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## Original Communications.

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### DIPHTHERIA.<sup>1</sup>

NOTES ON TREATMENT BY ANTITOXIN.

By ALFRED T. BAZIN, M.D.,

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My remarks shall be confined strictly to the clinical phases of the antitoxin treatment of diphtheria and based on the observation of 93 cases from their admission to the hospital to their termination, with record of 10 others, also treated in the hospital but not followed by me, making a total of 103 cases, the first fifty of which have been traced after the lapse of from one to four months and questioned as to the occurrence of any sequelæ.

Naturally the points first calling for consideration are those concerning the administration of the antitoxin, viz:—the choice of the syringe and of the site of injection.

I have used both a bulb syringe and a washer syringe, and am entirely in favour of the former. Of the bulb syringes, that known as the Koch syringe can be taken as the type. It consists of a graduated glass barrel ground at one end to receive the needle, and at the other to fit into an attachment to which is applied the bulb and which is provided with a stop-cock. The advantages of this syringe are:

1st. Absence of all threads and fittings to retain small quantities of serum and therefore absence of all risk of septic infection of the wound if ordinary sterilizing precautions are taken.

2nd. Absolute control of the exit of the serum and control against its loss by the tap which is inserted in the upper fitting.

3rd. An instrument which is unalterable in length and which at the greatest is not more than 9 inches long.

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<sup>1</sup> Read before the Montreal Medico-Chirurgical Society, March 6, 1896.

The disadvantages are two: 1st. In all of the syringes the needles are of an unnecessarily large calibre. 2nd. Care must be used in selecting a syringe, as in many the fittings are not accurately adjusted.

The stiffness or inflexibility of the syringe I regard as an advantage rather than otherwise, for one hand suffices to control the instrument while the other can assist in steadying the patient.

The disadvantages of the ordinary plunger syringe are very apparent.

1st. Small quantities of serum may lodge about the washer and decompose so that careful sterilization, even boiling, is necessary before each injection.

2nd. If the washer be of asbestos this may shred and a small fibre block the needle.

3rd. They are more or less unwieldy, being from 8 to 14 inches long when the plunger is drawn out, and unless there be a short rubber tube between the needle and the syringe, this length interferes greatly with the insertion of the needle, the patient moving some part of the body and thereby striking the end of the syringe.

The site of injection is of course open to choice. I have used the buttock, the interscapular region, and the infraclavicular regions. The buttock I have discarded as being more or less dirty, especially in children, and the intercellular tissue being more dense and the skin less loose, the injection therefore causing more pain than in the other regions. There is very little choice between the back and the breast. The former cannot be seen by the patient, which is in some an advantage; the skin over the latter is somewhat thinner.

It has been recommended by some to inject deeply into the muscle, as it is supposed to be less painful, but I have found that it is distinctly the opposite, and also that the injection is very slow and requires much greater force applied to the syringe. The needle being introduced well into the subcutaneous tissue, the serum will flow rapidly and without much pressure being applied, and will diffuse itself, raising a tumour which disappears with the rapid absorption of the serum. It is better to inject slowly as there will be less pain both at the time and afterwards.

Of the pain and discomfort I can speak from personal experience. I received 10 cc., in the interscapular region and was surprised at the absence of all pain except that produced by the prick of the needle. The flow of serum was almost devoid of sensation and if I had not known what was taking place, I could not have given any answer as to the proceeding. In from 4 to 6 hours after the injection there begins to be a good deal of discomfort about the part. This seems to

be first a superficial hyperæsthesia, secondly a deep pain as of a bruise. Movement of the underlying muscles is also very painful and for this reason the breast may be considered better than the back as there is less movement when the patient sits up, which posture has to be assumed frequently for the employment of local treatment. This condition lasts for about 18 hours. We have tried various means to prevent or allay this pain but without much result. Camphor chloral painted on the skin relieves the hyperæsthesia, but not the bruising pain.

When the breast is selected the needle should be inserted not lower than the second space and pointing upwards and outwards. Lower insertions are often followed by pain shooting down the inner side of the arm, due most likely to disturbance of the intercosto-humeral nerve.

The proper dosage is the most important question. As different preparations of the serum are made to possess different degrees of anti-toxic power, it will be confusing to speak of absolute quantities, therefore I shall designate doses as half, single and double; a single dose of Schering's being 5 cc., while that of Roux's is 10 cc.

The ideal dose is just that amount, and no more, which shall entirely render inactive the amount of diphtheria toxin absorbed by the system. But this amount can only be guessed at.

If at the first injection a quantity be given which neutralizes the effect of only two-thirds of the toxin absorbed the remaining one-third will continue to invade the system, while at the same time more toxin will be produced by, and absorbed from, the only partially cured local lesion, and in a short time the amount of toxin in the body will be as large as was at first present. For this reason it is better to give an overdose rather than an underdose.

Certain crude rules for dosage are given, but the results are most uncertain.

Given a case of ordinary faucial diphtheria—in children under one year where the disease has lasted not more than thirty-six to forty-eight hours half a dose will usually suffice. From 1 to 10 years a single dose must be given and over 10 a double dose, although from 10 to 18 a single dose can first be tried and will very often prove successful.

In laryngeal diphtheria it is not always necessary to increase the dose, in fact not at all when there is only very little laryngeal stenosis. When the labour of respiration is great, however, a double dose should immediately be given, or if the child were under two years a single dose and repeated within six hours.

Nasal diphtheria requires the large dose in almost every case, and it is better to start with a dose and a half or a double dose, according to the age of the patient.

The second dose—this should only occasionally be necessary, and is then due to a misconception, although inevitable, of the amount of toxin absorbed.

The necessity of a second dose cannot be determined by any one symptom, such as the temperature, although this is the most reliable. The general condition of the patient, the amount of depression, the subjective and objective symptoms of the local lesion, must all be taken into account.

Roux advises that when the temperature rises above  $100\frac{1}{2}^{\circ}$  a second dose should be given. In many cases this temperature, or even a higher one, on the day after the administration of the antitoxin is due to the absorption of septic poison, and therefore will not be influenced by diphtheria antitoxin. Again, in other cases the local inflammation will be active, while the temperature may never be above  $99\frac{1}{2}^{\circ}$  or  $100^{\circ}$ .

When a second dose is given it should be nearly, if not quite, as large as the one previously given, as this will insure against almost all possibility of the case requiring a third dose. In only 3 of the 103 cases was a third dose administered, and in two of these there followed a suspicious desquamation, leading to the belief that a mild scarlatina might have been complicating the diphtheria.

The immediate effects of the antitoxin are varied.

Upon the temperature: In the majority of cases there is a reactionary rise beginning in from one to two hours and lasting four to ten, the temperature rising from  $\frac{2}{3}^{\circ}$  to  $3^{\circ}$ . The amount of reaction seems to bear no relation to age, to the severity of the disease, or to the height of the original fever. In many cases there is no reaction whatever, the temperature gradually falling, and in a few cases there has been a sudden and decided drop.

After the reaction has spent itself the temperature begins to fall, and in ten to twelve hours may have reached normal. If the amount of antitoxin given is quite sufficient for the case the temperature chart will then exhibit slight evening exacerbations for one or two days, followed by a normal course. If the dose is not sufficient the temperature will either not fall at all, or after the reaction will fall to about the height of the original fever, or after having fallen to or nearly to normal will gradually again rise to a considerable extent.

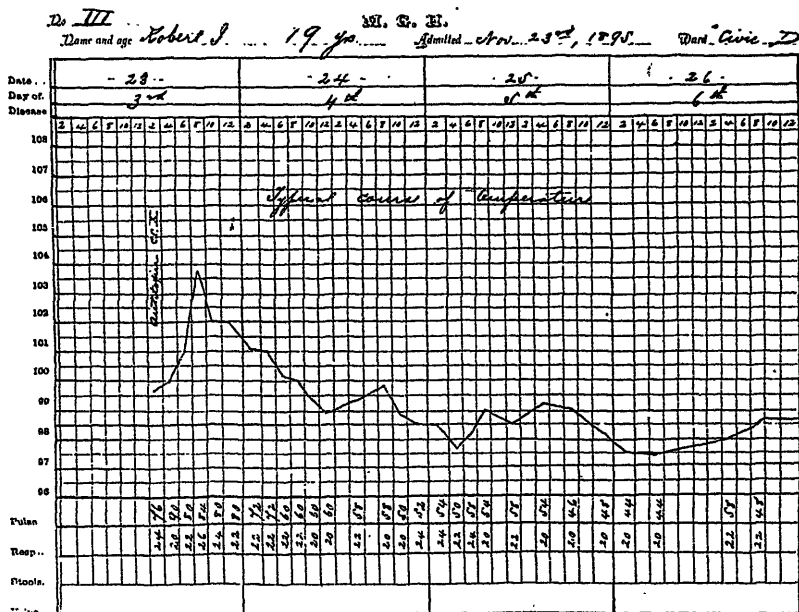
It is on the heart's action that the most varied effects are seen. In the majority of cases the pulse is unaffected, in many it is depressed,



intubation was completed and artificial respiration showed comparatively free entrance and exit of air, but the stethoscope could distinguish no heart sounds.

On the other hand, some observers state that almost invariably the pulse is strengthened. This I have found only occasionally, and I am of the opinion that perhaps this stimulating action may be due to something besides the serum, viz., the preservative used. In some preparations camphor is thus employed, and it may be in quantity sufficient to disguise the effect of the serum itself.

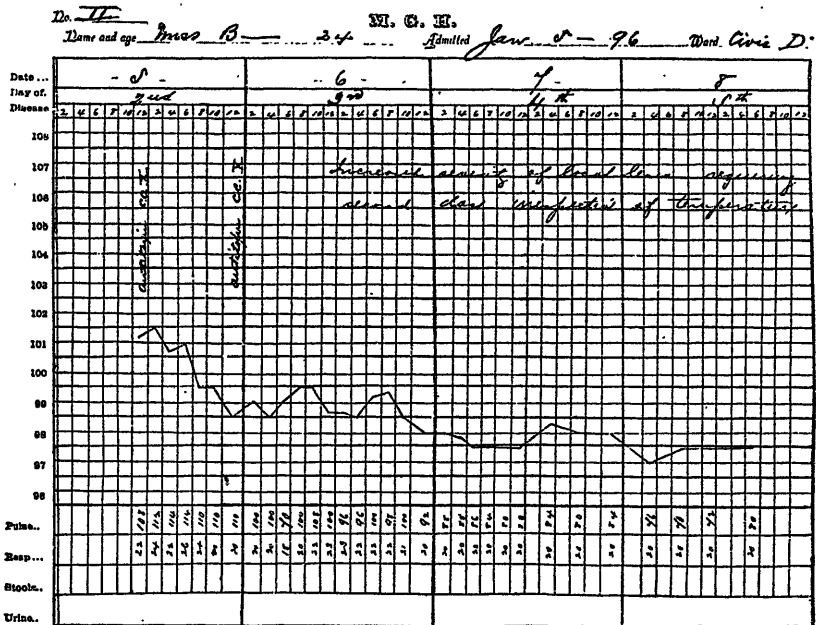
On the general condition of the patient the effect is marvellous. If the first dose be sufficient to terminate the disease the constitutional



depression will rapidly disappear. For the twelve to eighteen hours immediately following the injection and during the reaction the depression may be somewhat more marked and the patient may experience severe headache, but refreshing sleep is usually enjoyed and the patient wakens quite himself, the throat alone reminding him of his illness. Not uncommonly I have discovered children playing with toys on the second day. This picture contrasts forcibly with the clinical aspect of a case treated without antitoxin, where the constitutional disturbance is marked for a week or more and where the attack leaves the patient in a more or less exhausted condition.

Indeed, with the majority of cases treated with antitoxin the patients tire of the bed long before it is prudent to let them up. As a rule we allow patients up when the temperature has been normal from four to seven days, according to the severity of the attack, and in very few instances have they seemed to be weakened by the disease.

The marked influence of the antitoxin upon the local lesion is easily seen when a case is compared with one treated by the old method. Instead of the membrane spreading for two or three days and persisting for a week or ten days, it is usual to have the throat perfectly clean in four days. In eighteen hours or less there will be seen a narrow, bright red line, the line of demarcation, situated around the



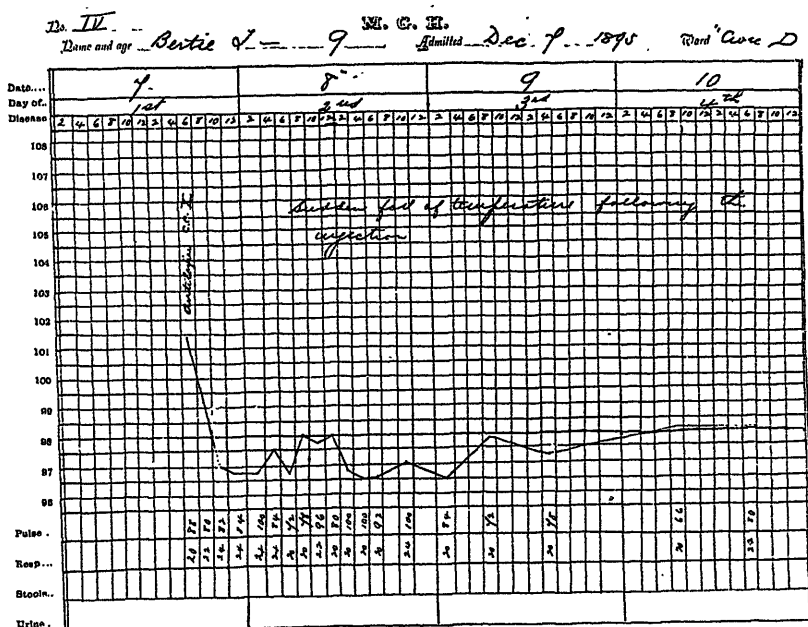
membrane, or more commonly just beneath its edge, and if suitable local measures are adopted, the old necrosed tissue will separate and there will be no further advance of the process. It is here that much delay may be occasioned by employing methods of local treatment which are too rigorous and therefore irritating. The cells are already weakened by bacillary irritation and will be damaged all the more by chemical or mechanical irritation. Often and often cases will present themselves in which thin membrane will persist and even extend while being sprayed with hyd. perox. Stopping the peroxide and substituting a spray of some bland solution, such as Dobell's, will rapidly



improve the condition and the parts will be clean within twenty-four hours. In the hospital we are in the habit of spraying with peroxide only for the first few hours, or as long as the membrane is thick and [dirty, after which we spray with Dobell's solution, or stopping the spray altogether swab with a weak solution of hydrarg. bichlor. or boracic acid.

By some there are two bad effects attributed to the antitoxin. 1st. Albuminuria. 2nd. Occurrence of rashes.

Albuminuria is most common in diphtheria, being present in 50 to 70 per cent. of cases, in the mild as well as in the severe. In some



cases the disease sets in with total suppression, while in others the albumen does not appear until the second week. To affirm then that antitoxin causes albuminuria is manifestly unfair. Not only does antitoxin not cause albuminuria, but it prevents its occurrence and reduces the frequency over 30 per cent.

Of the 103 cases only 36 showed albumen. In 15 the albumen was present before the administration of the antitoxin; in other 14 cases no specimen was obtained till after the injection and albumen was found on the first examination. The remaining 7 cases developed albumen from the first to the eleventh day. In only five cases in

which opportunity was given to examine the urine before the injection, did I notice any increase in the amount of albumen following the injection. The amount of albumen in most cases is small and is present only from one to five or six days, in other cases there is organic nephritis.

Of the 10 cases which terminated fatally, all but two had severe nephritis on admission. In one of these the urine was abundant, but all lost, and the other was in the hospital only two hours before death and no urine was passed. Of the other eight cases, five died directly of uræmia, and one of uræmia and hæmorrhage. In three of the five there was a history of total suppression during the twelve to eighteen hours preceding admission.

Nephritis then being the complication to be dreaded it is well to take for granted, till negatively proved, that in every severe case the kidneys are affected and to treat the patient accordingly.

The occurrence of rashes causes some worry on the part of the parents, but does no harm.

These rashes are of two kinds: 1st. An erythematous blush occurring most commonly on the upper trunk and coming out a few hours after the injection. How much of this is due to the reactionary fever it is hard to say. I have never seen it simulate a scarlatina rash as it is a simple erythema, and lacks the maculæ of that eruption. This rash lasts only a short time.

2nd. Urticaria. This is the more common eruption in my experience. It may be either general or local, sometimes developing into typical erythema multiforme with rise of temperature and joint pains. In almost every case I have ascertained that the patients were more or less prone to attacks of "hives" and usually the parents thought nothing of its occurrence.

The eruption is more or less symmetrical, in my own case perfectly so, the wheals occurring on the thighs, the extensor surfaces of the arms and forearms, on the metacarpo-phalangeal joints of the thumbs and on the back of the heels.

The rash shows itself in from ten to twenty days after the injection, and lasts two to five days. In three cases the eruption assumed a circinate form and was accompanied by elevation of temperature and in two cases by pains in the joints.

Independent of this more or less general urticaria there is often a somewhat similar eruption localized to the point of injection, characterized by the appearance of a few papules and very itchy, especially at night, this condition lasting for a month or more.

The last point I shall discuss is that of the sequela of diphtheria—paralysis:

Present in 15 to 20 per cent. of cases not treated by antitoxin, it is now found more frequently owing to the fact that with the antitoxin severe cases recover, and so give the paralysis the necessary time to develop. Thus of fifty cases traced I found paralysis in 12 or 24 per cent.

The question of how early the antitoxin must be given to prevent the onset of paralysis is an interesting one as affecting prognosis.

I will cite the following case :

Miss B., aet 25, a night nurse in the diphtheria wards awoke at noon with sore throat. In the evening one tonsil appeared reddened and at the upper corner was a small white spot. By the following morning this had spread to the anterior pillar and the patient was given a full dose of antitoxin, twenty hours only having elapsed since the onset. In 14 hours the dose was repeated as the local lesion had become greatly intensified. The patient recovered rapidly but on the 17th day developed paralysis of the palate with neuritic pains in the arms and legs which were present for about four weeks. In this case twenty hours had elapsed from the onset to the first dose, and only thirty-four before the disease was permanently arrested, and still the nerves had been sufficiently damaged to produce paralysis. As a rule however, paralysis follows only in those cases in which the disease has been present three or four days, and the local inflammation is severe and extensive.

Having thus briefly outlined the treatment, I will add that its results in the hospital have fully justified its employment and the high praise given to it.

Of 103 cases we have had 10 deaths, and most of these came to the hospital in a hopeless condition, the average duration of the disease before admission being five days.

Of 18 laryngeal cases five died, one of broncho-pneumonia three days after tracheotomy, two of anæmia on the second and fifth days respectively, the other after all respiratory trouble had ceased ; two of cardiac failure, on the third day and two hours after admission. All of the fatal cases were associated with pharyngeal and two also with nasal diphtheria.

Six of the cases required operative interference, three intubation followed by tracheotomy, and three intubation alone. There have been two recoveries in each. The use of antitoxin greatly shortens the period necessary to employ the laryngeal tube, 42 and 34 hours respectively being the two successful cases.



# A CASE OF PRIMARY CANCER OF THE LIVER.<sup>1</sup>

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and

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The exceptional occurrence of a primary cancer of the liver with secondary involvement of the stomach may render the present case of some interest. While, however, we do not regard the condition as undoubtedly of hepatic origin, there seem nevertheless to be many points in favour of this view, while the growths found in the stomach and elsewhere seem to have been secondary.

The clinical notes on the case may be briefly summarized as follows: N. McL., aged 60 years, presented himself for treatment at the Royal Victoria Hospital complaining of weakness, diarrhoea and pain in the abdomen, chiefly localized in the region of the liver and stomach.

He had been failing in health for six months, and during the last four months he was unable to work. The pain complained of, as well as the abdominal swelling, had troubled him for about three months.

His history gave no evidence of gastric disease, further than recurring attacks of gastritis, following on excess in alcohol, to which he had been addicted for many years.

His condition was that of one extremely emaciated and feeble, with rough, dry skin. The abdomen was distended. There was ascites and some diarrhoea. Examination in the region of the liver showed that organ enlarged. Its margin was felt about  $2\frac{1}{2}$  inches below the costal margin in the mammary line. It was hard and through the thin abdominal wall its surface was felt to be uneven. There was no jaundice.

No tumour was palpable in the stomach, abdomen, testicles nor rectum.

Oedema of lower extremities developed and the pulmonary signs indicated oedema of the lungs.

The patient died of asthenia after a few days sojourn in the hospital.

The *autopsy*, performed 8 hours after death, gave the following results in brief:

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<sup>1</sup> Read before the Montreal Medico-Chirurgical Society, February 21, 1895.

*Anatomical diagnosis*—Primary cancer of liver; secondary cancer of stomach, periportal glands, pancreas, vena cava; chronic gastritis; chronic interstitial nephritis; hypertrophy of prostate and chronic cystitis; arterial sclerosis.

