article he had recently read in which much the same views were put forth. A point mentioned in this paper was the occasional occurrence of tonic spasm in the recti muscles of the abdomen when complete anæsthesia had been induced, especially where there was a good deal of mucus in the trachea. Substituting chloroform for ether for a little while quickly overcame the spasm. He asked if any of the anæsthetists present had observed this phenomenon.

Dr. F. J. SHEPHERD, speaking of the advantages of ether as an anæsthetic, could not say that his experience was so uniformly favorable as Dr. Campbell's. He thought in men accustomed to consume large quantities of alcohol phenomena were noticed which were both frequent and troublesome. In some a condition of tremor will set in and persist in spite of everything throughout the whole of the anæsthesia. Others, again, frequently show a tendency to hyper-secretion of mucus in the tubes. In such cases he questioned therefore, if it would not be better to use chloroform. Before permanently settling the question, moreover, he thought it would be desirable to have some investigations made amongst men as well as women, as all the cases reported here to-night were, he believed, gynæcological patients.

Dr. ARMSTRONG also would like to see these investigations extended into that numerous class of surgical patients, whose constitutions were not normal, but rather more or less shattered as a result of their disease or accident—the sort of cases which the surgeon gets in the Montreal General Hospital, especially those emergency cases where an operation has to be performed within a few hours after their admittance. One of the most prominent features of Dr. Campbell's paper, was the great success he had achieved by the Clover's inhaler. He himself had heretofore a strong

dislike to this method of anæsthetising, especially as he had sometimes seen it employed, when the patient was forced to breathe vitiated air for as much as half an hour or more at a time; still after listening to the results of the extensive investigations laid before them to-night, he thought no reasonable man could deny that when properly used, at all events, the Clover's inhaler was a great success. Another important result brought out by this work was the evident danger of continuing the anæsthetic when the respirations were increased from any cause. By so doing, the patient inhaled an increased quantity of the drug; and the wonder is, when we consider how little this matter has been attended to in the past, why accidents have not been more frequent. Every anæsthetist should keep in mind the normal rate of respiration under ether, should know readily all the causes which might increase the rate, and watch carefully whether any of them be operating when any undue frequency is noted, so as to satisfy himself that it is not due to an excess of the drug. He should also remember that when the rate of respiration is increased the amount of the drug consumed is also increased, and the danger of administering in excess made greater. Another point made manifest by these papers is the apparent absence of all injurious effects from prolonged administration. If this hold good for that other class of patients, already alluded to, who are not in such good physical condition, as gynæcological patients generally are, it is a very important fact, and one that must sensibly influence surgical procedure. If time is of no consequence, or if it must not be seriously regarded by the surgeon in deciding on his operation, many of our present preferences for one operation more than another, will have lost their *raison d'être*. As an illustration, one may mention the fact that the "Murphy button" owes its chief superiority over the method of suturing in intestinal anastomosis to the saving of time which it allows, and if this saving of time is no longer of such paramount importance, the advantage of the "button" in the minds of many surgeons, will fall to the

ground. The same might be said of many other operations. Yet according to Dr. Campbell's statistics the patient seems to have been in as good condition at the end of three hours of ether anæsthesia as at the beginning, so far, at any rate, as the respiration and circulation were concerned. If this evidence be confirmed by more general investigation, Dr. Armstrong thought that too much credit could not be given to Dr. Campbell for having brought it to light.

Dr. BULLER believed that for short operations, not requiring more than a few minutes to perform, the old-fashioned cone was more serviceable than a Clover's inhaler. He had been accustomed, in little operations performed in his office, to allow the patients to anæsthetise themselves. This was easily accomplished and gave more satisfaction to all parties, as it could be done without violence or vomiting, and the patients quickly recovered from its effects. He also thought that the members of this society had an unnecessarily serious impression of the dangers attached to ether as an anæsthetic; for his part he had been using it for years, and with this simple apparatus, had never any really serious difficulty. He believed that any careful anæsthetist, by watching his patient, could always detect any threatened untoward effect and prevent its development by allowing a few inspirations of pure air.

Dr. MCCONNELL found the paper and charts very instructive. He himself had been accustomed to use a mixture of chloroform and ether in the proportion of two to one respectively. To a certain extent he was prepared to admit that these results were brought about by the use of the Clover's inhaler; but still he thought a careful anæsthetist, who watched closely the pulse and respiration, might perform good and safe work with the ordinary cone. He would like to ask Dr. Campbell if he had made any attempt to ascertain why the respirations increased under an excess of the drug. Is it because of some change in the blood, or is it through some local effect upon the respiratory mucous membrane? He saw an article some time ago

where it was stated that nitrogen produced almost exactly the same results as ether. If so, it must have been rather through the deprivation of oxygen than any special action of the nitrogen; and was it possible that in the case of the ether also, it was the want of oxygen that produced the increased respiratory action? He thought an investigation of these points would form an interesting study.

Dr. MILLS considered the papers valuable, apart from practical and scientific, as showing evidence of concerted work, which he considered only too rarely practised. It was not always the most curious case which was the most valuable; and it was only from the consideration of a great number of cases that any general laws could be based. Another advantage to be derived from the joining together of workers, is that men supplement each other's weaknesses; one man may be strong in compiling statistics, another man strong in making deductions, and in this way the combination produces greater results than could be accomplished by each individual acting separately. He would like to go into more fully than the present occasion allows, how Dr. Campbell's work brings out the question of reflexes. People sometimes sneer at the idea of reflexes, but he, for his part, believed that the extent to which reflexes have been so far used to explain the phenomena of the higher animals, is altogether inadequate.

Dr. GORDON CAMPBELL, in reply to Dr. Gurd, who advocated only using the bag when the patient moved, said the patient never ought to be allowed to move, if he did so it was a sure sign he was only partially anæsthetised.