*NECROPSY* (performed eight hours after death)—The body was that of a large-sized, much emaciated old man, presenting the usual signs of death; the abdomen markedly distended, the legs very œdematous.

*Abdominal cavity*—Panniculus adiposus and muscles much wasted. About 200 cc. of turbid brownish-red fluid free in the cavity. The visible intestines normal. The *omentum* presented atrophic fat. The *liver* descended in the mammary line 7 cm. below the costal margin. Apart from slight perisplenitis the *spleen* was normal.

The *suprarenals* had pale centres. The *kidneys* were firm, their capsules adherent, the surface dotted over with cysts and of a deep red colour, the cortex narrowed and presenting much evidence of interstitial new growth.

The *bladder* wall was much thickened and the organ dilated; there were numerous small diverticuli, but no signs of calculi. The *prostate* showed moderate hypertrophy of the lateral lobes. The *testicles* were small and soft.

*Liver*—Weight 4340 grms. The common duct at the duodenal orifice showed some slight swelling of the mucosa, while above it the canal was markedly dilated. The cystic duct was normal. On the upper surface of the liver there were some loose adhesions to the diaphragm. The organ itself was much enlarged, the surface reddened and dotted over with varying sized nodules of a yellowish or reddish-yellow colour, the largest being 5 cm. in diameter. For the most part they were soft, some almost semi-fluid, their surfaces regular and their outline more or less well defined. The usual cyanotic atrophy surrounded the most of them.

The organ was of firm consistence, and on incision it showed that almost the *entire parenchyma of the right lobe* was replaced by one large, firm, rounded mass of whitish colour, more reddish-yellow towards the periphery. The mass was 18 cm. in diameter, more or less regularly spherical on section, and was covered at no place by more than 2 cm. of liver tissue. Incision at various levels showed that the mass was almost everywhere of equal consistence, that it radiated from a central point where a small cyst existed and around which the tissue was dense. The periphery, on the other hand, was softer and presented a few hæmorrhages and some bile pigment. The surrounding liver cells were pressed into concentric layers, and even here presented secondary nodules of infiltration. In the left lobe were a number of smaller nodules similar in character to those described previously.

The *gall-bladder* was flattened, pushed to one side and contained a small quantity of dark green viscid bile. The cystic duct was free and there were no evidences here of neoplasia.

The periportal glands were much enlarged, softened and irregular in outline, their centres broken down.

The *vena cava* as it passed through the liver showed on its inner surface three small areas where the neoplasm, extending through the vessel coats, protruded into the lumen, thus giving rise to parietal thrombi. The Portal vein was free.

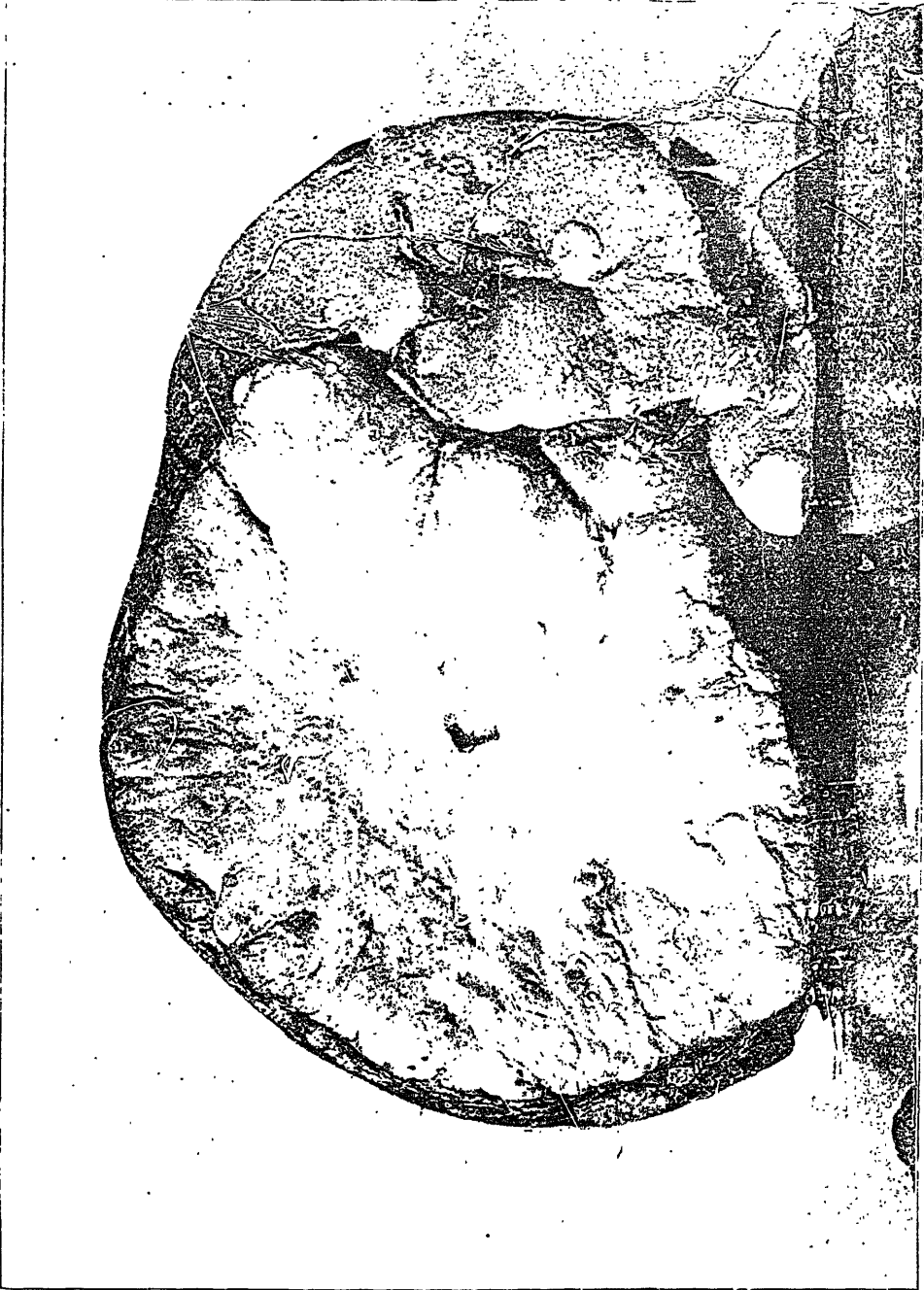
The *mesenteric glands* and thoracic duct were free from disease.

The *pancreas* small, soft, without evidences of cancerous infiltration; in the immediate vicinity of the tail was an enlarged cancerous gland in size equal to a walnut.

The *stomach* was distended with gas and contained about 50 cc. of greenish semi-fluid material in which various tests showed the absence of free hydrochloric acid.

The mucosa was thickened and reddened in patches. Along the lesser curvature and situated on the posterior wall 4 cm. from the cardiac opening was a round, elevated, well circumscribed nodule 3 cm. in diameter.

The mass was only moderately firm and on section showed but little density of structure. The serosa was only involved from within, the external surface present-



PRIMARY CANCER OF LIVER (TAKEN FROM A SECTION THROUGH THE CENTRE OF THE WHOLE ORGAN).  
[PHOTOGRAPHED BY MR. D. PATRICK.]

ing no sign of protuberance or adhesion. No nodules existed in the immediate vicinity in the wall, but 10 cm. from it were five or six firm, slightly elevated masses, apparently submucous, the largest measuring  $1\frac{1}{2}$  cm. in diameter.

The remaining portion of the alimentary tract was free from disease.

*Thoracic cavity*—In the lungs, beyond bilateral pleural adhesions, some slight hydrothorax and hypostatic pneumonia, there was but little worthy of note.

The *heart* showed milk spots upon its surface; its muscle was brownish in colour, the papillary muscles somewhat hypertrophied and fibroid. The coronary vessels atheromatous, as was also the first part of the aorta.

The organs of the neck presented merely the usual pathological conditions coincident with old age.

*The brain*—Dura adherent and somewhat thickened, the convolutions small; the basal vessels markedly atheromatous.

*Microscopic examination* of various portions of the liver neoplasms confirmed the macroscopic diagnosis. The epithelial cells were very large, of irregular shape and polygonal in outline. In some of the small secondary nodules the cells were seen in the portal vessels, but there was nowhere any indication of a true glandular type of growth.

The stomach growth presented superficial necrosis of the gland structure, great thickening and infiltration of epithelial cells in the submucosa and a very small fibrous stroma. The cells in some places filled blood vessels, in others lymph spaces.

No other new evidence was adduced from an examination of the remaining organs.

*Conclusions*—The conditions then found present a neoplasm in the stomach of small size, well circumscribed and circular in outline, with but little evidence of erosion and ulceration, while microscopically the constituent elements are chiefly cellular, with an inappreciable amount of fibroid change—that is to say, a growth apparently of very recent date. In the liver, on the other hand, the cancerous tumour is of enormous size, of markedly dense consistence from fibroid change, and on minute examination is seen to be made up of fibrillated masses out of all proportion to the insignificant amount of cellular growth—in other words, a neoplasm of long duration.

In endeavouring to make a pathological diagnosis as to the primary seat of the disease, the general appearances, though of great use as a guide, would not in themselves be sufficient as evidence, for it is everywhere recognized that growths in the stomach may for a long time remain small and apparently quiescent, while the secondary foci grow to enormous proportions; yet one would expect in such cases that there would be evidence either of chronic ulceration or of fibroid change, but neither of these conditions is manifest in the present instance.

Again the neoplasm in the stomach is circular, slightly elevated, regular in outline and well circumscribed, thus corresponding in general characteristics to the description given by Grawitz among the rare cases of secondary cancer of the stomach formed by metastases.

Should insistence be laid on this organ as the primary seat of the neoplasm one could surely render cautiously in future a diagnosis of primary cancer of the liver when the original focus can for so long a



time retain characters incident only to the very early conditions of growth, for it might well be argued that on the same basis such growths in the stomach might remain still smaller, even invisible to the unaided eye, while the secondary foci grow to enormous extent. Considering, on the other hand, that the disease originated in the liver, we have in favour of the view the evident duration of the growth as seen from its size and minute characters.

From the enormous variations in type of cancer cells it is not always possible to differentiate the original seat by microscopic examination, and our present case would come under such a category.

There are three chief modes whereby secondary cancers of the stomach may arise, firstly, by direct extension from neighbouring organs, such as the pancreas, liver, glands and œsophagus, or by the newly formed lymphatics in adhesions between these organs; secondly, by implantation from the œsophagus, such as might occur from an ulcerating carcinoma of the tongue. In these cases, which are rare, the cancer cells drop down, or are carried down into the stomach, and becoming fixed in their new situation they proliferate and form secondary tumours. It is in the same way, too, that secondary peritoneal cancers are so frequently formed in Douglas' pouch by the gravitation of the malignant cells from the serous coats of the stomach or the liver. Thirdly, secondary cancers of the stomach may form by hæmatogenous metastases; these last are extremely rare and have been put on record by Grawitz. In such cases the tumours are well circumscribed, circular and regular in outline.

In addition should be mentioned the possibility of cancer cells travelling against the stream of the circulation, thus moving along the portal vein and mesenteric vessels and lymphatics, and thus setting up a secondary growth in the stomach, just as occurs in involvement of the left supra clavicular glands when cancer cells travel along the course of the thoracic duct.

## REINFECTION IN DIPHTHERIA.

By ALFRED T. BAZIN, M.D.

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The case is of special interest, presenting as it does an instance of the therapeutic power of diphtheria antitoxin; an early reinfection of the disease, the patient having received no immunity either from the primary attack or from a large dose of antitoxin, and one of the rare forms of erythema as a sequela to the antitoxin.

The patient, a well-nourished boy, aged four years, was admitted to the hospital December 1st at 11 a.m., with alarming laryngeal obstructive dyspnoea and well marked cyanosis.

*History*—On November 28th, three days previous to admission, the patient became feverish and restless, with a frequent croupy cough. A physician was called whose examination discovered signs of consolidation in the right lung (scapular and axillary regions), covering an area 3 x 4 inches. The pharynx was apparently normal. On November 30th the area of consolidation was the same, the cough more frequent and more harsh. A small patch of pseudo-membrane was now seen on the tonsil. A double dose of antitoxin (20 c.c.) was immediately given.

In the late afternoon of the same day the patient coughed up small pieces of membrane and during the night had three or four attacks of dyspnoea, which were relieved by thus coughing-up membrane.

In the morning the dyspnoea was continuous and the respiratory labour was very great. The condition of the child was as follows: Face livid, lips blue, respirations rapid (36), stridorous and very laboured, the sternum and costal cartilages receding with each inspirating effort; cough is tight and harsh; pulse rapid (168), weak and imperceptible during inspiration. Cervical glands are somewhat enlarged, throat is reddened, and tonsils swollen and covered with thin membrane.

Intubation was performed, but no relief was given; the tube was withdrawn and in the fit of coughing which ensued the child ejected a tubular coat of membrane about 2½ inches long. After this the labour was greatly lessened and the cyanosis disappeared.

Examination of the lungs verified the condition previously stated, with, in addition, moist rales in both bases. Temperature 99°. Urine free from albumen.

Patient was put under a steam tent, jacket poultices applied and was given hydrarg. bichlor. gr.  $\frac{1}{16}$  every two hours.

During the night the child coughed frequently, and at times the breathing was rapid and laboured, but there was no cyanosis.

Dec. 2nd, 8 a.m.—The patient had a severe attack of dyspnoea and cyanosis, which developed with great rapidity. The laryngeal tube was again introduced, but without effect, and tracheotomy was performed. At the higher incision the trachea was found blocked with membrane which could not be removed, so the lower incision was used. Here also false membrane lined the trachea. Complete and permanent relief from the dyspnoea resulted from the operation, but the lips and finger-nails still had a dusky hue.

Dec. 3rd.—Child takes nourishment well and rests easily. Temperature  $102\frac{1}{2}^{\circ}$ , pulse bounding and full; lungs the same as before.

Dec. 6th—The temperature has been gradually falling and is now  $100^{\circ}$ ; the child is bright, while the lungs are clearing rapidly. Some air passes through the larynx when the tube is blocked.

Dec. 7th—the lungs seem perfectly clear; pulse 100 to 120, strong and full; temperature  $100^{\circ}$ , and this is due to slight suppuration about the wound.

Dec. 12th—Tracheotomy tube removed. Larynx patent; phonation has partially recovered.

Dec. 19th—Patient permitted to get up.

Dec. 28th—Since last note the patient has been rapidly gaining in weight and strength, voice almost normal, wound almost completely covered. The temperature has been normal for sixteen days. To-day the child was up as usual, temperature was normal. In the afternoon the voice became husky and there was a frequent croupy cough. Towards evening these symptoms increased and there was some respiratory labour. Placed under a steam tent.

Dec. 29th—This morning the child coughed up several pieces of membrane. Temperature  $99\frac{1}{2}^{\circ}$ . Given a single dose of antitoxin. Respiratory labour increased rapidly and at 4 p.m. intubation was performed and another double dose of antitoxin given. The tube afforded some relief, but there was still recession of the soft parts. 8 p.m., became cyanosed; tube removed, but had to be replaced in half an hour. This was again required at midnight.

Dec. 30th, 4 a.m.—Again cyanosed. Tube removed and child was easy. 8 a.m.—Tube again inserted, this time giving complete relief. Child slept soundly. Nourished by enemata. Highest temperature was  $103\frac{2}{3}^{\circ}$ , at noon.

Dec. 31st—Had a good night; in early part disturbed by coughing, when much mucous and secretion would be expelled. This morning

there is very little coughing. The tube was removed and was not again required.

Jan. 1st—Temperature normal. Child easy.

Jan. 3rd—To-day the child is covered with an urticarial rash which in a few hours developed into the circinate form of erythema multiform. Temperature  $102\frac{1}{2}^{\circ}$ ; severe pains in knees.

Jan. 5th—Rash faded. Temperature  $100^{\circ}$ .

Jan. 7th—Temperature is again normal and there are no remains of the erythema.

Jan. 14th—Child discharged in good condition. Voice has returned, but is low-toned and harsh.

In both instances the bacteriological diagnosis was established at the Pathological Laboratory of the Montreal General Hospital.

## NOTES ON A CASE OF STREPTOCOCCUS SEPTICÆMIA.

By A. A. ROBERTSON, B.A., M.D.

Senior Resident Physician, Royal Victoria Hospital.

In presenting this report of a case of streptococcus infection the following main features have been kept in view, as rendering the notes worthy of publication.

1. A markedly virulent streptococcus septicæmia associated with a scald on the foot apart from any abrasion of the skin.

2. The presence of a primary abscess inducing general bacterial infection without the development of metastases.

While cases of general infection from the presence of streptococci cannot be considered as uncommon, yet such a course as was manifested in the subjoined case, is of both clinical and pathological interest, and affords additional proof of the multifarious effects of the invasion of the streptococci into the system.

### *Abstract from case report.*

C. C., cook, aged 26, was admitted to the Royal Victoria Hospital on 25th Jan., 1896, complaining of weakness and loss of appetite.

On Sunday, 19th January, she was taken ill with headache and severe pains throughout the body. There was no definite rigor, but on this and subsequent days she frequently felt chilly. These symptoms continued during the week, the headache being worse on the fifth night, but not sufficient to prevent her from performing some of her daily duties. On Thursday morning she noticed pain and redness on the dorsum of the right foot. For this, she said after admission, she knew no cause, but from her mistress it was learned that she had been scalded on this foot some time before. During the week she had been able to take but very little nourishment. There had been no abdominal pain nor was there fixed pain in any of the joints. Cough had been very slight.

She was born in Scotland, but has been living in Canada for five years. She does not remember having had the usual diseases of childhood. Four years ago she had "congestion of the lungs" which confined her to bed for three or four weeks: another attack supervened in the following year. Two years ago she had quinsy. There is no history of rheumatism, but her physician outside had noted an old cardiac lesion.

In the family history there is tuberculosis.

On examination the patient was found to be well nourished, the

mucous membranes of good colour, and the cheeks flushed. There was a slight icteroid hue over the face. Her mind was clear, but she seemed dull, and had difficulty in recalling accurately past events. She complained of little beyond weakness.

On the dorsum of the right foot and extending up on to the anterior surface of the leg there was a strip of inflammatory redness about four inches long. About the middle of this strip, over the tendon of the great toe there was a raised area about the size of a bean which gave evidence of fluctuation.

On admission the temperature was  $104^{\circ}$ , pulse 110, respirations 32.

*Circulatory System.*—The pulse was small, rapid (110) and of rather low tension. *Heart.*—The apex beat and area of cardiac dulness was slightly displaced to the left. At the apex the first sound was diminished in intensity and accompanied by a soft blowing systolic murmur, well transmitted into the axilla. At the pulmonary cartilage, there was a systolic murmur louder and rougher than that at the apex, and the second sound was accentuated. This murmur seemed to be transmitted down the sternum but not into the vessels of the neck.

*The Respiratory System* was normal.

*Digestive System.*—The tongue was dry and brown. In the mouth and pharynx the mucous membrane was red and injected; the tonsils were not swollen.

The abdomen was not distended, and there were no rose spots. There was neither pain nor tenderness in the abdomen. The area of splenic dulness was slightly increased forward, but the organ was not palpable. Liver normal.

*Genito-Urinary System.*—The urine was high coloured, clear, with a slightly flocculent sediment; urea, 5 grains to the ounce; albumen, 0.25 per cent. In the sediment there were coarsely granular casts, some with pus cells attached; also some free pus cells.

There was no vaginal discharge or inflammation; nothing abnormal was found on vaginal examination.

*Diary*—28th Jan. Since admission temperature has been high and remittent. On evening of 26th,  $105.6^{\circ}$ ; on evening of 27th,  $104.4^{\circ}$ ; to-day not quite so high, but her general condition is worse. Pulse and respirations are more rapid. There is distinct pale cyanosis, but almost no cough. Cultures from blood of the finger were made to-day but remained sterile.

30th Jan. Condition still worse; evening temperature  $104^{\circ}$ ; pulse 124; respirations 40. Delirious, noisy and trying to get out of bed, at other times quieter but muttering. Cyanosis is increasing, respirations laboured. There are diminished resonance, and diminished

breath sounds on the right side behind, below the angle of the scapula, but almost no cough.

31st Jan. General condition about the same. Dulness in chest somewhat higher; over this area breath sounds are almost absent. On left side behind, breath sounds are roughened, and accompanied by fine moist sounds. In front the breath sounds are rough. No difference has been detected in cardiac sounds since admission beyond increased rapidity.

The inflamed area on the right foot was punctured and about a fluid drachm of thick greenish pus was obtained. From this cultures were made which yielded a pure growth of streptococci. Cultures from the blood were again made and these again remained sterile.

2nd Feb. Cyanosis has increased. Constantly delirious, and there is almost constant fine tremor of hands and mouth.

Two incisions were made in the foot and a quantity of pus withdrawn. The cavity was packed with iodoform gauze.

Blood slides made to-day show marked leucocytosis and increase of the fibrin net. The neutrophile granules, as stained by Ehrlich's triple dye, were unusually prominent.

Cardiac impulse best felt in the fourth interspace, five inches from middle line. Heart sounds in lower part of cardiac area are indistinct, heart very rapid (140). Dulness in right axilla and right base, to less extent in left base. Breath sounds in front are exaggerated; behind, the breath sounds are diminished in the right base and to a less extent in the left. At the lower angle of the left scapula there is a small area of almost blowing breathing. Almost no cough. Later in the day a friction rub was heard in the right axilla.

Urine is passed involuntarily, of same character as before mentioned.

3rd Feb. Patient died this morning at 6.15 a.m.

*Diagnosis*—The differential diagnosis concerned mainly three conditions, viz.: Typhoid fever, miliary tuberculosis, and septicæmia.

Typhoid fever was thought of as a possible cause at first, but later this was excluded as the characteristic signs of that disease did not develop, and the cyanosis, delirium, extremely dry tongue, rapid pulse and respirations, precluded the probability of such a condition alone. A secondary infection at so early a stage of the disease likewise seemed improbable.

No focus could be discovered as a starting point for miliary tuberculosis, and at the time of admission and all through the disease pulmonary involvement was a minor symptom.

A *diagnosis* therefore of *septic infection* was made, and with the history of injury to the foot and the subsequent development of the

abscess with streptococci, the conclusion seemed reasonable. The old cardiac lesion would have possibly become malignant and the diagnosis was so made. As complications to this general condition there were broncho-pneumonia, pleurisy, pericarditis and acute parenchymatous nephritis.

*Abstract from report of autopsy, performed by Dr. Martin, five and a half hours after death.*

The body was that of a well nourished woman with the usual signs of death. On the instep of the right leg there were two vertical incisions at the base of which were some slight sloughs. There was slight œdema of the legs.

The abdominal cavity on general inspection presented no pathological conditions beyond an abnormal position of the transverse colon.

The *spleen* weighed 320 grms. was much enlarged; its capsule thin and tense and the organ was diffuent on section.

The *kidneys* were large, congested, and manifested distinct parenchymatous nephritis. The pelvis was reddened and presented here and there submucous hæmorrhages.

The *pelvic organs* presented no macroscopic lesions.

The *stomach* was much congested and distended with gas.

The *ileum* presented marked emphysema of its wall, but there was otherwise no abnormality in the whole intestinal tract.

The *liver* was small, soft and fairly friable, the lobules somewhat indistinct.

The *pancreas* normal.

*Thorax.*—In the left pleural cavity was a small quantity of clear fluid and generalized recent adhesions, the right side was free. The *lungs* themselves, beyond acute congestion and some bronchitis with œdema, showed no evidence of disease.

The *pericardium* contained a small amount of turbid serum with flocculi of lymph, and presented over the right auricular surface recent inflammatory exudate.

The *heart* weighed 270 grms. Its valvular orifices were of normal size, and the left auricular and ventricular walls were somewhat thickened. Along the edges of the mitral valves were numerous old nodular thickenings, the muscle itself was of good colour, and the coronary vessels were normal. On none of the valves was there any evidence of acute lesions.

The *neck organs.* On the *larynx* there was some recent suppurative perichondritis which had remained well localized.

The *brain* was normal.

*Cultures* upon glycerine agar and broth were made from the differ-



ent organs and tissues with the following results: *streptococci* were found in pure culture in the spleen, liver and blood of the vena cava. Streptococci and staphylococci in mixed cultures were obtained from the left lung and kidneys. From the *suppurative perichondritis* a pure growth of *staphylococcus pyogenes aureus* was obtained.

*Microscopic examination* of the tissues showed mainly, great congestion, parenchymatous degeneration and the presence of the streptococci in the vessels, and apart from any signs of abscess formation.

## A CASE OF SYPHILIS OF THE LIVER.<sup>1</sup>

By W. F. HAMILTON, M.D.

Assistant Demonstrator of Medicine, McGill University; Assistant Physician,  
Royal Victoria Hospital.

Mrs. C., *æt.* 62 years, began to complain of failing health and strength in May of 1895. Her appetite was poor, she was losing flesh, and she felt languid and irritable. About the 1st of July a small growth, red and about the size of a pea, was removed from her right cheek. The scar healed without return of the growth.

On 31st of July, without previous pain or nausea, vomiting of blood began. During that night and the following day mouthfuls of blood were coming up at intervals.

On the 3rd of August, as well as on the 4th, slight evidence of continued hæmorrhage was manifest. Black stools were observed at this time, and during this attack she fainted once or twice.

Respecting her personal history it may be said that she was from her early days a beer drinker. She had always enjoyed good health, her only illness being at the period of the termination of her pregnancies, five out of seven of which, she reported, did not advance to full term, and the offspring of those which did come to full term died in infancy. There was no other point in her history suggesting syphilis. In fact, questions concerning rash, sore throat, falling of hair, etc., were all answered in the negative. She has never been subject to vomiting or affected with hæmorrhoids.

The family history revealed nothing favouring tuberculosis or malignant disease.

When first seen on August 1, 1895, the patient showed emaciation with anæmia; the temperature afebrile; no jaundice; no œdema of tissues was observed; no signs of scars upon ankles nor forehead. On examination the lungs were negative. The heart showed but slight departure from the normal in an apical systolic murmur.

The abdomen, symmetrically distended, presented no enlarged veins, no palpable tumour, no tenderness on pressure and no signs of fluid. The liver dulness was but 2½ inches, not palpable; the spleen was not perceptibly enlarged.

Urine gave a slight trace of albumen and a few pus cells.

The course of the case was favourable; no recurrence of hæmor-

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<sup>1</sup> Read before the Montreal Medico-Chirurgical Society, February 7, 1896.

rhage. She left the hospital on the 19th of August. Diagnosis, atrophic cirrhosis of liver.

About one month after (Sept. 17, 1895) she was again seen, and on this occasion she gave an account of another attack of hæmatemesis, coming on after a day of unusual exertion. The abdomen was larger than when last examined and presented signs of fluid, but no palpable tumour. The diagnosis remained as above stated.

The patient was seen from time to time and a gradual increase in abdominal measurement was observed, but it was not until the 20th of November that a palpable tender epigastric mass was detected on "dipping" into the abdomen at this part.

By this time the veins on the surface were full, the umbilicus protruded, the urine scanty and high coloured.

On the 24th of November the abdomen was tapped about three inches below the umbilicus on the median line and thirteen pints of clear, straw-coloured fluid withdrawn. This afforded one a good chance to palpate the abdomen, and the resisting body above referred to felt in all respects like the left lobe of the liver greatly enlarged. It was free from nodules and its edge clearly defined, and its lower margin could be traced toward the right where the right lobe retracted beneath the costal margin. The pain complained of was variable in situation, sometimes in hepatic region, sometimes in splenic region.

Without entering further into details, it may be said the abdomen refilled and was emptied on four subsequent occasions; at each time from ten to thirteen pints of clear fluid were withdrawn. On each occasion opportunity for careful examination of the abdomen was improved and each time one became more and more fully convinced of the fact that here was an enlarged hypertrophied left lobe and an atrophied right lobe. The spleen was very palpable.

Syphilitic appearances and history were lacking, and as a cause for atrophic cirrhosis had been active for many years, while the clinical features of the case fully corresponded with those of that disease, the diagnosis was thus made.

It is worthy of note, however, that in view of the growth on the face, though its character was not established, and the comparatively recent and rapid enlargement of the left lobe, malignant disease was suggested. For such a condition we had no further evidence.

The patient died on the 23rd of January, 1896, nine months after she began to complain of failing health and six months after the first attack of hæmatemesis.

The autopsy revealed *diffuse gummulous hepatitis*.

It is well known that in syphilitic disease the liver is the most

frequently involved of internal organs. Of 27 cases of syphilis examined by Moxon 22 showed signs of this disease. As points of special interest about this case may be mentioned the *diagnosis and treatment*, along with which may be considered, and with scarcely less interest, (1) the occurrence of ascites, (2) the enlargement of the left lobe, and (3) the manifestation of the disease in the liver only.

The correct diagnosis of such a disease in this case, with data, seems impossible. Perhaps we did not give due consideration to the history of those five cases of premature births and the two deaths in early infancy. But provided we established our diagnosis of syphilis and treated the case with full doses of anti-syphilitic remedies, in view of the hepatic condition found, what could we have thereby achieved? Upon this point opinions differ.

The best results of anti-syphilitic treatment have been obtained in cases of circumscribed or local syphilitic processes, while failure has not infrequently attended those cases where the process is diffuse. Indeed, some go so far as to regard the results as complicating rather than relieving the condition. Strumpell expresses this idea and suggests that the anti-syphilitic measures hasten the fibrous cicatrizing process in and about the liver tissue.

Perhaps this question is one upon which finally there must remain wide differences of opinion, but so far as I have observed it is rarely discussed, and if any member has any information touching this point it will be gratefully received.

The presence of ascites, though spoken of as rare in cases of syphilis of the liver, need scarcely be regarded as cause for surprise, since many cases presenting signs of such disease die before the disease is very far advanced, either from other causes or from the progress of the same disease in other or more vital parts, the blood vessels or brain for example. Moreover, such a condition as that presented by our case is practically that of atrophic alcoholic cirrhosis. The portal obstruction may occur, however, by gummous growths arising in the portal fissure and exerting pressure, as pointed out by Deakin, of Bengal, several years ago. This case of Deakin's presents several points of similarity with the present case, viz. : Greatly enlarged left lobe; hæmatemesis; recurring ascites; intestinal hæmorrhage.

The left lobe was found greatly enlarged. Such enlargement is due in part, no doubt, to the presence of syphilitic disease in the lobe in a recent state, but since the right lobe shows marked fibrous changes, the question of compensatory hypertrophy of this lobe is suggested. Such a condition is not infrequently found. In cases where the functional activity of one lobe has been interfered with, the other has

been found much increased in size. Experimental removal of large portions of the liver of healthy animals has been followed by remarkable hypertrophy of the remaining portion. It is held that the liver possesses the power of recreation of cellular elements in a remarkable degree, equalled by no other organ of the body.

From the autopsy it appears that the liver is the only organ presenting evidence of syphilitic disease. There were noted, however, signs of chronic pachymeningitis over a limited area. In the vagina a scar was found near the cervix uteri on the left side. Neither of these is distinctive of syphilis. Such a negative finding is rather contrary to the teaching of Moxon in his article on syphilitic lesions in Guy's Hospital Reports. He says : " When one finds syphilomatous formation in one organ one does not fail to find it in other organs, if not in the characteristic gummous form, at least in the form of circumscribed fibrous changes which are equivalent thereto."

## A TRIP AMONGST THE GYNÆCOLOGISTS OF NEW YORK.

By L. C. PREVOST M.D., Ottawa.

(Concluded.)

I am desirous to speak of Dr. Kelsey, whom you all know by reputation. He is the secretary of the Post-Graduate School and one of the professors of that institution. His clinics are exceedingly interesting; he speaks with authority and conveys immediate conviction in the minds of his auditors. Kelsey is one of the warmest partisans of the clamp and cautery in the surgical treatment of hæmorrhoids. As soon as the patient is totally under ether he introduces his two index fingers into the rectum and dilates forcibly; the piles at once protrude externally. He applies the clamp, cuts off the top part of the hæmorrhoid and roasts the remainder down to the clamp. Care must be taken to leave intervals of sound tissue between each pile to avoid stricture of the rectum. I was a little surprised to hear Kelsey repudiating dilatation in fissure of the anus. He simply in these cases splits the bottom of the fissure with a long, narrow, blunt-pointed bistoury, snips off the edges of the incision on each side, and then makes a moderate dilatation with a dilator. No gauze, no dressing. That simple operation, he says, can be done in the surgeon's office after a slight application of cocaine.

The most remarkable operation I saw him do was a ventro-fixation of the large intestine for a case of prolapsus ani in a man suffering from locomotor ataxia. The patient was etherized, the anus dilated and the mucous membrane of the rectum seized high up with a forceps and brought down in an exaggerated prolapse. Three inches at least of the mucosa was hanging outside. He then applied the thermo-cautery, but attention must be paid to the peritoneum which lines the bowel *inferiorly*. I say inferiorly because, as you understand, the gut has been invaginated by the traction of the forceps. Four stripes are burnt with the thermo-cautery from the margin of the anus to the apex of the invaginated mucosa, one anteriorly, one posteriorly and one on each side, furrowing more deeply superiorly than at the extremity. He then reduces the gut and again cauterizes the margin of the anus above and laterally. This treatment is all that is necessary for ordinary cases of prolapse, but here it would be insufficient, and he will make an enterorrhaphy. On an imaginary line from the umbilicus to the anterior superior process of the ilium he

makes a vertical incision in the left groin and rapidly divides the tissues as in ordinary cœliotomy. He cuts the peritoneum with scissors above and below. The finger introduced into the abdominal cavity recognizes the large intestine by its longitudinal band. He seizes it near the sigmoid flexure, pulls and winds it out, as it were, until the gut resists the traction. He then sutures it to the lips of the abdominal incision in the following manner: Four strands of catgut carry at each extremity a small half-curved needle. One needle is introduced superficially into the bowel and then through the abdominal wall, including *all* its layers. The needle of the other extremity does the same on the other lip of the incision. The four sutures applied are not tied immediately; the abdominal incision is united first by three tiers of sutures, one on the peritoneum, the other one on the aponeurosis and the last on the skin. Then only are the four catgut sutures pulled and tied. Ordinary dressing with gauze. The abdominal sutures are removed on the tenth day. Kelsey advises to keep the bowels constipated for ten or twelve days and then give an enema.

But let us return to the German Hospital; there is there a case that will interest you. It is a woman, *æt.* 40, whose husband died several years ago. She is examined; something suspicious protrudes through the os.

“Madam, would you not be pregnant, by chance?” “Never in the world,” she answers naturally. But the soft cervix, the uterus globulous and increased in size, the character of the pains raise Dr. Krug’s suspicions. He makes up his mind to wait and the patient is put to bed.

The same night the pains increased and a foetus of four months was expelled. The placenta is still in the uterus and she is brought into the operating room to have it extracted.

A magnificent man is Dr. Krug; tall, handsome, of a brown complexion, distinguished looking, he wears on his left cheek the cicatrix of a gash which mightily looks like a souvenir brought back from Heidelberg or some other German university, indelible decoration attesting his pride and courage. I suppose that in his younger days he very skilfully could handle a rapier, but what I can affirm is that he seems quite at home with a curette or bistoury in his hand. Our widow of the foetus conceived by spontaneous generation could certainly not confide herself to a cleverer surgeon.

The patient is anæsthetized, the cervix grasped with a vulsellum, the placenta extracted with the fingers, and then a sharp curette of a

monstrous size is carried everywhere in the uterine cavity, which is afterwards packed with iodoform gauze.

Next a patient is brought in; she has a fluctuating abdominal tumour; it is a cyst or some other fluid collection. The patient is placed in the Trendelenberg position. The operator standing on the left traces a long incision from the pubis upwards; the recti are set apart with the handle of the knife and the peritoneum opened below and above with the scissors. The finger explores the cavity and suddenly a stream of fetid pus flows out of the abdomen. It was a large abscess formed in the anterior cul-de-sac and separated by adhesions from the peritoneal cavity. Tubes and ovaries are normal. There was no mention made of the appendix, although the purulent collection seemed to be developed especially on the right side. The peritoneum being carefully protected by sterilized pads, the sac was totally evacuated and long parallel strips of iodoform gauze packed down to the bottom of the cavity, their external extremities folded loosely over the abdominal incision and covered with simple sterilized gauze. Two stitches only were placed at the superior part of the incision. The packing will remain *in situ* for forty-eight hours and then be replaced by a fresh dressing. Within ten or twelve days the cavity will heal up by granulation, and then the rest of the abdominal incision will be sutured, with local anaesthesia.

Third patient, inoperable cancer of the cervix; has been thoroughly curetted last year. Patient has always been well until lately. The vagina is carefully scrubbed with soap and brush and the sharp curette is thoroughly carried over the neoplasm, and then a deep cauterization is made in every corner with the cautery. Irrigation with sterilized water and vaginal packing with iodoform gauze.

I must confess that I like the Germans. I had the advantage of being acquainted with two others who enjoy a widespread reputation in the gynæcological world; you must have heard of them. I mean Dr. Edebohls, gynæcologist to St. Francis Hospital, and Hermann Boldt, gynæcologist to the German Poliklinik and to St. Mark's Hospital. Both are professors at the Post-Graduate and are highly considered. I heard Edebohls, in one of his clinical lectures upon the diagnosis of uterine diseases, give to his hearers practical advice of indisputable utility, but which infers that those physicians possess a *tactus eruditus* which is not met with every day. Judge for yourselves. A patient is brought in, she complains of laborious digestion, nervousness and pains in the abdominal and lumbar regions. Examination shows that she is affected with salpingitis complicated with a movable kidney.



The professor dwells upon the fact that, he has often met with this singular association of salpingitis and displaced kidney. Besides, with those patients, he has many times observed without trying to explain it, a sensitiveness to the touch of the vermiform appendix. These women are nearly always dyspeptic and whatever may be the treatment instituted to relieve the tubal or uterine disorders, the pain, dyspepsia and neurasthenia persist as long as the kidney has not been fixed by nephrorrhaphy. It is therefore of the greatest importance to be able to recognize by examination the existence of these various pathological conditions of these three organs: the tubes, the appendix and the kidney. The means of exploring are simple: The patient must be standing up. Apply the right hand in front, avoiding the rigidity of the recti and the left behind, taking the same precautions with regard to the quadratus lumborum. By combined and careful pressure, the position of the kidney is very easily ascertained.

So far, in fact, the examination offers nothing extraordinary, but here is what seems to me a little more complicated. To begin with, Edebohls teaches his pupils to make all gynæcological examination without speculum, hystrometer or any other instruments; digital examination generally suffices. The finger introduced in the vagina will feel the appendix on the right side of the pelvis, pressure on that organ will evince pain. And directing the exploratory finger towards the tube and especially if rectal and vaginal examination combined is used; as for instances, the medius in the rectum and the index in the vagina, then it is quite easy to discover the tube which is felt like a horizontal cord stretched across the pelvis in the direction of the uterus, whereas the round ligaments proceed diagonally downwards. Moreover, in certain cases, as in the case of the woman exhibited just now, it is possible to ascertain that the tube is tender in a certain portion of its course only, that is near its insertion to the uterus. Gentlemen, I must declare that this refined delicacy of the digital pulp dazzles me and leaves me somewhat sceptical and I ardently aspire to the day when a greater experience will gratify me also with a true eye at the end of my finger. I furthermore humbly confess that so far, in the course of a laparotomy, with the hand plunged right in the abdominal cavity and without any interposition of vaginal walls between the fingers and the appendages I very often have had all the trouble in the world to differentiate the fallopian tubes from the surrounding tissues without the help of my eyes. However, I doubt, but do not deny. Long since I came to the determination never to deny anything *a priori*; we meet every day with too many astounding, although indisputable, assertions in this end of the century.

Dr. Edebohls shows us another patient on whom we might at first feel tempted to diagnose an antelexion. True antelexion is very rare, according to the professor, who in spite of his large practice assures us that he hardly meets more than ten or twelve cases within a year. In this case the vagina is very narrow. The cervix is oedematous and increased in size; meeting the rigid posterior wall, it turns forwards towards the axis of the vagina. In spite of this curve of the vagina the fundus of the uterus remains above, whereas in true antelexion both the fundus and the os tincæ are situated on a same level. At last a woman is brought in, who since last February had two laparotomies performed on her, one for an ovarian cyst which was removed and the other for an oöphorectomy on the other side. Nevertheless, although both her ovaries are absent, according to her statement, that woman is four months pregnant. Dr. Edebohls sends her back to the surgeon who performed the operations to give him a chance to throw some light upon this mystery.

Dr. Boldt belongs to the class of brilliant and rapid operators. He does not handle the bistoury, he flourishes it. He carves living flesh with the same rashness as the student dissects, but I do not believe that he commits many errors at that; his self-possession is equal to his audacity. He is at home in a woman's abdomen, where he sinks his arms up to his shoulders. I saw him perform trachelorrhaphy—a snip of the scissors to the right of the angles, another to the left; removal of the triangular piece thus circumscribed and including the eicentrical plug; two or three sutures—and here it is. He does also perineorrhaphy in a very original manner. A volsellum is fixed at the top of the rectocæle, another one below the median line on the posterior wall, half an inch higher than the union of the skin and the vaginal mucosa. A third volsellum is applied near the caruncule on one side. The tissues are put on the stretch, and with a bistoury he traces the base and two sides of a triangle. With his fingers he raises and tears off the mucosa. The small lateral triangle thus produced is immediately sutured with a continuous catgut suture. The same thing is done on the other side. Care is taken to leave between the two denuded triangles a narrow band of sound tissue from the superior to the inferior vulsella. After the sides have been sutured he snips the posterior commissure on the median line at the union of the skin and the vaginal mucous membrane and thrusts his scissors under the latter, which he detaches on all sides in opening the blades, such as it is done in Tait's operation. The mucous membrane is not removed, and he makes two or three sweeping sutures imbedded in the tissues with a long curved needle.