In reply to Dr. Evans' question as to the tenseness of the abdominal muscles, he said the subject was too large to go into all the phenomena connected with anæsthesia in one evening. This abdominal tenseness generally occurred at the beginning of the administration, and he believed the manner of giving the ether had something to do with it. If one commences by giving the ether in a large dose, one gets a certain amount of spasm of the larynx which tends

to spread over the whole body, and unless the amount given is diminished, is kept up. Stopping the administration for a little while allows it to pass off and on commencing again with a weaker dose it does not recur.

Stated Meeting, November 2nd, 1894.

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

A Case of Goring by an Ox with Wound of Bowel.

Dr. SHEPHERD exhibited a patient who had been severely gored by an ox and the intestine and mesentery wounded. The patient, a French-Canadian aged 63, whilst driving cattle on board one of the steamships on the night of September 25th, 1894, was knocked down and severely gored by one of them. He was immediately brought to the Montreal General Hospital and Dr. Shepherd was summoned. On arrival he found the man suffering considerably from shock; the right testicle was exposed and a large wound on the left side of the abdomen, extended from the spine of the pubis upward and outward several inches; through this wound protruded some ten to twelve feet of bleeding small intestine covered with dirt. The intestine was washed and then examined. It was found that the mesentery was perforated and torn in eight or nine places, and on disturbing the clots the vessels bled profusely. These were secured and the mesentery brought together with Lembert's sutures. The intestine was torn completely through in only one place, but in several other spots the outer and middle coats were torn and the mucous membrane extruded. After securing the injured parts with a continuous Lembert the bowel was pulled out for several feet and found normal and then the whole was returned into the abdomen. The abdominal walls were now attended to, and it was found that the wound in the muscles was of greater extent than that in the skin, which had evidently been considerably stretched—to suture the torn muscles the wound had to be extended upwards and

outwards The different structures were sutured separately, the peritoneum with catgut and the skin with horse hair.

The wound in the peritoneum was most internal, a little more external was the wound in the muscles and more external still the skin wound; so, in this way, as each structure was brought together the level of the sutures was different. Although a considerable portion of the scrotum was torn completely off, yet sufficient skin remained to cover the testicles. A drainage tube was introduced into the peritoneal cavity and the wound dressed with gauze and absorbent cotton.

The patient went on well and never had a bad symptom The drainage tube was removed on the second day. The only untoward symptom that ensued was some sloughing of the wound made by the horn; this was no doubt due to over-stretching. The man was in excellent condition and had not the slightest tendency to hernia. The skin wound was not completely healed owing to the sloughing which had occurred, but the deeper parts were quite solid.

A Case of Medico-Legal Intere

Dr. J. A. SPRINGLE showed the genital organs of two little girls, 12 and 14 years of age, who had been violated and murdered four years before.

Polydactylis

Dr. J. CHALMERS CAMERON exhibited two children of the same family showing this condition.

First child, four days old.

Hands—Supernumerary fingers on each hand springing from the outer border of the little finger. Both thumbs broad.

Feet—Supernumerary great toe on each foot and a supernumerary little toe on the left foot. A web exists between the first, second and third toe of each foot.

Second child, 1 year and 9 months old.

Hands had supernumerary little fingers, which were amputated soon after birth.

Right Thumb very broad, with a distinct furrow down the centre.

On *Left hand* a double thumb.

Feet similar to those of the other child, except the web extended up almost to the end of the toes. On the left foot are seven toes; on the right six toes.

The father of these children presented the following peculiarities:

Right hand—Broad thumb, double the normal breadth; nail depressed in centre, but depression did not extend down the thumb below nail.

Between thumb and index finger is a web extending as high as the web of the other fingers.

A sixth finger projecting from the little finger.

Left hand—Same as right, except that there was a web running between first, second and third fingers as high as the joint between first and second phalanx.

Dr. SHEPHERD remarked that the subject of polydactylism was a very complicated one. The occurrence of supernumerary digits may be explained by two theories. (1.) That it is due to reversion or atavism. (2.) Reduplication or repetition owing to excess of germative material (Blastogenic). By the latter theory, the occurrence of more than seven digits is explained, and the doubling of the bones and muscles of the extremities. The theory of reversion is applicable to those cases of supernumerary digits occurring either on the inner or outer side of the manus or pes. Anatomists of late have been much interested in the theory advocated by Prof. Bardeleben, viz., that the penta-dactyle extremity has been preceded by a hepta-dactyle form, that is, that the present five digit limbs were preceded by those carrying seven digits, and that the suppressed digits were, one in succession to the 5th the post-minimus, and one in succession to the 1st, the pre-pollex. This would explain the occurrence of these marginal structures, such as the pisiform bone and the radial sesamoid of animals, and also the occasional re-appearance of certain

marginal muscles in rudimentary form. Supernumerary digits are very common in cats and pigs; in pigs the supernumerary digits are only found in the fore limbs, whilst in all other animals they are found in both fore and hind limbs. The horse occasionally has supernumerary digits, and the sheep much more rarely. The condition is markedly hereditary as evidenced by the cases before the society. In conclusion, Dr. Shepherd regretted that the subject was too large a one to permit him to go into it at sufficient length to make it intelligible to the members.

Dr. GIRDWOOD mentioned instances in cats of the reduplication of parts. He had a cat possessed of an extra finger, both in the fore and hind leg, and the progeny of this cat was likewise endowed.

Dr PROUDFOOT had a cat with four well marked ears, out of whose litter of seven, five of the kittens had similar supernumerary ears

Excision of Maxilla.

Dr. ARMSTRONG brought before the members a man whose right maxilla he had excised for sarcoma. The whole maxilla was removed, including the whole or part of the following bones, lachrymal, malar, orbital plate, superior maxilla, palate and ethmoid. The disease was of a very progressive malignant character. It began to grow in December last; the first symptom noticed was pain in the teeth, for which he had some teeth removed without getting relief. Next he was troubled with the tears running down the cheek, evidently denoting the plugging of the lachrymal duct. The third symptom which appeared was the pushing forward of the eye-ball. At this time his teeth were removed under the impression that there might have been some ulceration about the roots to account for the symptoms, but without result. The antrum of Highmore was next explored in the hope of finding pus, but with like success. The swelling continued, as also the pain, to grow worse, and finally the case coming under Dr. Armstrong's notice he diagnosed a sub-periostial sarcoma of

a pretty rapid growth and advised excision. A specimen had been submitted to Dr. Adami for examination and the following report received.

Section shows it to be an endothelioma, *i.e.*, a malignant connective tissue tumour presenting an alveolar arrangement which in parts is with difficulty distinguished from an epitheliomatous growth.

There are, however, no true cell nests, the stroma does not tally with that of a true epithelioma and the cells of the alveoli have a sarcomatous appearance.

The tumour is evidently rapidly growing. When the primary growth occurred could not be determined from the specimen.

Dr. RODDICK enquired concerning the prognosis of Dr. Armstrong's case and agreed with the latter that it was very serious.

Maternal Impressions—Missed Abortion—Monstrosity—(Janiceps).

Dr. GURD exhibited a monstrosity, a fœtus of about the thirteenth week having fusion of two bodies with a single head. It had four arms and four legs, all well formed. No external genitals were visible and the umbilical cord was given off low down between one pair of legs. There was also a comparatively large spina bifida The fœtus was partly mummified owing to its having been retained six weeks after its death.

The mother had all the usual signs and symptoms of pregnancy for three months, when these suddenly left her, and she then had all the symptoms of one carrying a dead fœtus. Dr. Gurd said that this case would strengthen the faith of those who believed that strong maternal impressions caused marks and deformities. One afternoon shortly after conception the mother went to Sohmer Park and there witnessed the performance of some acrobats. Their tumblings so affected her that she told her husband she could not look at them. The mother asked if this could in any way have made her lose her baby. She never knew of its being deformed.

Dr. LAPTHORN SMITH thought the term janiceps was not very appropriate in this case, as it ought to denote a double-headed body or double-faced head, instead of which, this specimen had only one head, the doubling being confined to the extremities.

Dr. GURD, in reply, said he recognized the inconsistency of the name with the condition, but he had looked up a number of authorities, and they all agreed in describing it by this term, so, though unsatisfied, he was obliged to follow their example.

Paralysis in Children.

Dr. MACPHAIL read a paper on this subject. (See page 417.)

Dr. JAMES STEWART, on being asked by the President to give his opinion on the nature of the disease described in Dr. Macphail's paper, said it was very difficult to express an opinion as to the pathology of such a very curious epidemic, without giving the subject more thought than could be expended in the course of listening to the paper being read. He, however, considering that the chief symptoms appeared to be mainly of a paralytic nature, suggested the possibility of the dissase being really a peripheral neuritis. This disease sometimes occurred epidemically, and was especially likely to do so in malarial districts. In the East Indies, for instance, many cases of peripheral neuritis are attributed to the direct effect of the plasmodium. In Dublin at present they are suffering from an epidemic of a paralytic nature, which is nothing more than a marked peripheral neuritis. In this connection, he would like to ask Dr. Macphail, whether or not any examination of the blood had been made, as in cases of neuritis, such as he had referred to, micro-organisms were invariably found, and were capable of reproducing the disease when injected into other animals.

Dr. MACPHAIL, in reply to Dr. Stewart, said the blood had been examined in many instances, but always with negative results. He had attended four cases which ended

fatally, but he could not secure a post-mortem. Several New York physicians were also on the ground and had carried on some investigations of the disease, which he had no doubt would subsequently be given to the profession; but so far as he could learn no definite data as to the pathological nature of the trouble had been obtained.

Dr. McCONNELL inquired from Dr. Macphail whether atrophy of the muscles followed the paralysis, and was answered, "Yes, in every case." He then commented on the nature of the disease, and remarked that it seemed to be an epidemic of a local variety, and was probably caused by some micro-organism. He did not agree with Dr. Stewart in regarding it as a peripheral neuritis, but was more inclined to look upon it as a toxic affection of the spinal cord, confined to the anterior horns, probably an anterior poliomyelitis with involvement, in some cases of the cranial motor nuclei. The symptoms here seemed to be confined to the motor functions altogether and were mostly sudden in their onset, whereas were it a neuritis, one would expect some sensory troubles such as pain, tingling, hyperæsthesia or anæsthesia, and the paresis or paralysis coming on gradually.

Dr. MILLS thought Dr. MacPhail had here compiled a great deal of valuable material, and presented it in a form to be grasped by all. He hoped this line of work would be encouraged, and the custom of collecting a large number of cases of some disease be continued.

Case of Primary Carcinoma of the Liver.

Dr. MARTIN read for Dr. Adami the report on this case. (See page 401.)

Primary Carcinoma of the Kidney.

Dr. MARTIN then exhibited a specimen which had been removed from a private case of Dr. McCarthy's, who, with Dr. Finley, in consultation, had diagnosed primary carcinoma of the kidney. The autopsy confirmed this diagnosis. The kidney shown appeared enlarged, the

capsule, Dr. Martin declared, was in some parts stripped off with difficulty, and on section a large cancerous tumour was seen infiltrating the medullary portion, filling the pelvis, and extending to the suprarenals. Thrombi were found in the renal vein, although the vena cava was free.

Dr. A. LAPTHORN SMITH presented the following specimens and related the histories of the cases:

Case 1.—Multilocular Cyst of the Right Ovary.

The tumour measured 24 inches in circumference. The patient, Mrs. L., nullipara, married two years, never pregnant. Abdominal enlargement first noticed sixteen months ago. On examination all the evidences of ovarian cyst were found. Operation was performed on September 4th, the tumour removed without any difficulty, and she made a rapid recovery, returning home twenty-five days afterwards.

Case 2.—Tubal Pregnancy.