Here is now a woman whose history is not given by the professor, to my great regret. She carries in her abdomen a large tumour, the character and exact situation of which remain doubtful. However, it seems have close relation with the uterus, because pressure on the top of the tumour is directly transmitted to the finger applied on the cervix. Dr. Boldt makes an exploratory puncture with the hypodermic syringe through the vagina and withdraws some sanguinolent serosity, which causes him to suspect the malignant nature of the neoplasm. He carefully disinfects the vaginal cavity and applies a tampon of iodoform gauze. The patient is put in the Trendelenberg position. The operator, standing on the left, makes from the pubis right up to the umbilicus a large and rapid incision. With a single stroke, a real sabre-cut, he slices all the tissues down to the deep aponeurosis, which is divided with the scissors. The peritoneum is opened between two forceps and the scissors slit it above and below. Several ounces of serosity tinged with blood run out of the abdominal cavity and are absorbed immediately with sterilized pads. The tumour appears immense, of a bluish colour, lobulated and containing some fluid in the superior lobules. The peritoneum is thickened, showing signs of old inflammation. Without paying much attention to the bowels, which tend to protrude, the surgeon plunges his hand and then the arm up to the elbow under the neoplasm, which he forcibly causes to jump out of the abdomen. The tumour seems to have taken its origin in the left ovary, but it is also adherent to the posterior part of the uterus. He rapidly separates the adhesions with his fingers. The tumour very soon hangs down, out of the incision on the left side, and finally comes off by its own weight and falls in the recipient held out by the assistant to receive it. The operator then calls for dry sterilized towels, sinks one of them in the abdominal cavity, where it disappears completely, holding up the intestines and omentum. Another one is put down below. He grasps the uterus, examines, manipulates, feels it and pulls it above, to the right, to the left. The right appendages are exposed; a clamp is placed on the superior part of the broad ligament and a catgut ligature applied outside of it. The ligament is then divided between the clamp and the ligature. A transverse incision is carried from side to side on the anterior part of the uterus; the bladder is detached. A catgut ligature is then applied deeply on the same side with a needle, taking the tissues with a double thrust, so as to cause the ligature to make a complete loop, which is tied with all the strength of his muscular arms. He now explores the side, looks for the pulsation of the uterine artery and surrounds it also with a complete loop of catgut

made by a double puncture of the needle. He then bursts the cul-de-sac in front and behind and penetrates into the vagina. Two tight ligatures are applied on each side close to the uterus and the latter is cut off and extirpated. Then the Trendelenberg rack is lowered. The towels are removed from the abdomen, and without minding the protruding bowels, six or seven pitchersful of sterilized water are poured into the abdominal cavity. The operator with his hands washes and kneads the whole contents of the abdomen, peritoneum, bowels, etc., and after placing the intestines in good order and recovering them with the omentum, a Mikulicz dressing with iodoform gauze is applied. The abdominal walls are sutured, two or three stitches remaining unknotted at the inferior part. In two or three days the gauze will be removed and the last sutures tied up. The whole operation hardly lasted more than forty minutes.

I saw another abdominal hysterectomy done at the Post-Graduate by Dr. Carpenter, also professor in that institution. It was for a fibroid tumour of the uterus. The operation was begun by the vagina. The anterior and posterior cul-de-sac were detached to a certain extent. The surgeon looks for the pulsation of the uterine arteries, but does not feel it. He therefore immediately proceeds to open the abdomen. Trendelenberg position, incision from pubis to umbilicus. The tumour appears, voluminous, adherent and jammed deeply in the pelvis. A clamp is applied outside of the left appendages, a silk-worm ligature thrown on the superior part of the broad ligament and the latter divided. The tumour, grasped by a large vulsellum, is pulled upwards, and another tumour appears in the field of operation, growing out of the inferior or posterior part of the principal tumour. A clamp is applied upon the uterine artery. The bladder is separated by snips of the scissors. An assistant then introduces his finger through the vagina in the anterior cul-de-sac, and the operator divides the tissues which hold still to the anterior part of the uterus. The adhesions are then separated on the left side, the blood vessels tied with catgut, the posterior cul-de-sac opened and the uterus extirpated. The peritoneo-vaginal cuts are united in front and behind, parallel bands of iodoform gauze pack the abdominal cavity and the abdominal incision is sutured.

As you may see, they generally do total hysterectomy for fibroid of the uterus. We hear no more of external or internal pedicles. This method is considered as more rapid and superior to all others.

Let us finish this excursion in the New York hospitals by a visit to Roosevelt. Dr. Cragin has something to do at McLane's operating room, let us go and see him.

I already said it, we are here in a real marble palace. Floor, walls, doors, all is in marble, the hose could be turned on everything if they wanted it. Antisepsis is absolutely perfect. Irrigation is made with portable crystal vases, the nozzles are of glass. Sterilized towels are taken out of the sterilizer, warm, smoking. They are applied everywhere, on the patient to limit the field of operation, on the chest of the operator, assistant and nurses, and fixed with safety pins. The pads destined for the abdominal cavity are supplied at one extremity with a tape upon which a forceps is applied during the operation; impossible therefore to forget one of these pads in the abdomen after the operation.

A woman with an ovarian cyst is being operated upon. Small incision. The cyst is adherent to the parietal peritoneum. Tapping with Tait's trocar supplied with a long rubber tube. The adhesions are separated and the cyst extruded; it is an adeno-cystoma. The pedicle is transfixed with Deschamp's needle and tied with catgut. The abdomen is closed with three tiers of suture. At first, silver wires are introduced and left untied. Then suture of the peritoneum and aponeurosis with continuous catgut, interlocked at each stitch, as Willie Meyer does it, and finally twisting of the silver suture. Dressing of sterilized gauze, maintained by large rubber adhesive bands encircling the whole abdomen and a many tailed linen bandage. In New York they seemingly do not like to trust buried ligatures of silk-worm gut generally, they now willingly use continuous catgut. Edebohls employs chromicized catgut, which is not absorbed for several weeks.

The other patient has had several attacks of peritonitis. She is greatly emaciated, has some temperature; there must be something wrong in the pelvis. The uterus is curetted and irrigated; no gauze packing. The posterior cul-de-sac is opened with scissors, the finger introduced into Douglas' pouch. A stream of fetid pus spurts out. Irrigation of the cavity; drainage with two large rubber tubes, through which antiseptic injections will be made daily.

The third patient is a woman who came into the hospital several months ago to be treated for a chronic cystitis. Various methods of treatment having proved unsuccessful, Dr. Cragin opened a button hole through the anterior vaginal wall, near the neck of the bladder, and obtained, by that means, the complete cure of the disease. In order to perform the vaginal cystotomy, the professor advises the introduction in the urethra of a dull uterine curette with which the vesico-vaginal wall is made to bulge in the vaginal cavity. The bistoury takes the eye of the curette as a guide to cut

the tissues, and by that means the operator avoids the recession of the vesical mucosa before the knife. The incision must be two inches long and care must be taken not to wound the ureter or the neck of the bladder. Now that the patient is cured from the affection which took her to the hospital, the fistula must be repaired. This is done very simply. The woman is in Sim's position. With the bistoury and scissors the tissues are pared in a cup-shaped fashion, paying special attention not to remove any of the vesical mucous membrane. The sutures are then applied with silver wire or silk-worm gut.

Speaking of the New York hospitals, it is impossible to pass over silently the Sloan Maternity, situated almost opposite Roosevelt, and which I had the pleasure of visiting from the basement to the attic, owing to the kindness of the medical adviser, Dr. Broadbent. This Maternity is annexed to the Vanderbilt clinic open to the students of the College of Physicians and Surgeons of New York. It is absolutely the ideal of the kind. One must see that establishment to have a just idea of its perfection. The four flats are occupied by public wards, each containing six or eight beds. The order, cleanliness, antiseptics leave nothing to be desired. On each flat, a room is reserved for septic cases, where a patient is carried as soon as she offers the slightest elevation of temperature after confinement. There is also in every story, a labour room, where the woman is delivered on an operating iron and glass table. Everything is thoroughly sterilized, instruments, dressings, the accoucheur, his assistants, exactly as for a gynæcological operation. And one must see with what care all observations are gathered. I lay before you the charts used in that institution; in perusing them you shall see whether it is possible to do better.

The Sloan Maternity is exclusively reserved for poor people; women who can and are willing to pay are not admitted, but are sent elsewhere. After delivery, the parturient is kept in bed for eight days. On the ninth she is allowed to get up but not to walk. The following days she tries her wings, and the twelfth day she is discharged.

When mastitis is threatening, massage is used, salines given and ice-bags applied to the breast; never any poultices. Against sore-nipples, borated lotions are made and the nipple dusted with one part of talc for two parts of salicylic acid.

Mr. Chairman and gentlemen, I am through with the narration of my trip amongst the surgeons of New York. The journey may have appeared long to you, but as far as I am concerned I found it very short, believe me. I have given you but a very pale description of

what I have seen and learned, and I voluntarily omitted a great many facts which nevertheless were certainly not devoid of importance. However, I think I have said enough to convince you of the interest which even a short sojourn in that great city offers to whomsoever is willing to observe and study. This scientific bath is refreshing and stimulates our courage. We go back to our work with an increased ambition, satisfied that down there, as well as here, and in every part of the world, work is obligatory to every one, and for the physician—labour is no more a burden when he cherishes the hope of never stooping in vain over human sufferings since study and experience always enable him to heal, relieve or console those who have confided their health and their life to his care.

# Ephemerides, 1895.

By WILLIAM OSLER, M.D.

## VII. ARTHRITIS DEFORMANS IN CHILDHOOD.

Of this rare condition I saw a case in Montreal with Dr. Howard, a case at the University Hospital in Philadelphia, and during the past six years two patients have been at the Johns Hopkins Hospital; all these were in children above ten years of age. The following very advanced case came under observation in December:

E. P. K., aged seven years, the third child, was brought by his father for a condition of chronic swelling of the joints, with wasting. There was no history of rheumatism or of any joint troubles in either the father's or the mother's family. The father had not had syphilis. The child was strong and well until about three and a half years of age, when the ankles began to swell. He had not had scarlet fever or rheumatism. From the onset to the present the swelling of the joints has been progressive. He has never been laid up in bed, but he has had in the past three years many "spells" in which he has had fever, and in which the joints would be a little tender. At times he has had at nights very heavy sweats. For months he would be better and suffer but slight inconvenience; then for weeks he would with difficulty be able to get about the house.

The child is a small, feebly developed, intelligent looking boy. The colour is a little yellowish. The head is held to the left and the chin cannot be moved to the middle line. The neck is completely fixed and moves with the head and trunk. He can neither nod nor rotate it from side to side. From behind, it is seen that there is much thickening about the spines and lateral processes, and the cervical vertebræ present a solid immobile mass. The temporo-maxillary joints are not affected. The left arm is semi-flexed and cannot be fully extended. The elbow-joint is uniformly enlarged and the tissues about it much thickened. The head of the radius seems involved, and the movements of pronation and supination are very limited. Any attempt at motion in this joint causes pain. The right elbow is not affected. The left wrist is enlarged, flexion and extension are very limited; there is no fluctuation. As he stands he looks knock-kneed from the marked eversion of the right leg. The right knee-joint is greatly enlarged. The movement is limited; the patella is flexed;



there is much ligamentous thickening, and the end of the femur seems to be expanded.

The feet are most affected. Both are freely movable at the ankle, and the malleoli are not expanded. The tarsal and metatarsal bones are, however, greatly enlarged and their ligaments are thickened; the skin over this is raised, but natural looking. The tendons can be felt, but there appears to be uniform involvement of the bones. The joints of the toes and of the fingers are not affected.

The temperature was normal. The reflexes were not increased; there were no disturbances of sensation or trophic changes about the nails or skin. The heart sounds were clear. The edge of the spleen was just palpable; the liver was a little enlarged. There was albumin in the urine and tube casts.

The child died early in January of this year from an acute intercurrent nephritis with dropsy.

There could not have been a more typical picture of arthritis deformans. I had never before seen the cervical vertebræ involved in a child. There did not seem to have been any determining factors as the disease began insidiously and at an unusually early age.

#### VIII. UNUSUAL TYPES OF NIGHT-TERRORS—DAY-TERRORS.

Two cases of night-terrors were brought for consultation; one illustrating the association with adenoid vegetations; the other a somewhat unusual type, allied to hysteria.

S. H., boy, aged seven, sent by Dr. Tompkins, of Fredericksburg, Va.

For between two or three years he has had at intervals attacks at night, usually after he has been asleep for an hour or two, in which he would arouse, jump out of bed, and talk silly, as if demented. He at first rarely had more than one attack in the night. They have been always much worse if he had a slight fever. In some of the attacks he is excessively frightened, but as a rule he jumps up and gets out of bed, talks in an incoherent, senseless way, and seems dazed for a few minutes. On the day following the attack he is depressed and miserable. From the onset of the trouble he has breathed very noisily at night, and snored and snorted a great deal. He once last year had the throat treated with very great benefit, but the condition has now become aggravated, and is very much worse.

The boy's facies suggested adenoid vegetations; both tonsils were enlarged, and growths could be felt in the vault of the pharynx.

I have heard from the mother recently; she says that the local treatment of the throat has benefited the child very greatly, and he had had only three attacks in three months.

The character of the attacks were not like the usual night-terrors of children. He never awoke screaming, but he would always get out of bed, on the edge of which the mother would find him sitting, talking in an incoherent way, and he would be quite dazed for a minute or two. It was really more of the character of night-mare than night-terrors, the distinction between which has been well drawn recently in an article by Coutts (*American Journal of Medical Sciences*, February, 1896).

The following cases may be described as nocturnal hysteria :

L. K., a lad aged eleven, the youngest child ; mother very nervous, and as a younger woman, had hysteria badly.

For two years the boy has had at irregular intervals, usually one or two in a fortnight, curious attacks at night. As a rule he would go to bed feeling quite well. After sleeping for two or three hours, he would rouse, calling out loudly, " I cannot get my breath," " I cannot get my breath," would sit up, gasp for breath, the whole body and hands trembling and shaking, so that even the bed would shake with the movements. The hands and feet would become cold and clammy, and he would get cold to the waist. He was always very terrified in the attacks, and would grasp his mother or anyone who sat by him. He would not change colour, but during the attack would sob, and often grasped at the throat. The incessant complaint, however, was a choking feeling that he could not get his breath. On the morning following the attack he always seemed very despondent and depressed.

There has been no variation whatever in the character of the attack during the two years. The difficulty in breathing was the point upon which he always laid stress, so much so that his elder brother nick-named him " Breather." He has passed two, or even three weeks without an attack.

He had been treated systematically by several physicians ; had had his eyes and throat examined, but the attacks had not lessened.

The boy was delicate looking. There was a slight facial tic, consisting in movements of the muscle of the eyes and lips. During the examination he frequently drew deep breaths, often with a little lateral movement of the muscles of the lower jaw. The abdomen during the examination was constantly protruded and flattened with great rapidity, owing apparently to rhythmical contraction of the diaphragm. His mother had noticed this at times, and she spoke of it as a trick. He wore glasses for a refraction error.

The boy had gone to school, had progressed fairly well with his studies, and though often nervous and irritable, he had never had an

attack of shortness of breath in the day time. The attacks never seemed to have been brought on by errors in diet. The examination of the heart and lungs was negative.

I saw the other day with Dr. Chatard a remarkable case of "day-terrors" in a child of six, belonging to a very neuropathic family. For nearly ten years she had had attacks in which she saw things, and putting her hands over her face, would, for a few minutes, be in a perfect paroxysm of terror. At first the attacks came on only when she had a little fever, but for the past year they have been more frequent, and she has had as many as four or five in a day. She would see frightful objects in certain pictures, and often in the same one, which to comfort her would have to be turned to the wall. The attacks were most common in the evenings after the lamps were lighted, and when she went to bed. She never, however, awoke out of sleep in the attacks. Before their onset she was often peevish and worrying. The hallucinations were chiefly of animals of frightful size and aspect, and these she would see appear from the pictures, or from the doors, or even from persons faces, or her father's little finger. During the attacks she rocked herself to and fro, and shook in an agony of fright.

She is a bright, intelligent child, very well nourished. The paroxysms are of such intensity and so distressing to the mother that some months ago a doctor recommended that she should take a whiff or two of chloroform, and this controls the paroxysm immediately. She knows when they are coming, and now will tell her mother to get the chloroform ready.

She has at intervals been a mouth-breather, and she has at present enlarged tonsils and a few adenoids, which the mother was urged to have removed.

# RETROSPECT

OF

## CURRENT LITERATURE.

### Medicine.

#### Serum Therapy in Diphtheria.

WIDERHOFER. "Ueber 100 mit Behring's behaudette fälle von Diphtherie."—*Deutsche Med. Wöch.*, January 10, 1896.

MARTIN AND SMITH. "Cases of diphtheria treated with antitoxin in University College Hospital."—*British Medical Journal*, January 25, 1896.

Among the many articles which during the past months have recorded statistics of the value of antitoxic serum in diphtheria, few present their records in so interesting and useful a form as those given recently by Prof. Widerhofer, of Vienna.

Being supplied with a limited amount of serum he has selected for his observations and treatment only those cases which were considered severe, and his studies have been directed towards a knowledge of the limits and possibilities of serum therapy. It has been used therefore in instances even where grave complications, such as pneumonia, sepsis, etc., have supervened and the aggregate of his results have fully justified his acceptance of the serum as a veritable specific.

The Loeffler bacillus was found in 96 cases, and of the four remaining no bacteriological examinations were made in two, through some unfortunate error. Of his 100 cases 24 died, while the total mortalities in three previous years were respectively 52·6, 34·2, and 39·8 per cent. Considering that in the present year his cases were only such as are to be regarded as severe, while in the past three years the records include all cases, mild and grave, the low percentage of the present mortality is still more emphatically in favour of the serum therapy.

Fatalities were due to varied causes, which are synopsized as follows:

In 13 cases, descending croup.

In 5 cases, sepsis.

In 1 case, oedema glottidis.

In 1 case, scarlatina and capillary bronchitis.

In 1 case, recurrent diphtheria in a convalescent from catarrhal pneumonia.

In 2 cases, measles with pneumonia.

In 1 case, tuberculosis with bilateral empyema.

The septic cases are of especial interest, for the lethal results were in the majority of instances due to the presence of streptococci. Cultures from the throat showed in early examinations a marked preponderance of streptococci over diphtheria bacilli, so that this feature might be of some guide to prognosis under certain conditions.

With reference to treatment, the same rapid improvement resulted as has been frequently recorded by others, and a special importance attaches to the fact that cases which are ushered in with the severest symptoms show in most instances the greatest benefits from the serum injections. He insists therefore on early treatment, and in this respect Sydney Martin is likewise very emphatic. Where cases are treated before the third day the prognosis is all the more favourable; and only harm can follow from waiting until serious symptoms arise. We cannot predict in the first day or two as to the probable severity of the case, and hence the necessity of injecting as early as possible.

Both Widerhofer and Martin show that people have over-estimated the evil results following use of the antitoxin. Occasionally rashes and joint pains have supervened, but in all cases these have been rapidly and readily amenable to treatment. Large doses do not induce these signs any more than do small doses. Widerhofer, further, cannot regard the albuminuria of such cases as other than a mere coincidence, and insists that nephritis does not result from the effects of a serum injection alone.

The main features of the Vienna observations have led to the following conclusions :

1. Behring's serum is a specific against certain groups of diphtheria cases.

2. When treated within three days all cases, even the gravest, are in the large majority of cases liable to be rapidly cured.

3. Where mixed infections occur, above all where streptococci have entered the system, the serum is less potent.

4. The serum is likewise beneficial in laryngeal diphtheria, though its effects become lessened according as the membrane passes beyond the larynx.

5. Where broncho-pneumonia is present the serum is of but little effect and the prognosis correspondingly grave.

*C. F. Martin.*

### **Pneumonia as a Complication of Diphtheria in Children.**

BERG, HENRY W. "Pneumonia as a complication of diphtheria in Children."—*New York Medical Record*, March 14, 1896.

The author of this paper finds that the brilliant results obtained by the use of antitoxin serum in diphtheria are materially diminished by the large number of deaths which are the result of broncho-pneumonia. In the Willard Parker Hospital, out of one hundred and twenty-four deaths during nine months of antitoxin treatment in 1895, sixty-six were due to broncho-pneumonia. It was noted that, whereas in 1894 those who died of this complication had had an average of only two days hospital care, in 1895 fatal cases due to broncho-pneumonia had had an average of 13.7 days of hospital care, which would seem to show that the antitoxin treatment had enabled even the most virulent cases to resist the occurrence of this serious complication. The time at which diphtheria may be complicated by the onset of pneumonia varies. It may be within a few days, or again, it may be deferred to the second or third week of the illness.