Mrs. W., aged 25, married three years, mother of two children, the youngest one year old. Since the birth of her first child she had suffered from repeated attacks of what was probably pelvic peritonitis. Five weeks before coming under his notice she was suddenly seized with a severe pain in her left side and a fainting fit while walking in the street. She began to flow and continued until time of operation. As she had not missed a period she was sure it was not a miscarriage and in a few days was about again. Two weeks later she had another fainting attack, accompanied by sharp cutting pain, and a third one week before he was called to see her in consultation. On examination he found a mass the size of a small orange in Douglas' cul-de-sac and it was exceedingly sensitive to pressure. Tubal pregnancy was at once diagnosed and operation performed on October 20th. In order to make the recovery more satisfactory he dilated and curetted the uterus, sewed up the cervix, and performed ventral fixation after the removal of the appendages. The dates of the various hæmorrhages were beautifully illustrated when

the specimen was first removed by the clots of blood surrounding it. There was rather bright red blood recently escaped, dark and slightly organized clots, and old hard clots more dense and firm. Dr. McConnell had made a microscopical examination and had only been able to find blood-clot, but further search would be made for chorionic villi.

Case 3.—Hæmatoma of the Left Ovary—Chronic Salpingitis.

Mrs. L., aged 25, has been a chronic invalid since the birth of her only child eighteen months ago. On examination deep bilateral laceration of the cervix and on the left side near the uterus a lump about the size of a small orange. After a course of preliminary treatment for reducing congestion of the pelvic organs operation was performed on September 6th. The uterus was dilated and curetted, the laceration carefully repaired and both appendages removed. The peritoneum and fascia were closed with buried silk and a layer of through and through silkworm gut stitches which had been passed previously were tied. The patient made a good recovery. The silk-worm gut sutures were removed four weeks after operation.

Embryo in Sac.

Dr. HUTCHISON exhibited a specimen of an embryo in its sac, surrounded by the liquor amini. It was of interest, he thought, from its rarity, such a complete picture of the early development of the human species, not being often seen outside of text-book plates. The abdominal opening could be plainly seen and the small points marking the situation of the eyes, etc., etc.

Stated Meeting, November 16th, 1894.

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

Drs. J. E. Binmore, Felix Cornu, William Burnett and H. M. Dahamel were elected ordinary members.

Diaphragmatic Hernia.

Dr. ADAMI exhibited the specimen and gave the history

of the case, which will appear in the next number of the JOURNAL.

Dr. MILLS remarked that between the years 1878 and 1881 he, then a resident physician in the City Hospital of Hamilton, Ont., reported a case of congenital hernia through the diaphragm in an infant. He did not remember what organs had passed upward through the orifice, nor whether there were any other Canadian cases on record.

In reply to questions put by the President, Dr. Adami remarked that this would be considered of the congenital variety: that it would seem to be caused by the non-development of the left crus of the diaphragm; and that the most common position for the rupture or orifice in the diaphragm was the tendinous portion of the left side.

Pus tubes and Hæmatoma in the Same Patient. Pus tubes Removed During an Acute Attack of Peritonitis. Double Hydrosalpinx, Causing Severe Dysmenorrhœa.

Dr. A. LAPTHORN SMITH read the reports of these cases, which will be found on page 429.

Primary Carcinoma of the Kidney.

Dr. J. G. MCCARTHY reported this case, which will appear in the next number of this journal.

Secondary Enchondroma in a Bitch.

Dr. ADAMI eighteen months ago had exhibited before this society the rare condition of an enchondroma of the mammary gland occurring in a bitch. (See this JOURNAL, Sept., 1893, page 209.) The animal, after its removal, kept in very fair condition for some time; but towards the end of February last, a swelling was noticed in the abdominal cavity, which was thought to be of an obstetrical nature. It, however, continued to grow, extending in a rather transverse direction. There was gradually increasing difficulty of locomotion, and about three weeks ago the animal was killed in the laboratory and a post-mortem performed. A hard tumour was found in the abdomen attached to the mesentery; it was not adherent

to any of the abdominal viscera, except a portion of the liver, which was found separated from the rest of that organ. Examination showed it to be an enchondroma, hard at the edges, with bony matter scattered here and there; while the whole central portion was essentially myxomatous. It appeared to be attached to the mesentery and to have started there; but we had then these peculiar relations between the tumour and the liver to explain, and altogether it seemed more reasonable to conclude that the growth commenced in the liver, extended until its weight caused that part of the organ which contained it to break off from the rest, and then attached itself to the mesentery. The tumour weighed ten pounds, while the animal in health did not weigh more than twenty pounds, and probably something less than that at the time of the autopsy, as it was much wasted. In addition to this large mass, other secondary growths were seen in the form of cartilaginous nodules in various portions of the lungs, pancreas, abdominal glands and kidney. Dr. Adami regarded the case and specimen as interesting, first, because the condition of primary enchondroma of the mammary gland is a very rare one; secondly, because, in spite of the usual benign character, in this case it had been followed by secondary growths.

Dr. MILLS' experience of tumours in dogs led him to believe that any kind of a growth occurring in the mammary glands of dogs, is apt to be followed by secondary growths. He had had quite a number of these tumours examined microscopically, and then, in spite of their benign gross appearance, sarcomatous tissue was pretty generally found in them.

The Late Dr. E. A. McGannon.

The following resolution was moved by Dr. J. ALEX. HUTCHISON, seconded by Dr. J. J. GARDNER,

Resolved,—That this Society learns with feelings of sincere sorrow of the death, at the early age of 41 years, of Dr. Edward Aaron McGannon, of Brockville, Ontario.

A member of this society since 1889, he attended its meetings, contributing papers and entering into the discussions.

He was one of the few members residing at a distance from the city who took an active interest in its deliberations.

His genial disposition and kindly manner made him the friend of all.

Selections.

Reminiscences of Medical Student Life Fifty Years Ago—Spinning yarns before the camp fire and in the home circle, it had often been said to me, "Well, if you could only write your stories as well as you tell them they would be rather amusing." But I was not then to be seduced into such an adventure. Now, however, that I am an invalid and have passed the "regulation allowance" of three score years and ten, the time drags so wearily along that I have listened to the suggestion of a friend—"Why don't you write a story and send it to one of the magazines?" So here I begin with a series of short stories, which, in reality, are not stories at all, but emphatically true—in every word and incident related.

When quite a youngster I was indentured before a notary public to Doctor James D——s, a very eminent surgeon in the ancient city of Quebec. There being no medical school in the Province at the time, this was the usual custom.

The doctor lived on Mountain Hill, in a house now used as a hotel. It was built when the country was under the dominion of France, and a remarkable house it was—and probably is to this day. It was built on the slope of a steep and tortuous hill, and built apparently to last forever. The foundations had been laid at the foot of the slope, on Notre Dame street, near the site of the historic Church of Notre Dame des Victoires, and the building was carried up so as to have two stories on Notre Dame street and two and a basement on Mountain Hill; the house thus fronting on two streets, each having its distinct and separate entrance, one shut off completely from the other.

The first story on Notre Dame street consisted of warehouses and wine vaults; the second was a private residence.

The Mountain Hill side, on the contrary, was not *in trade*, it was strictly *professional*. Passing through its large drawing-

room you saw a splendid circular staircase which led to a glass-covered cupola and out on a leaded roof, giving a promenade the full length and breadth of the building, and commanding a glorious view of the Citadel above, the St. Lawrence and St. Charles rivers below, the beautiful Island of Orleans, the Falls of Montmorenci, and the distant Laurentian Mountains, with the lovely slopes of the Beauport shores, from Ancien Lorette to Ange Gardien. Such a magnificent view to be once seen is to be always remembered. At the foot of this circular stairway stood a huge stuffed moose, with immense horns, a trophy of the doctor's skill as a hunter, and nearly every celebrity of the day who visited Quebec called and asked permission to see the moose: Admiral Sir George Cockburn—it was he to whom was intrusted the charge of conveying Napoleon to St. Helena—Charles Dickens, the Marquis of Waterford, Lord Charles Wellesley, Lord Powerscourt, Count D'Orsay, Sir James Macdonnell, the hero of Huguemont, and others too numerous to mention. But all have now gone to the "Spirit Land." Where the moose is I do not know.

This stairway was used only in summer, when the family and their visitors wished to enjoy the grand view from the roof promenade, and it was always a matter of surprise why the dwellers in Notre Dame street should have been denied this great privilege. But it was reserved for one of the ghosts of my story to discover that it had not been always *thus*. In fact, a very narrow private stairway had been made for their benefit, but, this being objected to by the "upper crust," it was closed up, and in time its very existence was completely forgotten.

Before my time the basement referred to had been used as a dissecting room, but that had been moved to the attic and the dissecting room converted into a kitchen. Just for the sake of pleasant associations! The presiding genius of the kitchen—old Kitty—was Irish, a strict Protestant, but, when in extreme peril, not above crossing herself and appealing to all the saints in the calendar. She slept in a cupboard-bed in the kitchen, knew what this room had formerly been, and was prepared accordingly—every mouse to her was a ghost in disguise.

"Why, then, Master Edward," she would say, "not a night of me life that they don't come and sit across me legs and dance on me chest, and then lift me up—bed and all—up—up—until, my jewel, I think they are going to shut me up intirely, when I wakes wid a scream, and comes down wid a jump. Not for worlds—no—not for me weight in goold would I stay in this house another day, but for the Missus, the darlin'!"

"Now, but Kitty, what did you have for supper?"

"What did I have for supper, is it? Just a glass of beer and a bit of bread and cheese; sorra thing else."

"Well, Kitty, don't you think it might have been the cheese?"

"Arrah, then, honey, don't you think I am old enough to know the differ between *them* and cheese? The craythurs, they'd never harm one any way—God be good to them—but they've been cut up in this room, and they likes to come back to it."

I do not wish it to be suspected for one moment that my familiarity with Kitty is any proof that I had a "mash" on her. It used to be said in Ireland, and perhaps elsewhere, "Whatever you do, keep good friends with the cook." Kitty was an old maid—she could not help that—under proper facilities she might have been a grandmother; she was old enough! But she came from the *dear owld sod*, not far from where I was born, and it was pleasant to hear her talk of owld Ireland, and its fairies, and its churches, and round towers, and blarney stones, and how St. Patrick banished the snakes from the island and drove them all into the *say!*

The family spent the summer in the country. So Kitty and I had the house to ourselves a great part of the time. I am afraid that, in spite of my friendship for Kitty, she saw a great many ghosts in those days, but she was very forgiving and thought it was all done for her own good.

A day of retribution, however, came at last. That kind of thing is sure to come, sooner or later, upon the wicked. I saw a ghost myself, and in that very kitchen.

Smoking was a luxury to be indulged in cautiously in that

house. Lucifer and Congreve matches and phosphorus bottles were unknown. Only the old tinder box, with its flint and steel, could, in the absence of a fire or a lighted candle, be relied upon to light a cigar.

One Sunday evening, knowing to a certainty that I was alone in the house, I went down to the kitchen for a light. A man sat on a chair in front of the coal-stove, his feet on its hearth, his elbows on his knees and his face on his open palms. I had firmly believed the man-servant to be out, but there sat some one. I passed behind him, and coming to his left side stooped down to open the stove door. He did not move—not one foot. So I said in my blandest tones, looking up at the same time, "Will you have the goodness to move your foot? I want to open the door." If I had had my hat on I would have taken it off, I was so awfully civil. No, he never moved. I repeated my request, without result. So, losing patience, I pushed the the door open forcibly. It opened back to its hinges, but the feet never moved. *The stove door went "right straight through them!"*

I stood up quietly, with my eyes fixed steadily on the figure. I had always heard that that was the correct thing to do when attacked by a lion! I had seen it recommended in books of Eastern travel. I had never travelled myself much, nor was I ever attacked by a lion, but this man never moved—he was worse than a lion, and I might be annihilated at any moment. Oh! for a word from old Kitty. She would have prayed to the saints for me. I had to act for myself, and I acted quietly—oh, so quietly. I feared to disturb that "questionable shape." I retired backwards with my face to the foe, until I reached the foot of the stairs, and then! *then* I took about eighteen steps in three bounds! Never before was such "time" made on that stairway.