It has been found that, in cases of tracheotomy, when the lung becomes inflamed immediately after the operation, the complication is apt to be broncho-pneumonia, whereas lobar pneumonia is more liable to set in at a later period.

Some of the causative factors are :

1. In diphtheria of the larynx, direct extension of the membrane through the bronchi into the air cells.
2. Minute pieces of false membrane may be drawn by aspiration into the farthest ramifications of the bronchi.
3. In cases where intubation has been practised, minute particles of food may be drawn into the lungs ; in tracheotomized cases, foreign bodies may similarly gain entrance ; and finally, in partial occlusion of the larynx and trachea, the proper expulsion of the secretions may be interfered with and thus set up a series of processes that terminate in a more or less inflammatory condition of the lung.

Dr. Berg considers that infection is the most frequent cause of pneumonia complicating diphtheria. The streptococcus is the germ which would seem to be constantly present in these cases. Dr. Vetter, in a series of bacteriological studies of broncho-pneumonia complicating diphtheria in adults and children, found streptococci present in every case, and it would seem highly probable that this mixed infection may be transmitted from one patient to another. This is a factor of importance in diphtheria hospitals. The virus of such a mixed infection reaches the lungs partly by aspiration and partly

through the lymphatics. A final element in the causation of this disease is the condition of the hygienic surroundings.

The varieties of inflammation of the lungs complicating diphtheria are: Congestion of the lungs, gangrenous pneumonia, lobar and broncho-pneumonia. Congestion of the lungs alone is rare, as is also gangrenous pneumonia. Sturgis and Coupland found lobar pneumonia in 14 per cent. of their fatal cases. Broncho-pneumonia is the form most frequently present.

From experiments made by various investigators, the following conclusions are warranted:

1. Streptococci with Loeffler bacilli, with or without other cocci, are the bacteriological cause of pneumonia complicating diphtheria.
2. Mixed infection not only causes this and other complications, but it increases markedly the virulence of the diphtheria bacillus.

In the recognition of the onset of pneumonia, the writer lays great stress upon two points: namely, a rise in temperature and an increased rapidity of respirations as compared with the pulse. By observing these two symptoms, he is frequently able to diagnose pneumonia long before the physical signs give any proof of such a condition. Not infrequently the physical signs will be masked by the deeper portion only of the lung being affected.

The prognosis varies with the extent and nature of the disease. Lobar pneumonia is the most favourable. Isolated patches of broncho-pneumonia, even when of considerable size gives a better prognosis than cases the result of the extension of the primary disease. Gangrenous pneumonia is of course absolutely fatal. Furthermore, the prognosis depends upon the severity of the diphtheritic process, the stage of the disease in which the pneumonia has occurred, the condition and surroundings of the patient. Pneumonia complicating tracheotomized cases is very fatal. Intubated cases are also very grave, but less so than the preceding.

This being a disease due to bacterial infection, cases of diphtheria complicated by pneumonia should be isolated from cases of pure diphtheria.

In the treatment of broncho-pneumonia complicating diphtheria, Dr. Berg discourages the use of antiseptic vapours, denying that they retain their antiseptic properties when they reach the seat of the disease in the finer bronchioles and air-cells. He advises inhalations of oxygen. The cold pack is the best antipyretic agent. Poultices should never be used. He also recommends digitalis and strychnine.

and larger doses of antitoxin serum than one would give to an uncomplicated case of diphtheria.

As the streptococcus plays so important a rôle in the causation of this disease, the writer recommends the use of anti-streptococcus serum. This serum has been used by Dr. Marmorek in the treatment of other diseases in which the streptococcus is present, and with considerable benefit, the death rate in his cases of erysipelas having been reduced by one-half.

*E. J. Semple.*



# Surgery.

## Local Anæsthesia.

LUND. "Recent advances in the method of local anæsthesia."—*The Boston Medical and Surgical Journal*, February 6, 1896.

For very many years the want of a local anæsthetic has been growing greater. One is often deterred from performing needed operations because the patient has diseased kidneys or has an unnatural dread of taking an anæsthetic. There is also a large group of cases demanding surgical interference of a minor, yet painful, nature, when the ill-effects which so often follow general anæsthesia may well be balanced against the sharp incision of short duration. The patient dreads the one and fears the other.

A safe and satisfactory local anæsthetic would fill a long felt want. With it a small growth might be removed or a whitlow opened and cured, the patient walking quietly home afterwards, while, if a general anæsthetic must be administered, the patient must be "prepared," and an assistant obtained, and the patient must spend the remainder of the day at home, probably suffering more from the after-effects of the anæsthetic than from the effect of the operation itself.

Neither could a general anæsthetic be administered in out-patient departments, unless some friend was present willing and able to take the patient home.

Freezing mixtures have been tried and generally abandoned because producing imperfect anæsthesia and being more or less painful in application.

In 1884, when Köller, a student of medicine at Vienna, accidentally discovered the anæsthetic effect of cocaine hydrochlorate upon the mucous membrane of the eye, great hopes were entertained that a local anæsthetic had at last been discovered that would prove generally useful. But although fairly satisfactory when applied to mucous membrane, it was not absorbed by cutaneous surfaces to a degree sufficient to cause anæsthesia.

The introduction of cocaine solutions by electrolysis was tried without success. It was then found that solutions of cocaine injected subcutaneously along the trunk of a sensory nerve would produce local anæsthesia in the area of its distribution. It was found difficult, however, to found a satisfactory technique upon this principle. As

applied, it consisted of the injection of a few minims of a two to five per cent. solution of cocaine *under* the skin in four or five places surrounding the operative field, and so situated as to reach, if possible, the branches of the sensory nerves which supplied it. It was found necessary to wait five or ten minutes for the drug to be diffused among the tissues and to be brought in contact with the various nerve filaments which supplied the part. This method was sometimes successful and sometimes a failure. The failure was due to the well-known anastomosis of terminal nerve filaments.

This method also was not without danger. Many surgeons have had experiences in the use of hypodermic injections of cocaine that have prevented them from using it again, and numerous deaths have followed its use by this method.

Certain men, however, notably Reclus in France, Lauderer in Germany, and Halstead in the United States, have persisted in its use and developed the technique.

Gradually, however, weaker solutions came to be employed, and of these it was found possible in many cases to use enough to thoroughly infiltrate the whole operative field with the solution. Better effects were obtained when the solution was injected *into* instead of *under* the skin, and when, starting from the area infiltrated by the first puncture, the operative field was gradually and thoroughly drenched with the fluid, the needle never being pushed outside of the area previously anæsthetized, a perfect local anæsthesia to all operative procedures was found to be produced. Weaker solutions (2 per cent. and less) were found to give the best results, because it was safe to use enough of them to thoroughly infiltrate the tissues. When this was done it was found not to be necessary to wait for the anæsthetic effect to be produced, but that the operation could be begun at once. Those who had most knowledge and skill in the use of cocaine used the weaker solution,  $\frac{1}{2}$  to 1 per cent.

In certain instances it was found that after anæsthesia had been established by cocaine solutions the anæsthetic area could be extended by injecting pure water, beginning within the infiltrated area. The injection of water without previous cocainization was, however, an exceedingly painful process.

Schleich, of Berlin, has recently published a monograph which, if true, placed local anæsthesia by the injection of anæsthetic fluids upon a scientific basis, and rendered its more extended application safe and feasible. This method has since been given extended trial; and while it has not, and probably will not, as its author thinks probable, become of such general application as to render the employment of a

general anæsthetic a surgical rarity, its has none the less widened in some degree the field for the safe and efficient use of local anæsthesia, and enabled operations to be performed without pain or danger, in cases where a general anæsthetic was contra-indicated. To Schleich is due the credit of demonstrating that the intra-cutaneous injection of various drugs (not alone cocaine) in very dilute solution produced local anæsthesia. Instead of the effect depending solely upon the drug itself, the anæsthesia was found to be due to the pressure of the infiltrating fluid upon the nerve filaments, the artificial anæmia which it produced and the comparatively low temperature at which it was injected.

Beginning by gradually diminishing the strength of the cocaine solutions employed, and following the principle of endermic injection, he found that in the white wheal produced by a syringeful of a two-hundredths per cent. solution of cocaine there was absolute insensibility to pain, and also that no pain was present during the injection. This solution was so weak as to suggest that the cocaine might be entirely omitted, which was done, with the result of finding that complete anæsthesia was produced throughout the area of infiltration, but that severe pain was experienced during the formation of the wheal.

It was next found that physiological salt solution (six-tenths per cent.) produced no pain on injection, but that it also had no anæsthetic effect, a fact probably due to the circumstance that it was absolutely non-irritating to the nerve terminals. A salt solution of two-tenths per cent., however, was found to produce only slight paresthesia on injection, while complete anæsthesia was produced in the infiltrated area. With this solution a nævus was excised from the neck of Dr. von Bergmann without producing the slightest pain.

Solutions of other drugs were also found to have the same anæsthetic effect, notably these: Sugar, 3 per cent.; potassium bromide, 3 per cent.; morphine, 1 per cent.; carbolic acid, 5 per cent., and caffeine, 2 per cent. The anæsthesia was found, however, to be preceded by more or less irritation.

Inasmuch as common salt solution is an efficient anæsthetic in the strength of two-tenths per cent., it may be asked why is not that sufficient, and why should any cocaine or morphia be added to the fluids to be practically employed for local anæsthesia? The answer is that although the injection of 2 per cent. salt solution into healthy tissues produces but slight pain, the surgeon has often to deal with tissues rendered hyper-sensitive by inflammation. The injection of salt solution into inflamed tissue causes extreme irritation and pain.

The gratifying fact, however, was ascertained by Schleich that by the addition of a very small amount of cocaine, morphia or carbolic acid to these solutions they could be successfully employed, even in tissue rendered hyperæsthetic by the pressure and tension of inflammation.

In infiltrating the wall of an abscess it must be remembered that injections into the cavity itself do no good. If there is no outlet they cause extreme pain from increased tension; if the outlet is present, they run out without infiltrating the tissues and therefore without producing any anæsthetic effect. Injections into the sacs of cysts or the tissue of tumours which we wish to remove are equally fruitless in their results.

It is also essential to remember, that only the infiltrated œdematous tissue is anæsthetic, and that when it becomes necessary to extend the operative field beyond the infiltrated area, the injection must be carefully continued out in the direction required, starting within the anæsthetic area. The surgeon must be prepared at any moment to drop the knife and use the syringe.

The following solutions are recommended by Schleich, the first or stronger one being necessary only for operating on inflamed or hyperæsthetic tissues. The second is used for all operations of no more than moderate extent on tissues not inflamed. The third is to be used in extensive operations when it has been necessary to inject so large an amount of the other solutions that there is danger of exceeding the limit of tolerance of the drug.

## No. 1.

Cocain mur .....	.2
Morph. mur.....	.025
Natr. chlor.....	.2
Aq. dist. sterilis ad.....	100.
Add acid carbol. (5 per cent.).....	2 gtt

## M. O. S.

## No. 2.

Same as No. 1, except cocaine.

## No. 3.

Cocain. mur.....	.01
Morph. mur.....	.005
Natr. chlor.....	.2
Aq. dist. sterilis ad.....	100.
Add ac. carbol (5 per cent.).....	2 gtt

The small amount of morphia present in these solutions has been added for the purpose of diminishing the pain which sometimes

follows operations under infiltration anæsthesia during the time the infiltration is being absorbed and the carbolic acid to ensure the preservation of the solution.

By the use of these solutions Scleich claims to have performed such operations as ovariectomy, cholecystotomy, ligature of the common carotid, and in fact to have been able almost entirely to dispense with general anæsthesia. The anæsthesia begins immediately after the infiltration is completed and lasts about twenty minutes. Every tissue of the body, nerve, muscle, skin, gland, mucous membrane, etc., is rendered anæsthetic when infiltrated in the manner described, and the same effect is produced upon bone by infiltrating the periosteum, or injecting the medulla.

As these solutions act better when cold, it is recommended that they be kept on ice.

#### **Puncture or Incision of the Pericardium.**

DELORME ET MIGNON. "Sur la ponction et l'incision du pericarde."  
—*Revue de Chirurgie*, Octobre, 1895.

The authors begin their article with a brief history in which it is pointed out that puncture of the pericardium was first proposed by Riolan in 1646, but only become an accepted operation in 1840, after the operation by Schub, of Vienna. Schub used a trocar, and since that time paracentesis has been the recognised method of removing fluid from the pericardium, notwithstanding Trosseau's effort to substitute incision. It is then shown that the classical operation of puncture or incision must of necessity wound the pleura in the great majority of cases.

The differential diagnosis between effusion into the pericardium, and effusion into the pleura, mediastinal tumour and dilatation of the heart is somewhat fully discussed. The history of a mediastinal tumour is very different from that of a pericardial effusion. A mediastinal tumour can only with difficulty work its way between the sternum and costal cartilages and pericardium, and in doing so would produce other symptoms of compression. Dilatation of the heart to a degree sufficient to cause difficulty in distinguishing from pericardial effusion is rare. In dilatation the cardiac bruits can be heard, feeble but not afar off.

The heart is an organ very tolerant. The pericardium permits serous transudation, but has also power to reabsorb rapidly.

The opening of the pericardium should be reserved for those cases where the limit of tolerance is reached and the phenomena of cardiac adynamia become apparent.

One of the first signs is frequency of respiration. The number of respirations may be 40 or 50 to the minute. The patient first gets propped up on two or three pillows and finally sits up in bed.

Cyanosis and enlargement of the superficial veins of the neck and hands are seen.

The pulse is small, unequal and irregular, 120 to 150 beats to the minute. The inequality is more often felt than the irregularity. It is one moment strong and then feeble. Dicrotism is not rare.

The patient complains of a vague pain over the left thorax, and sometimes of a constriction about the base of the chest.

Edema over the præcordia sometimes develops to such a degree that the ribs cannot be felt.

Dulness on percussion extends 15 to 16 c.m., in a vertical and 18 to 20 c.m., in a transverse direction.

The hand placed over the breast fails to detect any cardiac impulse.

The distension of the pericardium may be so great as to cause compression of the œsophagus, and difficulty in swallowing.

The indication in such cases is, clearly to relieve the distended pericardium, and the operating surgeon naturally asks himself, shall it be by puncture or incision. It is often impossible to determine before aspiration whether the fluid is serous or purulent. The following rules are laid down :—

1. Aspirate first. If the fluid is serous or sero-sanguinolent be satisfied to empty the pericardium in this manner. If the fluid is found to be purulent, then at once proceed to incise the pericardium.

If it is feared that there may be adhesions between the pericardium and the anterior wall of the heart, better to perform incision in the first instance than to plunge a trocar in the dark into an organ, the wounding of which may prove fatal to the patient.

Another question may arise here. If the serous fluid returns, should aspiration be repeated, perhaps, several times, or should incisions be resorted to in the event of a re-accumulation of fluid ?

The cases are numerous where after an aspiration which was thought to be complete, at the autopsy a few days later, several hundred grammes of fluid have been found in the pericardium. Is not the rapid return of the signs of pericardial distension after aspiration, the clearest indication that aspiration is not sufficient and that a more radical method of treatment, or in other words, that incision should be resorted to ?

When fluid is removed from the pleural cavity the lung tends to expand and to meet the parietal pleura, but the heart does not move. Multiple punctures do not give the best results.

After incision we can tear some adhesions if necessary, and thus aid the return of the pericardium to the surface of the heart, or modify the conditions by the introduction into the pericardium of some anti-septic solution.

It is now proven that we need not fear to evacuate the fluid from the pericardium rapidly, and arguments against incision based on this argument no longer hold. Illustrating this point the case reported by Eiselsberg of Utrecht, is very instructive. His patient suffered from pericardial effusion, the result of a wound from a knife in the cardiac region. After three punctures at intervals of a few days, evacuating each time about a litre of pus, the fourth costal cartilage was resected and the pericardium incised. It still contained two litres of pus with large fibrinous clots. The cavity was washed with a warm salicylic acid solution and drained with two tubes. It was afterwards injected daily with iodoform and glycerine emulsion. The cavity became smaller and smaller, and in seventeen days afterwards the tubes which had been gradually shortened were removed altogether. Four weeks later the wound was completely cicatrized and the patient left the hospital cured.

In front of the pericardium to the left and in the median line were the following :

1. The skin and subcutaneous cellular tissue.
2. The pectoralis major muscle.
3. The sternum, costal cartilages and intercostal muscles with their fasciæ.
4. The internal mammary artery and the triangularis sterni muscle.
5. The left pleura and the right pleura.
6. The cellular tissue of the mediastinum.

The pericardial effusion may be sero-fibrinous, sero-sanguineous, hemorrhagic, sero-purulent, or purulent. Louis found in 36 cases, 9 serous, 5 sero-sanguinolent, 13 sero-purulent 7 purulent.

The quantity varies from 200 or 300 to 800 or 1,000 grammes. In one case 1,500 grammes of pus was found at the autopsy.

In the majority of cases the heart floats free in the fluid. It is not yet definitely determined whether in the absence of adhesions the heart lies nearer the anterior or posterior wall of the pericardium.

*Geo. E. Armstrong,*

(To be continued.)

### **The Surgical Examination of the Lungs.**

TUFFIER. *Gazette des Hôpitaux*, No. 135, November 21, 1895.

M. Tuffier, in a communication to the Société de Chirurgie, describes a method for the surgical examination of the lung by means of incision

of the chest wall with peeling off of the parietal pleura. Up to the present it has been the custom in cases where such an examination is found necessary to incise the parietal pleura, thus creating a pneumothorax, but it appears that it is quite possible for this to be done without the incision embracing the pleural cavity, the parietal pleura being pushed gently away from the chest wall at the point where the required examination is to be made.

The detachment of the parietal pleura is comparatively easy on the sides and towards the apices of the lungs. Clinical observation and post-mortem examination show :

1. That the parietal pleura is easily detached if due care is taken not to tear it.

2. That by the resection of a piece of rib 5 cm. (2 inches) in length it is possible to peel off the pleura beneath and around the incision to the extent of a hand's breadth.

3. That the pleura appears to be most adherent at the upper and lower borders of the ribs; once detached from these points, it is easily separated from the intercostal muscles and the surface of the rib.

4. That the presence of the ligaments of Sebileau at the apex does in no way interfere with the peeling off of the pleura. After an incision parallel with the first rib has been made and the second rib excised for a distance of about 3 cm., it is possible to expose completely the apex of the lung to the extent of being able to touch with the finger tips the anterior aspect of the posterior wall of the thorax at the level of the first, second and third ribs.

5. That this method is much more easy upon the anterior than upon the posterior aspect of the thorax.

6. The parietal pleura having been detached, the pulmonary tissue can be examined under its coverings, both by touch and by sight, with the greatest ease.

M. Tuffier mentions the following case as an example of the applicability of his method :

A man of about 60 years of age was admitted to hospital on October 23, 1895, under the care of M. Roget, who diagnosed a condition of gangrene of the middle lobe following on pneumonia. M. Roget, after treating the patient medicinally for fifteen days without benefit, and in view of the development of symptoms of septicæmia, asked M. Tuffier to see the case. Upon examination he found the patient profoundly anæmic, the temperature varying between 37.5° C. and 40° C., the pulse soft, compressible and extremely rapid; the breath extremely foetid, and all the signs of a progressing infection.

On Nov. 7, 1895, the patient having been anæsthetized and placed



upon his left side, an incision 10 cm. in length was made in the eighth space, on the right side, exactly over the point where the clinical signs indicated the presence of the disease. The intercostal muscles having been divided, the parietal pleura was exposed and detached from the muscular fibres. The lung beneath appeared normal. He then detached the parietal pleura from the lower border of the eighth rib and with some difficulty from the upper border of the same rib; the eighth rib was excised for a distance of 5 cm., and he finally succeeded in exposing the pleura over a surface as large as his hand. The condition of the lung was recognized without difficulty. It felt spongy and pliable and presented no change in its consistence. Continuing the separation of the pleura at the upper boundary of the exposed part, the operator suddenly came upon a portion of lung of increased density, and altogether different from the remainder of the pulmonary surface. He immediately concluded that this was the site of the lesion and succeeded in isolating the part, which was hard to the touch and yellowish in colour.

Adhesions of the parietal and visceral layers of the pleura were present at the site of the disease, and having cut through about 1 cm of pulmonary tissue he came upon a large cavity, from which escaped a brownish and very foul pus containing numerous blood clots and fragments of lung tissue. The cavity having been emptied of its purulent contents was packed with iodoform gauze and the remainder of the wound united. During the operation the patient breathed easily, the lung acting as usual beneath its double coat. The good effects were shown by the temperature falling and a great amelioration in the condition of the patient.