This was the first *ghost*—I may as well call it by that name as by any other—I had ever seen. I had not been eating cheese, and I had not then ever tasted beer. I firmly believe to this day that I saw what I have described and as I have described it, "and further deponent saith not."

If tobacco had never been discovered, or if parlor matches had been introduced, and I had not been obliged to go to the kitchen for a light, would that "poor ghost" have been there?

***

Years afterwards, I saw another shadowy form, which I may as well get off my hands while I am about it. It was not in Quebec, but where I am living at present. Driving out professionally one summer evening, just before dark, as I was coming to a bridge over a tiny streamlet I saw in front of me, not twenty yards off, a man in a nut-brown suit, with a pack on his back. He was in the middle of the road, and walked as if fatigued, so I said mentally, "Poor old fellow, I must give you a lift." At the moment I had to attend to the bridge, which was narrow and had no railing; when I looked up the man was gone. It had been raining slightly—but there were no fresh footmarks to be seen, no stone or hillock or tree behind which a man could hide. I got out of my trap and looked everywhere. *No peddlar! no pack!* Months afterwards I was passing that spot again, having with me a man I picked up and whom I had known for years. As we neared the bridge he said, "*That is the spot where the man is seen.*" "What man?" "Oh, did you never hear of him; he has been seen off and on for years—dressed in a brown suit, with a pack on his back. He has never been seen but for a moment at a time." I verified this statement afterwards, and declare most positively that I had never spoken of the circumstances to any one. It was said that years before, a peddlar, or backwoodsman, going out to one of the lumbering shanties, had been murdered in the neighborhood, but nothing definite was ever known.

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For a couple of years the united wisdom of the medical faculty on Mountain Hill was devoted to the case of Paddy Quin. As his name implies, he was by birth an Irishman—by occupation a stevedore, and he was the unfortunate proprietor of a pair of very poor legs. During the summer months he was at work loading ships engaged in the timber trade, and if there was a big stick or a sharp-edged "*deal*" "convaynient," Paddy was

sure to rub his shins against it; and this being repeated day by day, by the time the summer was ended and Paddy's occupation gone he was ready to spend the winter and his earnings in "undergoing repairs." Poor Paddy—as simple and good-hearted an Irishman as ever lived—he was passed along from one student to another, and one and all gave him up—or rather his legs—as a bad job, until at last he was handed over to me. I strapped and bandaged—applied lotions and ointment to those unfortunate legs, in the most orthodox manner—for a whole winter without result—that is, without any good result. One day he was better, another worse. What between my want of success, and the "chaff" of the other sawbones, I was of all men most miserable; but Paddy, if not proud of my skill, admired my perseverance and always had a word of encouragement. "Well, may the Lord love you anyway; you are willing to try—and do what you can—but what am I to do next summer when the shippen be's comin' in?"

I lost sight of Paddy for a while, and when he turned up he had a line of treatment to propose which was emphatically new and striking—in fact tragic. An old woman from Ireland had told him of a remedy, and "would I help him to try it?" "Of course I would do anything in the world for you, and you know it, Paddy." "Indade I do, sir, but I don't like to tell you what it is." After a good deal of persuasion it came out that his countrywoman had suggested the passing of a dead hand over the sores on his legs: it had cured lots of people in Ireland. "Well," said I, "sure that is easily done." "Arrah, then, how and where am I to get a dead hand?" "Oh, Paddy, we have lots of them in the house this minute. What kind of one would you like?" "Faith, then, and sorra one of me knows, but she said a black naygur's, if it could be got, would be the best." "By George," said I, "you are up to your knees in clover, Paddy. We have a most excellent nigger upstair this moment." "Glory be to God! I heard you had such things in the house, but I was afeared to spake of it, for fear you'd think I'd tell." "Don't say that again, Paddy; I'd trust you with my life; only tell me what you want to do, and I'll do it.

What was to be done was to be done at the silent hour of midnight—the moon to be at the full—and none to be present but himself.

The following night would do, so it was arranged that he would be on hand at 11.30. In the meantime I would get everything ready.

The scene of operations was to be the new dissecting room. This was in the attic, down the centre of which ran a long, narrow, dark passage. On one side was a rubbish room, on the other a line of small rooms originally intended as bed rooms for the servants. The doors had been made and stood on end, unhinged, against this partition—in this narrow passage—and here the passage abruptly ended in a door, the door of the dissecting room. This room had one large dormer window, fronting on the River St. Lawrence, and as the moon came up over the water its light "slept" brightly and beautifully on the poor "subject's" face; the table was wheeled up so that not one beam of light was lost Elephants' and lions' and tigers' and crocodiles' skulls lay on the floor; men's, women's and children's heads—*galore*—were ranged on shelves round the room; skeletons of men and animals, down to Bandicoot rats, were there; "dried preparations," too, abounded; arms and legs, and a few at full length, were in "review order" standing at "attention" round the room. It was a lovely sight, but one had to get accustomed to it—to be comfortable, particularly at midnight.

Paddy Quin was sharp on time, but as I had a few touches to give to the room at the last moment, I asked him to sit down a minute and rest himself. He had a raw potato in his hand, and as I left the room he said pleasantly, "Well, I'll cut this up while you are away—just to amuse myself."

With a stick of phosphorus I made a few artistic touches in the orbits, along the lines of the ribs of the skeleton, and on the walls, until the whole room presented a brilliant phophorescent display. Then I led Paddy Quin up, but I must confess that I did so in fear and trembling; I might be carrying the thing too far. It was cruel, I confess it, but I was young, and always

rather too fond of a lark; but I poured balm into Paddy's ears as I took him up, and vowed I would stick to him through thick and thin—like a brother!

When the door was opened and Paddy looked in, he gave a jump back and cried out in dismay, "Holy mother, I can't do it." But I said: "I'll go in before you, to show you there is no danger. Don't look round; don't mind what you see at all —you want your legs cured?" "Arrah," says he, "it's aisy for ye to talk, so it is." "Well, Paddy, it's getting on the edge of twelve; if you are going to do it, do it; if not, let us go." "Ah well, be aisy—be aisy a minute." Then he added: "You are not to look in, and I am not to have a candle; lave me to meself, but for the love of heaven don't stir out of this. If I want you I'll call." He then walked in with a courage equal to facing a masked battery.

I had a little peep-hole all ready, and this is what I saw.

The brave fellow walked up in fear and trembling to the side of the table; he put his right foot on a low stool beside it, bared his leg, and then—*then* came the tug of war; but Paddy was equal to it; he took the right hand of the "subject" and passed it slowly down over the bared leg; when this was done he knelt down, crossed himself, said a "Pater Noster" and "Ave Marie," *and then* placed a small square of raw potato on the table beside the body. This he did nine times—each time *keeping tally* with *a piece of potato.*

Then he came to the door and said in a dry whisper: "LET ME OUT!"

As I look back upon that night, I regard that act of Paddy Quin's as one of the grandest religious ceremonies I ever witnessed, grand in its simplicity and trusting faith. Many a soldier who had fought in the great battles of the world would not have entered that room, at that time?

I did not meet Quin again for two years. I had been in Edinburgh, and on my return he was one of the first persons I met. "Well, I am glad to see you, and how are the legs?" "By St. Patrick, sir, you did me a good job that time; they have never troubled me since that night—Glory be to God!"

Next in order I must relate poor old Kitty's adventure with her own particular ghost, and how its appearance led to the discovery of the dark staircase that had been so long shut up as to be forgotten.

When describing the rooms in the attic, I should have stated that one small room—the first one—was finished; it had a door, and a lock and key, and was the store-room of the house, and a very inconvenient one too. If Kitty wanted a "drawing of tay" she had to go up two pairs of stairs, to this store-room, which was at the entrance to the dark passage; she knew what was at the other end! This passage was always dark, dark at midday, and she was most careful to get her supplies in the daytime.

One Sunday evening, however, she was obliged to go up for something; it was between the two lights—and as she was putting the key in the lock, a woman in white walked up out of the darkness. Kitty had a lighted candle in her hand; a lighted candle is by common consent admitted to be a protection to a certain extent against uncanny visitants. But the moment she saw the woman she dropped her candle. The woman smiled at her, and said, "Who lives here?" Kitty, thinking it wisdom in the face of the enemy to be civil, replied, "Doctor D——s." "Oh," said the woman in white, "*and what is in that room at the end of the passage?*"

This was coming to close quarters; it was, in fact, in legal phrase, a leading question, too leading for Kitty, so she ran down stairs screaming, and when she got to the bottom she gave way to the most bitter lamentations. She would "not stay in the house another night, just as if a dacent woman could not go about her business without being molested in that way. It was only natural that the poor craythurs would be allowed to go back to their quiet graves—to sleep in pace—and not be mayandering round the world to try and find where they belonged."

It certainly was very extraordinary where that female had come from. It seemed utterly impossible that any living being could find his or her way into that passage. The only

possible entrance seemed to be by the big front door, or down the chimney and out through an eight-inch stove-pipe hole! The Doctor came in at 9 o'clock and joined in the chase.

It is not very pleasant to know that the sanctity of home can be invaded mysteriously by a woman—even in white. If by a woman, why not by a man—why not by burglars?

A careful search was made at once, at which every one in the house assisted.

> "In the highest, the lowest, the loneliest spot,
> We sought for her wildly, but found her not."

At length our efforts were rewarded, and the mystery solved. Four unfinished doors and some loose boards stood on end against the partition in the passage; on removing these we found another door, exactly parallel with the door of the dissecting-room, and which this lumber had hidden. A panel had been recently removed from this door, and in the dust on the floor were plainly to be seen the marks of fresh footprints. As the door was fastened from our side with screws, it was soon taken down, and the footsteps followed. Such a pile of dust, such curtains of cobwebs, and such a musty, sickening smell! But down we went in Indian file—the stair was too narrow to admit of any other line of march—until at last we heard voices, and saw a light through a keyhole. The doctor knocked and a woman within said, "Oh, missus, don't let them in; its me they're afther." But the missus opened the door and the mystery was explained. While the family were out in the afternoon, the servant girl, being of an inquiring turn of mind, determined to open a door in a deserted corner and see what was beyond. "No sooner said than done." She had her reward in a stairway full of dust and cobwebs. Up she went until something barred the way. She had no light, but groping about carefully she loosened and removed a panel, squeezed herself through, and was rewarded by coming out in the dark passage above, close to the dissecting room door. Looking through the keyhole made her wish to "inquire within," but at that moment Kitty came up to the store-room door. She could at the same time gratify her curiosity and establish friendly relations with

the stranger; so accordingly, but with timidity, she diplomatically asked: "Who lives here?" and "What is in that room?" When Kitty screamed and ran away—to give the alarm, as she supposed—she ran away too. "She meant no harm; she was only lonesome, and hoped to be forgiven," and she was. It was a pleasant solution to what promised to be a very great mystery. The doctor had lived for ten years in that house and knew nothing of this dark stairway, and the dwellers in the lower regions were equally ignorant.