M. Tuffier lays down the following rules for guidance in the performance of this operation :

1. The patient being anæsthetized and placed in the proper position, the site of the disease being localized by the physical signs, an incision is made in the *middle* of the intercostal space overlying the lesion, as the parietal pleura is most easily detached at this point. Bleeding must be promptly arrested, so that the subsequent steps of the operation may not be interfered with.

2. Having reached the parietal pleura, it is carefully detached from any muscular fibres which may be adherent to it. If the disease does not appear to exist at this particular point, the pleura is carefully separated from the upper and lower borders of the two adjacent ribs. The rib having been denuded of its detachments by the raspatory, the intercostal nerve is divided, the vessels clamped and a portion of the rib is removed. The detachment of the parietal pleura being

completed, it rests upon the visceral layer, and palpation of the parenchyma of the lung then becomes an easy matter. As lesions requiring such an operation are as a rule peripheral, deep palpation is rarely called for. The exploration of the lung may extend over a considerable surface, the hand being gradually introduced between the chest wall and the parietal pleura.

3. Having reached a point where the consistence of the lung and its appearance are sufficient to arouse suspicion, the lung tissue is divided and the lesion exposed. Sufficient drainage must be provided when the wound is being closed.

While M. Tuffier's method is of value when one is dealing with a normal pleura, in cases of chronic pleurisy it would doubtless be a failure. The friability of the pleura would then preclude the possibility of its detachment from the chest wall without tearing.

*E. J. Semple.*

## Ophthalmology.

### Bacteriological Etiology of Keratitis and Conjunctivitis.

BACH. "Bacteriologische Untersuchungen über die Etiologie der Keratitis und Conjunctivitis Eczematosa, nebst bemerkungen Zur eintheilung, Etiologie und Prognose der Hornhaut geschwure."  
—*Graefes Archiv.*, XLI. No. 2

Bach found staphylococcus pyogenes aureus only in fresh cases of phlyctenulæ.

He got cultures on agar and inoculation of these cultures in rabbits and men gave rise to typical phlyctenulæ.

The contents of these inoculated phlyctenulæ furnished almost constantly again staphylococcus colonies on agar and gelatine.

From the facts that in an ulcer serpens of the cornea of several days existence, frequently no bacteria were found and that in the rabbit's cornea, inoculated staphylococci disappear in a short time, Bach was led to conclude that the same conditions held in phlyctenulæ, where after a short time no staphylococci could be detected, being found only in the early stages.

Bach can not say whether these are destroyed so quickly in their own products of decomposition or by the influence of the blood current. In favour of the latter possibility, is the difficulty in the development of phlyctenulæ in the loose vascular tissues of the conjunctiva.

Upon the virulence and number of the cocci, as well as the resisting power of the organism, will depend whether a phlyctenule or pustule will develop.

As the same exciting agent occurs in Eczema, Bach considers that the eye disease should be called eczematous keratitis and conjunctivitis.

Between phlyctenulæ and scrofula there is only an indirect connection; the tendency to mucous catarrhs and delicate skins in scrofulous subjects favours the easy infection.

Corneal ulcers are without exception caused by micro-organisms.

Their situation decides the question of greater or less malignity, central ulcers of the cornea having a less favorable prognosis than peripheral being further away from the blood supply, which rapidly removes the bacterial products of decomposition and destroys also the bacteria themselves.

In central ulcers these vessels develop only in the late stages and

in addition the bacterial products get into the anterior chamber, setting up iritis and its results.

### Bacteria in the Conjunctival Sac.

LACHOWICZ. "Über die bacterien in conjunctival sac des gesunden Auges."—*Archiv : für Augenheilkunde* Bd XXX Heft 3.

BACH. "Experimentel Untersuchungen über die infectionsgefähr penetrirender Bulbusverletzungen vom inficirten Bindehautsack aus, nebst sonstigen bemerkungen zur Bacteriologie des Bindehautsackes."—*Archiv : für Augenheilkunde*.

BACH. Bacteriologische Untersuchungen über den einfluss von verschiedenen specielle Antiseptischen verbänden auf dem Keimgehalt des Lidrandes und bindehautsackes,"—*Archiv : für Augenheilkunde*, Band XXXI Heft 1

Bach's experiments in re-penetrating eye wounds are interesting but his conclusions in some points seem a little hasty.

The paper gives the result of fifty experiments upon the rabbit's eye.

In twenty-five he infected the conjunctival sack with a pure staphylococcus culture and after this with a carefully sterilized knife made an incision in the limbus 6-8 millimetres long.

In the other twenty-five experiments he made the incision first and the inoculation immediately after.

In the first twenty-five, suppuration of the wound occurred in 20 per cent., in the second twenty-five in only 8 per cent.

In ten other cases he made the incision with an infected knife and in nine cases panophthalmitis followed.

Bach concludes that sterilization of the instruments is the chief means by which to avoid infection.

If the wound be in an area free from germs, there is really hardly any danger.

In order to cause infection of a wound, it is not merely necessary that the germs be simply in superficial contact with the wound, but that the microbes must as it were, be pressed more or less into the tissue.

Lachowicz as a result of very interesting investigations has arrived at the following conclusions :

That as opposed to other mucous membranes the conjunctiva is by no means a constant field for the ordinary well known organisms.

The germs sometimes present, come from the air, and remain only temporarily.

As a proof of this, there are the very few and slight cultures which one can obtain when germs are present in it; and furthermore the small number of germ containing microbes found in the conjunctival sac; and finally, the rapid disappearance of any artificially introduced microbes, the different varieties probably disappearing with varying rapidity.

The healthy eye is indifferent to the various bacteria except streptococcus and bacillus xerosis.

In Bach's bandage experiments he applied in some cases moist antiseptic bandages of hydrarg. oxycyanat. 1-5000 or sublimate 1-3000, in other cases a simple dry or moist non-antiseptic bandage.

As a result he finds that the antiseptic bandage had a slight, but by no means constant disinfecting action as compared to the non-antiseptic.

### **The Position and Function of the Cells of the Oculomotor Nucleus.**

STUELP. "Zur lehre von der Lage und function der einzelnen Zellgruppen des Oculomotorius Kerns."—*Aus der Universitäts Klinik zu Strassburg.*

Much obscurity still overhangs the structure and function of the nuclear region of the oculomotorius.

Until now there have been three methods of examination.

1. Faradic stimulation of the separate nuclei.
2. Gudden thought that atrophy of the separate nuclei must follow extirpation of the different muscles from loss of function of the nerve.
3. Microscopical examination of the nuclear region in cases of nuclear paralysis observed during life.

These have all given diverse and uncertain results.

Stuelp formulated a theory as to the position of the nuclei founded on the clinical observation of 229 cases of partial paralysis of the O. M., and on the nature of the combinations of the paralysis.

His results were:—The nuclei of the ciliary muscle and sphincter iridis twigs must be close together and especially in the anterior portion of the nuclear region.

The centre for the branch to the levator palpebræ, in the neighborhood of, and at a certain distance from the nuclei of the branches going to the external muscles of the eyeball.

Backwards lie the nuclei of the rectus superior and internus branches; that to the internus lying near the middle line.

Further back are the nuclei for the rectus and obliquus inferior. that to the rectus inferior near that for the internal rectus and nearer the middle line than that for the obliquus inferior.

**The Periods of Occurrences of Optic Nerve Troubles in Syphilis.**

JANUSKIEWICZ. "Der Zeitliche Verlauf bei Syphilitischen Erkrankungen des Sehnerven Nach 150 Fällen."—*Centralblatt für Augenheilkunde*, Dec., 1896.

The summary of this interesting article on 150 cases is as follows: 107 were non-inflammatory cases, 45 being genuine atrophy and 62 spinal atrophy. The remaining 43 were cases of neuritis: of which 26 were in the acute stage, and 17 in the stage of post inflammatory atrophy.

*Genuine atrophy.*—The interval between infection and onset of visual disturbances varied greatly, the shortest, in one case only, being six months, and the longest, in two cases, 29 years. The most frequent occurrence being between the 5th and 10th years after infection, 28.8 per cent. being women, 71.2 per cent. men.

*Tabetic atrophy.*—Here the shortest period noted was two years in one case, and the longest 30 years, also in one case, the most cases appearing to be between the 5th and 20th years, 16.1 per cent. being women, 83.9 per cent. men.

*Acute specific neuritis.*—Here the onset as a rule was early, being generally the 1st to 5th years; although in one case it was only 2½ months after infection.

In 11 of the 26 cases marked improvement followed the use of blue ointment, especially in those cases where the neuritis appeared soon after infection. In 4 cases atrophy ensued.

*Neuritic atrophy.*—These cases occurred mostly late after infection.

The shortest interval was 2 years, and the longest 28 years after infection; the result was bad in all cases, 39.5 per cent. being women 60.5 per cent. men. Neuritis occurred in general 1 to 5 years after infection, and the atrophy 5 to 10 years.

**Blindness Caused by Male Fern.**

GROSZ. "Complete blindness caused by a vermifuge."—*Königl. Aertzverein*, Budapest.

VAN AUBEL. "Amaurosis produced by male fern."—*Scalpel*, Oct 6, 1895.

Grosz's case was a man 29 years of age who took 8 grammes of extract of male fern in 32 capsules every half hour, with a dose of castor oil between times.

The ensuing day he lost consciousness, had severe diarrhoea, and twenty-four hours later was completely blind, there being mydriasis,

but normal fundus. Ten days later atrophy of the optic nerve was perceptible.

Poulsion mentions 13 cases of intoxication from this drug and three deaths. He considers the amorphous filicic acid poisonous.

The eye symptoms were:—Mydriasis, transient amblyopia or amaurosis, monocular, or binocular, and lasting blindness with atrophy of optic nerve.

The toxic doses were 4 to 45 grammes, depending on whether the preparation was fresh or not, upon the resorptive activity of the bowel, and most of all upon whether castor oil was administered with it or not.

With the oil, absorption is much readier and more rapid, and hence intoxication much more easily occurs.

In one case mentioned, a certain dose without castor oil was harmless, whereas later half the dose with castor oil was lethal; this in a child 2½ years old.

Knies considered the mydriasis and amaurosis as of peripheral origin, comparable to the amaurosis of quinine and anæmia; this theory Grosz also holds to.

Van Aubel, in his cases considers also the poisoning as due to filicic acid.

The stimulation exerted by it on the central nervous system and spinal cord also extending to the sympathetic, causing the mydriasis and by vaso motor stimulation contracting the retinal arteries.

He hence considers strychnine and nitrite of amyl, indicated in the treatment of the toxic action.

The ethereal extracts and filicic acid act harmfully on the liver and kidneys; one had hence better use the essence.

*J. W. Stirling.*

## Pathology.

### **Upon Contagious Pleuro-Pneumonia of Cattle, Transit Pneumonia and Corn-Stalk Disease.**

“ Reports of the Minister of Agriculture for the Dominion of Canada, for the years 1893, 1894 and 1895.” Ottawa.

“ Papers on the subject of the scheduling of Canada by the Board of Agriculture.” Ottawa, 1895.

VERANUS A. MOORE. “ An investigation into the nature, cause and means of preventing the corn-stalk disease of cattle.”—Bulletin No. 10 U. S. Bureau of Animal Industry, Washington, D.C. 1896.

Having myself performed some part in presenting the pathological aspect of the Canadian case in reference to the scheduling of our cattle by the Imperial Government I have been somewhat chary in referring to the subject in these pages ; more especially because this journal deals mainly with human pathology ; yet it has been brought home to me of late that singularly little is known in Canada generally concerning the strength of the Canadian contentions, and as at present there is reviving interest in the subject, on account of the further steps to be taken in the Imperial Parliament, the time may not be inopportune to place briefly on record what appears to be the correct interpretation of the matter, from a pathological point of view.

True contagious pleuro-pneumonia is a disease presenting a long and variable incubation period. In the greater number of cases, from three to eight weeks pass between the time when the animal is exposed to infection and the first manifestations, but cases in which three to six weeks or even ten months have elapsed are on record, but these are as rare as they are extreme. When the disease shows itself then again the course is ordinarily of long duration, lasting from a fortnight to several months, according to the severity of the attack. Not all the cattle attacked die, but a fair proportion pass through a long stage of convalescence and recovery, although this recovery is never complete. Here, just as in phthisis in man, the apparent healing in the lungs is of the nature of an encapsulment of the diseased areas, and as in phthisis there is always the danger that with lowered vitality of the individual, the disease may light up again. It will be evident, therefore, how subtle is the spread of the



disease, how case after case may appear upon any one farm, at long intervals, and how many difficulties lie in the way of complete eradication of this lung plague, once it has obtained a hold in any given country,

It is safe to say that contagious pleuro-pneumonia has caused greater losses to British stock owners and dairymen than any other single disease to which animals are subject. Thus, from 1855 to 1860, it has been calculated that more than 1,000,000 animals perished in Great Britain, whose value must have amounted to at least £12,000,000. Nor is this all, the slow advent of the disease, its intense infectious properties, the long duration and the varying period of convalescence have led also to England becoming a centre from which other lands, even in the antipodes, have been affected. Thus, in 1858, a diseased cow was imported into Melbourne, Victoria, and the disease became diffused all over Australia. It is estimated by Bruce that from 1860 to 1875, the loss of cattle was 30 to 40 per cent. of the whole number in the infected colonies, being more than 1,400,000 head. The money lost there was very many millions of pounds. From England also the disease has been more than once introduced into the United States. At first it seems to have been confined within certain areas along the eastern coasts near the port of entry, but in 1878 it spread rapidly, involving the States of New York, New Jersey, Pennsylvania and Maryland, and it gradually advanced to Chicago, and to the west of the Alleghany mountains. Most vigorous methods were eventually adopted, and since March, 1892, no fresh case has been discovered in the States.<sup>1</sup>

By stringent quarantine regulations at the points of danger and at great expense, Canada has, so far, prevented the advance of the disease within her borders, although had it not been for the public spirit of some of her prominent cattle importers, among whom is to be counted the Dean of the Medical Faculty of McGill, and had it not been also for the prompt action of Dr. Duncan McEachran, the chief inspector, the disease would have been introduced into the country in 1880. In that year pleuro-pneumonia was detected in some high-bred cattle imported from Scotland, and although at that time the Government regulations were scarce strong enough to authorize the measure, all the cattle imported on this occasion were killed and most rigorous quarantine was established at Quebec. As a result the danger was averted. For this prompt action the agricultural interests of the Dominion owe a debt of gratitude to Dr. McEachran the extent of which can scarce be calculated.

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<sup>1</sup> Tenth and Eleventh Bulletin of the Bureau of Animal Industry, Washington, 1896, p. 8.

But during the last three years it has been officially declared by the Home Government that pleuro-pneumonia exists in Canada, and as a consequence Canadian cattle are scheduled; that is to say, they are not permitted to pass beyond the port of entry, but must be slaughtered within a few days of disembarkation.

What are the probabilities that this contagious lung plague exists in Canada? The Dominion Government affirms that it is unable to discover the existence of a single affected animal, from the Atlantic to the Pacific. According to its inspectors the country is absolutely free from the disease. Is it possible that they are mistaken, or—the obstinate action of the Agricultural Department forces me to make the suggestion—that they are purposely concealing from the Home Government their knowledge that the disease exist? A little consideration must show that neither of these alternatives can be accepted by any right-minded man. Had the disease been introduced into Canada during the last few years from England or from the States, it might be said with the utmost sureness that the mortality caused thereby would in a very few months have attracted the notice of the farmers, the veterinary profession and the Government; it is absurd to think that it could have remained hid, as it were, under a bushel. We living in this country know often to our cost how every trifling item is seized upon by the local papers, which make up for their poverty and incapacity to reproduce telegrams from foreign parts, by the assiduous working of local news into readable and often thrilling paragraphs. Had the disease existed, the opposition journals, at the least, would have called our attention to the fact.

Again, it must be remembered that important as is the extension of the export trade of this country, the internal trade and preservation of herds in prime condition for dairy purposes are of yet greater importance. For internal reasons, therefore, it is absolutely necessary that the Government makes public any and every outbreak of disease, and schedules affected districts. This is the Government's first care; it is absurd to doubt the veracity of the Ottawa blue books, for were they falsified the first effects would be felt, not in England, but in the Dominion. And yet the secretary of the Imperial Board of Agriculture writes officially in August, 1893: "The fact that the Canadian Government have at present no information as to the existence of the disease appears to the Board to be very far from conclusive. . . . The possibility that disease should have been irregularly introduced undoubtedly exists." And only within the last few weeks the President of the Department of Agriculture would seem to have more than hinted his firm belief that we have the disease in this country. Speak-

ing for myself, I may say that ever since the outcry concerning possible pleuro-pneumonia in this country has existed, every lung in which appearances have been detected at all resembling the genuine disease has passed through my hands. Of these there have been more than seven, and in not a single case has there been the true disease present. The majority of the cases have been those of purulent metastatic or broncho-pneumonia. In one case a large thorn was discovered impacted in the bronchus and causing intense surrounding inflammation; in another the bronchi contained numerous minute nematode worms, in another the calcified larvæ and eggs of some unknown insect.

Thus I can unhesitatingly affirm that from my own experience the disease is non-existent.

While, therefore, everything points to the absence of the disease within the Dominion how, it may be asked, are we to explain the most suspicious lungs found in cattle exported to the United Kingdom? Either the disease exists here or it does not, and if it does not then the conditions discovered in these lungs have been brought about by some cause other than that which induces contagious pleuro-pneumonia.

As I have already said, the disease cannot possibly exist here in its ordinary contagious form. Of that there can be no doubt. It is absurd also to suggest that we have it here in a latent form. If that were so we should occasionally come across lungs presenting chronic lesions. We never come across such lungs. Our only alternative is that there is some other condition capable of producing lesions in the lungs capable of being mistaken for those of contagious pleuro-pneumonia.

Lesions associated with contagious pleuro-pneumonia differ from those seen in any form of human pneumonia, in the one important peculiarity that the lobules of the organ become widely separated from each other by broad bands, not of fibrous tissue, but of lymph. These bands are, in fact, in the main huge dilated lymph channels filled with thick lymph. The pneumonia is of a lobular type, and on section through an affected organ a mass is found varying from an inch or two across to the larger portion of a lobe of the organ. This is dense, cuts firmly, and on section, both from the existence of these bands previously mentioned and from the fact that lobules or sections of lobules exhibit the disease at different stages, a cut surface presents a characteristically marbled appearance. In general the disease extends to the surface and there is developed a localised pleurisy. On closer examination the alveoli are found filled with exudate, sundry of the vessels exhibit thrombi, and as a result there are areas of

necrosis ; there are other areas exhibiting recent hæmorrhage, others showing hæmorrhagic necrosis of older date.

This is in the earlier stages of the disease ; where the condition becomes chronic, as already stated, the affected area becomes surrounded by fibrous tissue and is cut off from the healthy lung. It is of importance to note that whereas in countries affected with the true disease lungs exhibiting these chronic fibroid and encapsuled areas are not infrequently met with, among thousands of Canadian cattle slaughtered at Liverpool, Deptford and Glasgow, not one single instance of the discovery of this stage of pleuro-pneumonia has been recorded. This in itself is strong evidence that the British authorities are mistaken. Undoubtedly the lesions found in the suspected animals are very like those seen in contagious pleuro-pneumonia, more especially to the naked eye. There has been the same marbling present ; in one case there was evidence of necrosis (but only one) and the affected areas of the lung had the same firm feel. In one case at least also a cough was recognised somewhat similar to that forming a symptom of the true disease ; but when we come to examine these lungs microscopically the resemblance is not so close.

(To be continued.)

# 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.

JANUARY, 1896.

### THE JOURNAL OF PATHOLOGY AND BACTERIOLOGY.

Upon general infection by the bacillus pyocyaneus in children—E. P. Williams and Kenneth Cameron, Montreal, p. 344.

### THE CANADIAN PRACTITIONER.

The surgical treatment of gall-stones—J. F. W. Ross, Toronto, p. 1.

### CANADA MEDICAL RECORD.

Artificial lighting of public buildings and private houses, and its effects upon the human eye (continued)—Casey A. Wood, Chicago, p. 159.

### DOMINION MEDICAL MONTHLY AND ONTARIO MEDICAL JOURNAL.

Clinical notes on a recent series of surgical cases—Thomas H. Manley, New York, p. 33.

Cases in practice—Frank Hall, Victoria, B.C., p. 38.

Notes on the treatment of enteric fever—C. J. H. Chipman, Ottawa, p. 39.

A new nasal tablet—Murray McFarlane, Toronto, p. 41.

### THE MARITIME MEDICAL NEWS.

Appendicitis—J. F. Black, Halifax, p. 1.

Report of two cases—(1) acute inversion of the uterus, immediate reposition, recovery; (2) strangulated hernia, gangrene, rupture, suture, recovery—R. A. H. McKeen, Glace Bay, C.B., p. 9.

### LA CLINIQUE.

A propos du cancer du sein, des organes génitaux, urinaires et de la peau—James Bell, Montreal, p. 223.

Une erreur fréquente—J. E. W. Lecours, Montreal, p. 228.

Carié des deux vertèbres lombaires—A. A. E. St.-M., p. 230.

### DENTAL COSMOS.

Irritative or reflex trismus—J. S. Ibbotson and W. G. M. Byers, Montreal.

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### THE CANADA LANCET.

Six years' experience in abdominal and pelvic surgery—A. Laphorn Smith, Montreal, p. 175.

Expert testimony—Henry Leffman, Philadelphia, p. 181.

### CANADA MEDICAL RECORD.

Artificial lighting of public buildings and private houses, and its effects upon the human eye (continued)—Casey A. Wood, Chicago, p. 207.

A plain talk on the treatment of consumption—A. D. Stevens, Dunham, Que., p. 215.

### DOMINION MEDICAL MONTHLY AND ONTARIO MEDICAL JOURNAL.

Relation between chorea and rheumatism—J. W. Shaw, Clinton, Ont., p.

## LA CLINIQUE.

Considération sur la fièvre typhoïde et sur le traitement par les bains froids—  
Marc Clergue, Paris, p. 270.

## L'UNION MÉDICALE DU CANADA.

Nouvelles observations de sérothérapie—J. L. Archambault, Cohoes, N. Y.,  
p. 65.

Echo des hôpitaux de Paris—Prof. Demers, Montreal, p. 71.

Tétanos—A. Laurandean, St. Gabriel de Brandon, Que., p. 76.

De l'orchite chez les prostatiques—A. Guépin, Paris, p. 80.

## JOURNAL OF CUTANEOUS AND GENITO-URINARY DISEASES:

Hydroa aestivale—James E. Graham, Toronto, p. 41.

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## THE CANADA LANCET.

Club-foot—B. E. McKenzie, Toronto, p. 218.

## DOMINION MEDICAL MONTHLY AND ONTARIO MEDICAL JOURNAL.

Annual address of the Chairman of the Board of Health of Ontario—J. D.  
MacDonald, Hamilton, p. 257.

Hygiene of Canadian railways, p. 263.

## L'UNION MÉDICALE DU CANADA.

Etudes médico-légale—Les aliénés devant [la loi (A suivre)—Georges Ville-  
neuve, Montreal, p. 129.

Signes et traitement de la colique spermatique—A. Guépin, Paris, p. 145.

Six années d'expérience en chirurgie abdominale avec résultats ultimes et  
immédiates—A. Laphorn Smith, Montréal, p. 146.

## MONOGRAPHS, Etc.

Electricity as applied to practical medicine—Albert G. Nicholls, Montreal.

**Irritative or Reflex Trismus—J. S. Ibbotson and W. G. M. Byers.**

The authors report the following cases which were treated in the Montreal General Hospital during the winter of 1894-95:

*Case I.* (Service of Dr. J. Alexander Hutchison.)—Robert R., aged twenty-three, a fireman in the employ of the steel and iron works, came to the General Hospital on December 11, 1895, complaining of "stiffness in the muscles of the jaw, and inability to open widely his mouth." He said that, five weeks previous to entrance, the right side of his cheek began to grow painful and the gums of the mouth tender when touched, or more especially when he attempted to eat anything hard. This continued for two weeks, when swelling of the right cheek commenced and gradually increased; and at the same time the jaw-muscles slowly stiffened and finally became so rigid that he could not, without difficulty, masticate his food or speak distinctly.

On entrance, patient was found to be a young man of medium height and well nourished. The acute inflammatory symptoms had evidently subsided in part, but a large swelling of the right side of the cheek was present. This was due to an enlargement of the parotid gland, and hot fomentations were applied, the case being looked upon as one of non-specific parotitis with closure of the jaw

as a secondary consequence. The case, however, dragged on for a week or so with no improvement, when the teeth were thought of and found to be the cause of the trouble. The upper right bicuspid and first molar were found to be in a carious condition, and elongated; and the gums in the neighbourhood in a state of subacute inflammation. The third molar was seen in a half-developed condition, appearing through overhanging gums. Below on the same side the third molar was "erupting" and crowded in between the second molar and the ramus of the jaw. The gums, too, in this neighbourhood were inflamed, and overlapping and tender.

On December 29 patient was given ether and the mouth forced open by a gag with considerable difficulty. The upper third molar in carious condition and the lower right third molar in an embryonic stunted state were removed.

Almost instant relief of symptoms was experienced. On the following day the patient could move his jaws to a considerable extent and on January 2, was discharged as cured.

*Case II.* (Service of Dr. R. C. Kirkpatrick.)—Thos. F., aged fifty-four, a strong, well-built navvy, was admitted to the General Hospital on March 9, 1895, complaining of stiffness in the muscles of the jaw, sudden uncontrollable closures of the teeth, and darting, shooting pains in the right side of his cheek and head.

He gave the following history: Soon after an exposure during a very cold spell of weather, patient was seized on January 2, 1895, with pain and stiffness in the muscles of the jaw, particularly on the right side; and also with this he suffered from darting, shooting pains in the ramus of the jaw and right side of his face, which extended up to the ear and side of his head. These symptoms gradually increased so that on February 2, patient had to give up work on account of his being unable to take anything but liquid food, owing to the almost entire closure of the jaw, and to the pain which he experienced when he shut his teeth on anything hard.

About January 15, peculiar involuntary spasms of the muscles of the jaw appeared, first noticed when on putting his pipe into his mouth the bowl flew up into his face, on account of the sudden coming together of his teeth. This condition, too, increased in severity and became almost alarming. On one occasion during a very severe closure the two lower incisors were knocked out, and at frequent other times his tongue and cheeks were badly bitten. Sometimes the closures came on spontaneously, and always when an attempt was made to put a pipe or finger or probe into his mouth.

Condition on entrance : A well-built, shaggy-bearded man ; hair turning gray ; nutrition good.

Complains of tenderness and stiffness in the muscles of the jaw, particularly on the right side, with a dull pain in that region, and occasional shooting, darting pains in the side of the face and head. He cannot open his mouth widely, and for this reason has to live on soft food. A more serious trouble is the spasms of the jaw spoken of above, causing the teeth to come together with a snap. These come on when an attempt is made to put anything into his mouth, but very often without any cause at all apparent.

*Examination.*—Swelling of the submaxillary gland on both sides, and slight thickening of the right ramus of the jaw to about its middle third ; corners of the lips and the tip of the tongue show marks of the teeth. Patient can only open his mouth to about one-third or one-fourth its normal extent. Breath very foul. Teeth present an elongated and extreme carious condition of the first and second molars of the lower right side, the gums around which are filled with salivary calculi. On the lower left side are roots, remnants of the first, second and third molars, all in a state of ulceration: The lower incisors are wanting, and there is partial fracture of the lower front alveolar process, owing to the severe spasm mentioned above. On March 20, the right lower first and second molars were removed, the roots of which presented an exostosed condition ; also remains of the first, second and third molars on the lower left side. In front, below, a small piece of necrosed alveolar process was taken away, and above on the left side, the upper first bicuspid root in badly ulcerated condition was extracted.

The patient's progress after the operation was most satisfactory. On March 28 a bedside note records that he had fully regained the use of the muscles of the jaw, and had had no further spasms. A few days after this, however, a slight return of this trouble occurred ; but the removal of a small piece of loose necrosed bone from the lower right ramus speedily set matters right again.

Spasm of the muscles of the jaw as a result of reflex irritation from local conditions in or about the mouth receives more or less attention in all the standard works on general and dental surgery. The authors conclude that although spoken of in the literature as being of comparatively frequent occurrence, the condition is in fact rather rare, at any rate in as marked a form as the cases cited. Moulin, the only authority who dwells on the point, mentions that the affection is most common between the ages of twenty and thirty-five. All authorities speak of the eruption of third molars as a cause, while but one of them recognizes caries of the teeth as an etiological factor.



The affection, too, is generally described under some general heading, such as "closure of the jaws," or "spasmodic closure of the jaws," along with other conditions, which as regards the *modus operandi*, bear no relation whatever to the cases here reported.

Inasmuch as the factors in the production of the phenomenon are well known, and the *rationale* understood, it is proposed that it should be isolated as an entity, and given a name; and the term "Irritative or Reflex Trismus" is suggested.

#### **Hydroa Æstivale--James E. Graham.**

Two cases of this somewhat rare affection were reported before the American Dermatological Association at the meeting held in Montreal, September, 1895. The first case, was a girl who had suffered from the age of four until her eighteenth year. The eruption commenced as small red spots on the face and hands, they grew larger, became vesicular and then pustular, attaining their full size in two or three days, when a dark spot appeared in the centre of each, after which a scab formed over the whole surface. These dried up and fell off in a few days. The whole duration of each crop of vesicles was about nine or ten days, and superficial cicatrices were left. During the summer, successive crops of this eruption appeared, always following exposure, either to the direct or reflected rays of the sun. In winter, however, the eruption was much less marked. Nearly every form of application seemed to aggravate the disease. This condition remained the same until her thirteenth year, when menstruation commenced. From that time until the eighteenth the eruption had gradually disappeared, and at that age entirely ceased and had never returned.

The second case, a female, aged twenty-five, came under the writer's observation in August, 1895. At the age of ten, the patient had had her leg amputated for a chronic swelling of the left knee joint, probably of tubercular character. The eruption commenced when she was eleven years old, and the phenomena during the fourteen years had changed very little, and were described as follows: When she was exposed to the sun's rays for about twenty minutes or half an hour she noticed a burning sensation on the unprotected parts of the body. This would be followed by extreme swelling and the formation of small water blisters. These in two or three days would become yellow, and scales would form on the surface. These were not thick, and would speedily dry up and fall off, leaving a congested surface which would soon return to the normal condition. The pustules, as far as could be learned, were never umbilicated. The crop of pustules varied in duration according to the severity of the attack. The

process in some attacks did not last longer than eight or ten days, whereas at other times it lasted two or three weeks. The swelling was greater on some occasions than on others, sometimes it almost closed the eyes and produced a good deal of deformity of the features. The attacks were accompanied by general malaise, coryza, sleeplessness and anorexia. The eruption would occur on any part of the body exposed to the sun. It occurred in the winter just as in the summer, if the sun was shining. If she sat near a window the eruption would appear, even if the sun was not shining on her. A thick veil always prevented the action of the sun. She was afraid to go out even on a cloudy day, and had been kept a prisoner in the house for the last fourteen years, at least during the summer, only going out in the evening after the sun had gone down.

The majority of writers upon the subject attribute the cause of the eruption to the action of the chemical rays upon the skin. Widmark concludes from his experiments that the ultra-violet rays act with great intensity on the surface of the body, but the writer of this paper considers that the difference between the effects produced by the rays in the summer and in the winter, in these cases, would lead him to believe that their action is not altogether due to the ultra-violet rays, but that the heat rays play also an important part. In the second case, the electric light had no effect, although in it the chemical rays predominate. How the rays of the sun produce such deep lesions in so short a time cannot easily be explained by direct action on the tissues without the aid of the vaso-motor nerves. The inflammation, then, is probably of a reflex character. Whether a toxin exists in the tissues or not has not been proved. The indications for treatment are, to restore to the tissues that power of resistance which exists in ordinary conditions, and to so protect the skin that those rays which would act injuriously are absorbed.

*Kenneth Cameron.*

## Reviews and Notices of Books.

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**The Pathology and Surgical Treatment of Tumours.** By N. SENN, M.D., Ph.D., LL.D., Professor of the Practice of Surgery and Clinical Surgery, Rush Medical College, Chicago. W. B. Saunders. Philadelphia, 1895.

When an author has evidently expended a great amount of time, and has accumulated an enormous amount of material, it is painful to have to deliver an unfavourable verdict upon the results of his labour; yet in the case of the book before us, it is impossible to do otherwise: it is impossible to recommend a work such as this.

While Dr. Senn's book is crowded with material, that material is arranged with an utter lack of perspective; the pages bristle with names of observers, but no attempt is made, or next to none, to indicate the value to be attached to the observations. Cheek by jowl with the most recent theories of carcinoma, for example, we have the theories of thirty years ago, without the slightest indication being given of the relative value of these theories or of their chronological sequence. Virchow's earlier theories are referred to as though he still held to them and as though now-a-days they possessed the same value as they did at their first publication. To hurl thus a mass of ill-assorted material at the head of the reader is not to write a book, it is to make a book, and that withal of the most pernicious type; and the pity of it is that had Dr. Senn taken more time, and had he thought out his subject more, he could have supplied a crying want. As it is, the work is only useful in so far as the worker may occasionally from the mass of facts given extract something that is suggestive; but even its value in this direction is limited, because scarcely a single reference is given to the literature of the subject; given the name of an observer the worker is left to hunt out the reference for himself. Possibly the surgical portions of the work are more satisfactory, but surgery and pathology are throughout so intermingled that where the pathological portion is so poor it is doubtful whether the excellence of the surgical part can in any way be held to outshine the other defects.

We could further dilate upon yet other failings of this work; for example, upon the ambiguities that are introduced by the author's most dubious limitation "inflammation" to the changes produced by certain micro-organisms, a limitation which is stated in the early part of the work, but is not adhered to throughout; again, upon the failure of the photographic reproductions scattered plentifully through the work to illustrate satisfactorily the conditions mentioned in the text, and again, upon the inadequate recognition of those who prepared and diagnosed the material from which many of the photographs were taken. But we

have said enough to show that the work is not one to be recommended, and as unfavourable criticism is unpleasant we are unwilling to say more. A.

**A System of Surgery.** Edited by FREDERIC S. DENNIS, M.D., assisted by John S. Billings, M.D. Volume III. Philadelphia: Lea Brothers & Co. 1895.

This volume is devoted mainly to the surgery of special parts of the head and neck. There are also articles on the skin, the genito-urinary system and syphilis.

The article on genito-urinary diseases contains a chapter on impotence and sterility which is well worth reading. The writer very properly considers these conditions as being worthy of recognition and treatment and states his case in so many words.

R. W. Taylor writes an excellent article on syphilis. He insists upon the fact that the primary lesion is often multiple, and that "a multiplicity of lesions is only mildly presumptive of their being chancroids." He says that the period of primary incubation is rarely over thirty or forty days, and more often the former. In speaking of the treatment of this disease he says that, as a rule, it should begin at the time of the evolution of the secondary symptoms, not before. He regards the protoiodide of mercury as the most convenient form of administering this drug in the early stages of the disease, but after the first few months prefers to use inunctions. An important point which he raises is that the mercury should be given intermittently.

In writing of cancer of the tongue, Henry H. Mudd adheres to the opinion, which is now so generally held, that cancer "is primarily local, and as such must receive prompt and efficient treatment." He points out that the tongue is not essential to deglutition, to speech, nor to taste, and that the removal of a part or of the entire tongue is neither difficult nor especially dangerous. He is of the opinion that partial excision is justifiable in certain cases. He prefers the use of the knife and scissors to the ecraseur or galvano-cautery as less likely to produce sepsis and secondary hæmorrhage. All enlarged glands should be removed, and for this purpose an external incision is preferable. He appends elaborate tables showing the mortality and the percentage of recurrences.

The subjects are in the main well treated, and the articles are essentially practical. The pathology, and especially the bacteriology, of the diseases is not gone into as fully as one might expect in such a work; as for instance we look in vain for the cause of the suppuration in buboes, and the bacteriology of empyema is given very briefly. The article on necrosis of the jaws is written in a very involved manner and consequently is difficult to understand. On page 490, under tuberculosis of the kidney, we are referred to another place for further information, but the number of the page has been omitted.

On the whole, however, it is an excellent volume, and the work is one

which we can strongly recommend. The illustrations and letter-press are both good, the publishers having performed their part thoroughly well.

R. C. K.

**An American Text-Book of Surgery, for Practitioners and Students.** By Charles H. Burnett, M.D.; Phineas S. Conner, M.D.; Frederic S. Dennis, M.D.; William W. Keen, M.D.; Charles B. Nancrede, M.D.; Roswell Park, M.D.; Lewis S. Pilcher, M.D.; Nicholas Senn, M.D.; Francis J. Shepherd, M.D.; Lewis A. Stimson, M.D.; William Thomson, M.D.; J. Collins Warren, M.D., and J. William White, M.D. Edited by William W. Keen, M.D., LL.D., and J. William White, M.D., Ph.D. Second edition, carefully revised. Philadelphia: W. B. Saunders, 925 Walnut street. 1895.

The appearance of a second, three years after the issue of the first, edition is an indication of the success of the book. It has been much improved and brought up to date. A new section has been added on acromogaly and many chapters largely rewritten. A full description is given of the effect of modern small-arms in military surgery. Very good descriptions are given of the modern treatment of septic diseases of the brain and its membranes resulting from middle ear disease, and of the Hartly-Krause method of removing the Gasserian ganglion. In the chapter on the surgery of the respiratory organs a description and a clear plate are given of Schede's operation of theraoplasty.

Witzel's gastrostomy, which has given such good results, is fully described. The sections dealing with fractures and dislocations, appendicitis, the radical cure of hernia, and the more recent methods in amputations of the breast have been enlarged and more fully described. The chapter on displacements of the uterus has been largely rewritten.

The better results obtained by the more aggressive treatment of fracture-dislocations of the spine is clear and concise. The chapter on gall-stone surgery, while hinting at the more recent advances made in this important department of abdominal work falls short of what might have been expected, and the removal of gall-stones from the common and hepatic ducts is only mentioned. The subject is worthy of more space, and a detailed description of the removal of gall-stones from the ducts would have been much appreciated. The book is large and heavy to hold, and in a future edition we hope the authors may see their way clear to divide the book into two volumes, or else furnish each purchaser with a book-holder. The work, however, is deservedly popular with both students and practitioners and is one that can be read and studied with great satisfaction.

G. E. A.

**A Manual of Operative Surgery.** By Lewis A. Stimson, B.A., M.D., and John Rogers, Jr., B.A., M.D. Third Edition. Philadelphia: Lea Brothers & Co. 1895.

A neatly gotten-up book, fully and clearly illustrated. So large a field is covered, including the operations in general surgery, gynæcology, as

well as symphysiotomy, that the descriptions are necessarily brief. The chapters on brain surgery and the surgery of the abdomen are clear and as a rule up to date. The operation of pylorotomy, most fully illustrated and described, is not the most approved of at present by many abdominal surgeons. The directions for trephining the mastoid antrum in septic lepto-meningitis are too meagre to be practically useful. The chapter on hernia is good. Bassini's operation is fully detailed and illustrated, and is probably the best operation we have for the radical cure of inguinal hernia. The book contains an immense amount of information in a very small space. But it is imperative that a surgeon should have more information concerning most operations than is contained in this book before he is in a position to do justice to his patient or to himself. It is admirably adapted, however, to be a book of ready reference in an emergency.

G. E. A.

**The Pathology and Treatment of Venereal Diseases.** By ROBERT W. TAYLOR, M.D., Clinical Professor of Venereal Diseases at the College of Physicians and Surgeons (Columbia College) New York; Surgeon to Bellevue Hospital, and Consulting Surgeon to City (Charity) Hospital. With 230 illustrations and seven coloured plates. Philadelphia: Lea Brothers & Co. 1895.

In the introduction the author gives a history, so far as is known, of the appearance of venereal diseases, showing very clearly that they were all well known before the return of Columbus from his first trip, 1493. Then follows a brief statement of the observations which finally led to the settlement of the great controversy between the unicists and the dualists.

The chapter on the anatomy and physiology of the penis, etc., is very complete and well illustrated.

Gonorrhœa in the male and female receives the full consideration which its great importance calls for, and the author's treatment of this large subject is masterly and instructive. The sequelæ and complications are fully discussed. The author is inclined to doubt the magisterial statement of the Neisser school that the discovery of the gonococcus settles forever the etiology of gonorrhœa, and from his large experience quotes some remarkably interesting cases, which tend to show that other germs may be etiological factors in this disease. We would especially commend this chapter to all family and other physicians and surgeons who undertake the treatment of gonorrhœa. In treatment the author is practical and conservative and does not altogether approve of some of the more recent methods.

Syphilis is treated in a masterly way. The student or practitioner will find in this book a most full, complete and trustworthy guide on all points connected with this subject.

Taken altogether it is a most valuable work, and one that can be trusted as up to date, and yet possessing the conservatism of wisdom and of a long experience in a large field.

G. E. A.

## Society Proceedings.

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### MONTREAL MEDICO-CHIRURGICAL SOCIETY.

*Stated Meeting, January 23rd, 1896.*

F. G. FINLEY, M.D., FIRST VICE-PRESIDENT, IN THE CHAIR.

#### **Unusual Form of Salpingitis.**

Dr. C. F. MARTIN said: The specimens which are presented to-night were removed by Dr. William Gardner at an operation some weeks ago. They consist of two Fallopian tubes which are considerably dilated, and their walls, which are greatly thickened, show a ragged, somewhat shreddy inner membrane.