The discovery of this dark passage, however, was not without result; for one of the students, hearing of Kitty's adventures, and being blessed, or otherwise, with a most inordinate amount of curiosity, went down one day to see what he could see, and returned with several bottles of very choice wine. After having lost his way, he had suddenly found himself in a large vault, surrounded with shelves loaded with bottles, and he had brought up a few to sample them. The result was so encouraging that for many days he went down and returned with spoils. At last the poor boy came in one day looking rather depressed. Most affectionate inquiries were made as to the cause of his melancholy. That day at dinner he had heard his father say to his head clerk: "John, have you noticed that the famous Port of '96 in the Duponts' vaults has been disappearing mysteriously? Some one is stealing it!"

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There is a general impression that a dissecting room is very dirty and very disagreeable. Of course it may be, but is not necessarily so It cannot, under the best of circumstances, be called "home-like" in appearance, but a "post-mortem" examination for family reasons, or an "autopsy" in the interests of justice, may be infinitely more disagreeable.

When one settles down to the quiet dissection of an arm or leg, or the following-out of the distribution of the branches of blood-vessels or nerves, it is rather pleasant than otherwise, especially, as often happened in those "good old days," when the ladies of the house would bring in their work, sit down for a pleasant chat, and manifest a deep interest in the surround-

ings ; and then it was so pleasant to explain to them all the mysteries that were explainable. And this was more than half a century ago, before the idea of entering the medical profession had ever been contemplated by the coming sovereigns of the universe.—EDWARD WORTHINGTON, M. D., Sherbrooke, P.Q., in the *Canadian Magazine.*

THE

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THE POST-GRADUATE COURSE.

In our October issue we essayed to urge the advisability of establishing a post graduate course in Montreal, and from what we hear, we are not alone in believing that the time has come for such an extension of the teaching facilities in connection with our medical schools. It is well, however, before rushing headlong, or advising others to rush headlong into a new departure, of such import and magnitude, to discuss the subject from all sides. Regarding, then, the project from the side of the clinical teachers, and teachers not clinical, in other branches of medicine, it does at first sight appear that the development of post-graduate courses would mean the throwing of a large amount of extra work upon a body which, as a whole, is already sufficiently overworked. But on further consideration it may be asked, whether this would really and necessarily be the case. In Berlin, Vienna and the other large cities where such post-graduate courses have been established, it would not appear that the university professors find that the post-graduate courses are too great a strain upon them. And studying the way in which affairs are managed in these large centres, we find that practically a very slight amount of extra work is thrown upon the heads of the various departments. The various clinical professors, it is true, give clinics to the members of the post-graduate course, but these are, after all, but their ordinary clinics,

the same as those given to the undergraduate students. And the real bulk of the work in the way of practical classes in various special branches of medicine, in the use of instruments and in bacteriological and pathological courses, falls upon the junior members of the staff. It is they who give the special courses. This arrangement, it strikes us, is mutually beneficial. These junior members of the staff have willy-nilly a considerable amount of time on their hands—more time as a body, that is to say, than have their seniors ; and the members of the post-graduate courses have thus more attention given to them, while, on the other hand, these junior members of the staff gain the invaluable benefit of more teaching, and of teaching a class of those thoroughly eager and anxious to learn. Altogether. then, it seems to us that there would, in this respect, be no reasonable cause why post-graduate courses should not be started here in Montreal, once it is understood that the bulk of the work need not necessarily fall upon the heads of the profession, need, in the main, only be under the direction of the senior teachers.

MONTREAL GENERAL HOSPITAL TRAINING SCHOOL FOR NURSES.

This training school has now been in existence for four years and already seventy-two graduates have completed the two years course, passed the examinations and obtained the medal and diploma awarded to successful candidates. The sixth class of graduates passed their final examination last month and received their medals and diplomas.

The following are the successful candidates in order of merit: Misses Boyce, Hersey, Thompson, Bowen, Barnes, M. Bickle, Smith, Booth, Lounds and Moses.

The hospital prize for bandaging and the surgeon's prize for the best written and oral examination in surgery were awarded to Nurse Boyce.

The final examinations are held semi-annually, in April and October, and the nurses are graduated twice yearly.

The number of nurses in training in the school is about sixty. The course is of two years duration and during that time the nurse is required to pass three examinations, the course being divided into three terms of eight months each. The first two examinations are held by the Medical Superintendent and the Lady Superintendent, while the final examination is conducted by two members of the Medical Board, a physician and a surgeon, each examining in his own department.

Before a nurse is received into the school she must serve a probationary period not exceeding two months, then, if accepted, she becomes a junior, and if successful in passing her examinations she becomes in turn a senior and finally a head nurse.

The instruction consists principally of work in the ward under the supervision of the Lady Superintendent and her assistants, the head nurse of the ward being held responsible for the way in which the assistant nurses perform their duties. Classes are held regularly by the Lady Superintendent for the nurses, and during the winter months lectures are given by members of the attending staff on various subjects.

Such is a brief outline of the methods pursued in the school—methods which have been followed by such signal success, both in raising the standard of nursing in the hospital and also in providing capable nurses for private work outside.

Obituary.

DR. E. A. McGANNON.

We deeply regret to chronicle the untimely death of Dr. E. A. McGannon of Brockville.

For several years Dr. McGannon has occupied a very prominent position in Central Canada. Although having to practice as a general practitioner, his work as a surgeon was extensive and of a high order.

He graduated in medicine in McGill University in 1881, and after acting as a surgeon on some of the Canadian trans-atlantic liners, he settled down to practice in Lowell, Mass,

In 1885 he removed to Brockville, where he rapidly built up an extensive and lucrative practice. He was Grand Trunk surgeon at Brockville, and last year he was appointed Vice-President of the Association for Railway Surgeons of North America.

In 1892, Dr. McGannon married Miss Walsh, a daughter of Major Walsh.

Through the death of Dr. McGannon the profession loses a valuable member, the public a worthy and highly esteemed citizen.

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