On section into them there had exuded in both cases clear watery fluid, not bearing any resemblance to pus, but rather having the characters of fluid contained in an ordinary hydrosalpinx. There was, in addition, some granular contents which microscopically presented no evidence of cellular structure. Examination of the wall showed chronic progressive thickening, with numerous small round-cell aggregations at various parts of the different sections. There was no evidence of tuberculosis.

The conclusions to be inferred from the conditions found are, that the case was one of old pyosalpinx, that the cellular elements of the exudate had become absorbed and left behind merely a clear fluid. Such conditions are mentioned by many observers, and there would seem to be sufficient evidence from microscopic appearances to justify this belief.

Dr. W. GARDNER said that the case had been unusual also in its history. The patient from whom the specimens had been obtained was a woman of 35, healthy, with the exception of profuse menstruation, up to within eight weeks previous to the operation. At that time she was seized with sudden severe pain in the pelvis, "cramps," vomiting and fever, and was confined to bed up to the time of the operation. On admission to hospital she had an evening temperature of two to four degrees above normal, and on external examination a tender mass could be felt in the right side of the pelvis, but it was not large enough to project the abdominal wall. On bimanual palpation the uterus was found to be fixed in the pelvis by masses, of which that on the right side was the larger. The operation most suitable for dealing with the case, Dr. Gardner stated, he had not been

able to decide upon until the patient was under ether. Then he chose an abdominal incision on account of the firm fixation of the uterus, made out under anæsthesia. The operation was unusually difficult owing to the dense adhesions and involvement of the intestines. The appendix vermiformis was found in the mass and removed. After removal of the masses an extensive bleeding surface was left which he packed with gauze. The case had not done well, convalescence had been slow and a suppurating sinus and fæcal fistula had formed. The condition met with, he felt, would have given better results if it had been dealt with by a vaginal incision, the better drainage secured in that way being the great advantage. In view of the difficulties already described, a double operation, part of the work being done by the vagina and part by the abdomen, might have answered best. The microscopical examination of the tube had been disappointing to him. There had been no evidence of any form of septic infection, puerperal, gonorrhœal, or other, and the macroscopic appearances had led him to expect the presence of tubercular disease.

Dr. LAPHORN SMITH thought that the amount of thickening and the dense adhesions could not have been formed during the short time that the patient had been complaining of pain. He thought that it was more probable that she had become infected at the time of her marriage, and that the ends of the tubes had become sealed, producing sterility.

Dr. G. E. ARMSTRONG asked Dr. Gardner what his experience was in relation to the connection between disease of the uterine appendages and the appendix vermiformis. In this case they were incorporated in the same mass. Dr. Armstrong had operated several times for appendicitis and found pus in the pelvis in connection with the ovaries and tubes. A French anatomist has described a layer of peritoneum passing from the neighbourhood of the appendix to the tube and stated that it was not uncommon for septic infection to pass down along this to the pelvis and set up local trouble there. He would like to know if any bacteriological examination had been made. Dr. Armstrong thought the abdominal method was to be preferred in these cases, from the fact that it offered an opportunity for the removal of a diseased appendix, if such were present.

Dr. GARDNER, in reply to Dr. Armstrong, said that his experience in finding the appendix involved was small. He did not believe that the condition was common.

#### **Aortic Aneurism.**

Dr. H. A. LAFLEUR exhibited the specimen, which was from the case alluded to by him on the 8th of March, 1895, and he felt would



be of interest. The history of the case briefly is as follows: The patient, a man aged 69, had suffered from aortic insufficiency for fifteen or sixteen years, and had exhibited the well-known signs of that disease. A short time previous to the date on which he had referred to the case, symptoms of pressure upon the trachea had appeared, and Dr. Birkett, on laryngoscopic examination, had detected an aneurism as a small pulsatile tumour projecting into the lumen of the trachea. The symptoms then subsided and the case again became one of aortic regurgitation merely. There had been no signs of intrathoracic pressure, no increased area of dulness and no obvious pulsation beyond that due to the enlarged heart. Tracheal tugging was detected after the aneurism had been made out by Dr. Birkett.

The specimen showed a little projection into the trachea, less marked post-mortem than it had been during life. Dr. Lafleur thought that the early deposition of lime salts in the walls of the aneurism had prevented its growth, the whole expanded portion of the vessel being walled in by calcified masses.

Dr. F. G. FINLEY asked if there had been any pressure by the aneurism on the left bronchus, or if, in any way, the explanation given by the late Dr. MacDonnell of tracheal tugging was borne out.

Dr. LAFLEUR, replying to Dr. Finley, could not say that there was any pressure upon the left bronchus. He was not prepared to say how the tugging in this case had been produced, but the aneurism was closely and intimately related to the trachea. The tugging could not have been due to the small aneurism, as here pulsation was directed towards the centre of the trachea, not downwards. In reply to Dr. McConnell he stated that there had been no difference in the radial pulses.

#### **Parotitis in Pelvic Disease.**

Dr. W. S. MORROW read a paper on this subject, which appeared last month.

Dr. WM. GARDNER had only seen two or three cases of enlargement of the parotid after abdominal operations; one, however, following extirpation of the uterus for fibroid and procedintia, was very severe. He remembered having read only one paper on the subject, and that was by Goodell, entitled, "Parotitis following Ovariectomy." Probably the reason so little had been written about it of late years was that better and cleaner surgery was being done than formerly. He always looked upon this condition as due to some form of infection.

Dr. J. B. MCCONNELL, referring to the first instance related by Dr. Morrow, said he could not understand how a pelvic peritonitis could exist and have such a speedy cure. He thought that possibly it was

an attack of grippe with manifestations in both the abdomen and the parotid gland. He thought the fact that parotitis in these cases was usually unilateral would point more to bacterial than to reflex origin.

Dr. F. A. L. LOCKHART was much interested in the subject of Dr. Morrow's paper, as it was one that was causing considerable discussion in medical literature at the present time. He referred to a case of double suppuration of the parotids reported in Toronto, as having followed vaginal extirpation of the uterus for cancer. The case had done well until the tenth day, when there was a rise of temperature and swelling of the parotid; the second gland became infected also, and both ultimately suppurated, the patient dying on the forty-eighth day after operation. The treatment employed had been stimulants and iron. In the discussion following the recital of this case several observers reported parotitis occurring on the third or fourth day after operation, but in no case had the disease commenced as late as the twelfth.

Dr. WESLEY MILLS said that we were now beginning to understand something of the physiology of the ductless glands, and the relations to one another of the different organs of the body. Whatever might be the cause of the trouble we must not lose sight of the connection between enlargement, etc., of certain glands in the throat and changes in the generative organs. When we deal with groups of organs histologically alike we can understand why changes in the one may affect the other. Whether the enlargement of the parotid was due primarily to vaso-motor effects he could not say, but at least it was probable. The multiform effects of "taking cold" were associated with vaso-motor changes. The reason why the parotid was affected and not the other salivary glands might be that there was a different nerve supply. It was to be remembered that the nervous system influenced metabolism otherwise than through the vaso-motor nerves.

Dr. LAPHORN SMITH had ten years ago attended a medical student for gonorrhoeal orchitis, which was followed by parotitis. He thought that the connection was well known. He quoted two cases, one a lady who developed six weeks after confinement a well-marked inflammation of the parotid. Another had acute peritonitis with pus tubes, followed by parotitis, which disappeared when the pus was removed. The fact that the breasts swell sometimes, when menstruation was not taking place properly, showed the marked nervous relation between these organs and the ovaries, and bore out what Dr. Mills had said.

Dr. H. A. LAFLEUR thought that in discussing the cause of parotitis one should not forget that there was no other instance in the domain

of pathology in which inflammation was caused by excitation through the nervous system. He thought here one must first exclude every other possible cause.

Dr. JAS. STEWART stated, at Dr. Martin's request, that he had produced inflammation of the skin from simple hyperæmia to blistering by suggestion under hypnotism.

Dr. W. F. HAMILTON referred to a case which he had had, an old lady of 82, with an advanced abdominal tumour, connected probably with the uterus or ovaries. Five days before death a symmetrical parotitis of stony hardness, with intense tenderness, had set in. He had regarded it as due to septic absorption from the mouth, which was dry and very foul for some time before death.

Dr. F. G. FINLEY remarked that inflammation of the parotid was not uncommon in typhoid fever, but he had always been inclined to attribute it to septic infection from the mouth.

Dr. W. D. MORROW, replying to Drs. Gardner and Lafleur, said that Paget in his paper mentioned fifteen cases of parotitis secondary to disease outside the abdomen and pelvis, and in all these cases their septic nature could be inferred from other symptoms present; whereas in one hundred and one cases having their original seat in the abdomen or pelvis there were signs of septic infection elsewhere in less than ten per cent., although there was local suppuration in the parotids in something over fifty per cent. of the cases where its presence or absence was specially noted. These differences had to be explained. Pain and swelling of the parotid gland resembling parotitis were set up by very slight causes in some people. Jonathan Hutchison related the case of a woman where the parotid glands became swollen on fatigue and the swelling disappeared rapidly on resting. Dr. Morrow thought that this was explained by the anatomical structure of the gland: with large blood-supply and a tense capsule it was not surprising that hyperæmia caused inflammation.

In reply to Dr. McConnell he gave further particulars of the cases, showing beyond question the correctness of his diagnosis.

In reply to Dr. Lockhart he said that Paget's notes showed the time elapsing before the onset of parotitis to be from three days up to twelve.

Dr. Mills had suggested experiments on animals, but in view of the fact that the parotid glands and other organs involved were frequently removed for disease in the subject, it was hard to see what additional light could be gained in this way.

Dr. Finley had referred to its occurrence in typhoid fever and suggested that here it was due to the sepsis. It had been shown conclu-

sively in England that it was proportionately greater in typhoid than in other fevers and Paget's explanation of this was that in typhoid the local lesion was found in the bowel.

#### **Hodgkin's Disease.**

Dr. A. E. VIPOND and Dr. C. F. MARTIN read a report of this case, which will be published next month.

*Stated Meeting, February 7th, 1896.*

A. D. BLACKADER, M.D., PRESIDENT, IN THE CHAIR.

#### **Disseminated Sclerosis.**

Dr. F. G. FINLEY presented a patient with this disease and read a report of the case, which will be published later.

#### **Intra-Cranial Neurectomy.**

Dr. G. E. ARMSTRONG showed a woman upon whom he had successfully performed this operation. (See page 666 of the March number.)

Dr. JAMES BELL said that he had shown a woman two and a half years ago before the Society, on whom he had operated for the removal of the Casserian ganglion for inveterate neuralgia of over twenty years standing. In his patient the infra and supra-orbital nerves had previously been stretched, with the result of giving only temporary relief. The result of the operation had been perfect freedom from pain, a small anæsthetic area remaining in the cheek and inability to masticate on that side. (This was the report received two years after the operation from the patient herself.) At the time he had undertaken it, this operation of Hartley and Krause was comparatively new; only a small number of cases had been operated upon and the operations had been too recent to allow of a fair judgment of the results. Now a considerable number of cases had been operated upon by this method, and a sufficient length of time had elapsed to justify an opinion upon the results, which could be said to be excellent. So far as he knew, there had been no return of pain in any of these cases; the deformity was almost nothing and the disabilities trifling. No other operation, except that of Mr. Rose, which aimed at effecting the same results by another method, had yielded more than very temporary relief.

This operation is infinitely preferable to that of Mr. Rose, in which the ganglion was approached from the base of the skull behind the pharynx.

A few points in the technique which Dr. Bell considered worth mentioning were, (1) to enlarge the space for entrance to the cranial cavity by cutting away a portion of the temporal bone below the base

of the flap posteriorly down to the level of the zygoma with rongeur forceps. This also provided a suitable drainage space when the flap was replaced; (2) the hand of an assistant he had found much more satisfactory in retaining the brain and keeping it out of the way than any form of metal spatula. Escape of the cerebro-spinal fluid, which frequently occurred by accidental wounding of the membranes, was also a great advantage, as it allowed the brain to be pushed aside much more readily. In the case to which he had referred, so much pressure had been employed in displacing the brain that he had expected it to be followed by cerebral symptoms, but no ill effects had been observed.

#### **Professor Roentgen's New Method of Photography.**

Prof. COX, of McGill University, exhibited several plates and photographs obtained by this method. (See page 661 of the March number.)

#### **Extirpation of the Tonsil for Malignant Disease.**

Dr. G. E. ARMSTRONG presented a patient from whom he had removed one tonsil and described the operation, an account of which will be published later.

#### **Specimens Illustrating Medico-Legal Pathology.**

Dr. WYATT JOHNSTON exhibited specimens from the following cases:

1. Fracture of the skull produced by a hammer, which was also shown.
2. Homicide by cutting the throat. The specimen itself, with photographs, and experimental lesions of the vessels of the neck and of the vertebræ, made with scissors, were shown.
3. Homicide—revolver wounds of the head, neck and chest. Shooting experiments showing the distance at which the shots were fired.
4. An old bullet wound of the skull, with consecutive lesions of the meninges and localized softening of the brain. The symptoms were mania followed by dementia.
5. Fracture of the skull in a railway accident.
6. Fracture and fissures of a foetal skull.
7. Thrombosis of the abdominal aorta, with inversion of the intima, following a crush of the abdomen.
8. Laceration of the intercostal muscles without fracture of the ribs in a crush of the chest.
9. The relative extent of the injuries to the muscles and skin produced in cases of crushing.
10. Photographs showing lesions in the Demers and Gauthier homicide cases.

**Foetal Eventration.**

Dr. W. W. ALEXANDER shows a specimen of this monstrosity; the report of which will be published next month.

Dr. A. L. de MARTIGNY asked if the missing portion of the leg had been found. The appearance of the stump suggested amputation by the cord.

Dr. ALEXANDER answered that he had not found it.

*Stated Meeting, February 21st, 1896.*

A. D. BLACKADER, M.D., PRESIDENT, IN THE CHAIR.

**Extra-Uterine Foetation—Dermoid Cyst.**

Dr. WYATT JOHNSTON showed for Dr. Alloway the following specimens:

1. An extra-uterine foetation sac the size of an egg with a thick wall showing numerous adhesions; the embryo was not present, but chorionic villi were found.

2. A case of extra-uterine foetation, in which the embryo was in good preservation; the date was about the second month of gestation.

3. A dermoid cyst showing teeth, hair, and possibly a rudimentary mamma.

Dr. Johnston called attention to the fact that the presence of a mamma within a dermoid cyst was consistent with the morphological theory that the mamma was merely a modified sebaceous gland, being derived from the ectoblast.

Dr. T. JOHNSTON-ALLOWAY, referring to the last case of ectopic pregnancy shown by Dr. Johnston, said it was an extremely interesting case, on which he had operated the same day. The patient, a woman who had been a widow for six years, had married again last year and had missed two periods. Six weeks previously she suffered severe abdominal pain, and losing consciousness fell upon the floor. The family physician was sent for and found abdominal tenderness and Douglas' pouch filled with a fluctuating mass, so the patient was put to bed and kept there until she was able to travel. On entering the hospital her pulse was between 130 and 140 and she was extremely anæmic. Examination revealed a mass in the right iliac region running up across the abdomen to the hypogastric region. There was moderate tenderness. It was not thought necessary to operate the same night, so stimulants were given freely. On advice of the anæsthetist, at the operation, as the heart began to fail, she was not put in the Trendelenberg position. On opening the abdomen the omentum was found adherent to the tumour, which seemed to be firmly

cemented to the parietal peritoneum. After some difficulty Dr. Alloway reached the ovarian artery, which he ligated at the right corner of the uterus, then separating the adhesions, he got into the main cavity. The way in which the condition had formed was probably from rupture of the tube six weeks previously, and nature had supplied a fibrous wall which had prevented general fatal hæmorrhage—thus it did not become general, but encysted. After having tied off the artery he proceeded to clear out the clots and debris. The patient by this time was pulseless, only the respiration going on, so he packed the cavity with gauze to prevent oozing, although there had been no fresh hæmorrhage during the time the abdomen was open—*twelve minutes*—and the patient did not suffer at all from shock.

#### **Necrosis of the Jaw.**

Dr. JAMES BELL exhibited the specimen, the report of which will be published later.

#### **Gall-Stone Specimens.**

Dr. JAMES BELL exhibited gall-stone specimens from six cases upon which he had operated during the previous six weeks.

1. A single round stone about three-quarters of an inch in diameter, which he had removed from the ampulla of the common duct, partly within the walls of the duodenum. The patient, a gentleman aged 52 years, had suffered from complete obstruction of the common bile duct for twelve months. The jaundice was intense, the colour of the face being a dark bronze, the urine very dark and the stools devoid of colour. He had fallen off in weight in the year from 225 to 140 pounds. For four or five years previous to the complete obstruction to the outflow of bile, he had suffered from attacks of biliary colic. On opening the abdomen the stomach, duodenum, colon, liver and omentum were all matted together with dense, firm adhesions, so that the bile ducts were exposed only after a very tedious and difficult dissection. The gall-bladder and cystic duct were shrunken almost to the point of obliteration, while the common duct was dilated to the size of the index finger. A longitudinal incision was made into the duct, extending into the muscular wall of the duodenum, directly over the stone, and the stone removed. There was a gush of bile from the incision, which was arrested by compression of the duct on the hepatic side. The wound was closed by a row of interrupted sutures, and supplemented by a double row of Lembert sutures. A drainage tube was retained in the wound for several days, but there was no escape of bile. The progress of the case after operation was uneventful, with one exception. For one week after operation there was no

diminution of the jaundice and no evidence of bile in the stools. After this, however, bile was passed freely and the jaundice rapidly disappeared.

This experience led Dr. Bell to conclude that the patency of the orifice of the duct should not be taken for granted, as was generally done, but that it should be demonstrated before closing the wound. The patient returned to his home at the end of four weeks and has since been rapidly regaining his strength and increasing in weight.

2. A small stone (the size of large pea), from the cystic duct. This patient, a nurse aged 35, had been engaged in nursing a case of typhoid fever, when she became ill and feverish and concluded that she had contracted the disease from her patient. She was admitted to the Royal Victoria Hospital under this supposition. She soon developed some septic symptoms, with localized swelling and tenderness in the right hypochondrium, and was transferred to the surgical side. The more urgent symptoms soon disappeared and a swollen tender gall-bladder could be recognized. Cholecystostomy was done on the 16th of January and the small stone found impacted in the cystic duct. On aspirating the gall-bladder, after isolating it in the wound, a clear viscid fluid first flowed, then flaky sero-pus and finally pus. Subsequent history uneventful.

3. Four stones removed from the gall-bladder of a lady aged 37, who had suffered for four or five weeks from acute localized symptoms, which had suggested a diagnosis of appendicitis. There was a history of attacks of biliary colic extending over a number of years. The four stones were so arranged as to form a conical shaped mass, the apex of which lay in the neck of the cystic duct. There were no adhesions, the operation (cholecystostomy) was simple and the subsequent progress uneventful, except for a phlebitis of the right leg, which developed about a week after operation.

4. 135 faceted stones removed from the gall-bladder of a woman aged 27. There had been attacks of biliary colic at the age of 13. Present illness began in December, 1895, and was of an acute inflammatory character, localized in the side, and suggested appendicitis. On opening the abdomen, the under surface of the liver was found firmly adherent to the stomach, duodenum, colon, and omentum. The base and inferior surface of the gall-bladder was fused into the greater omentum as a hard inflammatory mass. On separating this mass many stones rolled out, and those in the neck of the bladder and cystic duct were removed with difficulty. Great difficulty was experienced in attaching the imperfect gall-bladder to the parietal peritoneum. The subsequent history was uneventful. There was



only a very slight flow of bile from the gall-bladder on a couple of occasions.

5. A single large, soft stone from the gall-bladder of a woman aged 55 years. There had been a history of biliary colic, beginning at 15 years of age and continuing for a number of years and then ceasing. Recently she had suffered from severe chills, high fever, and at times a slight jaundice. Cholecystostomy February 15th. No adhesions, and the distended gall-bladder contained, contrary to expectation, only pure bile. Subsequent history was uneventful.

6. A man aged 55, intensely jaundiced and cholæmic, was admitted to the Royal Victoria Hospital with a history of sudden onset of jaundice six weeks previously. Obstruction to the outflow of bile was complete. At the operation, which was extremely difficult on account of the adhesions, the gall-bladder and ducts were found empty, shrunken, and beaded with hard nodules. The gall-bladder was opened and several of these nodules examined. They consisted of hard fibrous tissue (apparently cancerous). The lymphatic glands in the neighbourhood were also enlarged and indicative of cancerous infiltration. On this account the operation of cholecystectomy, which had been contemplated, was abandoned. Recovery from the operation, which was prolonged and difficult, was uninterrupted.

#### **The Diagnosis and Treatment of Septic Infection in Puerperal Cases.**

Dr. D. J. EVANS read a paper by this title, which will be published next month.

Dr. A. LAPHORN SMITH thought that the paper was above criticism. Every word in it was true, as far as he knew, and if all the directions were carried out the death rate from puerperal septicæmia would be materially lowered. He then read conclusions which he had embodied in a paper read before the American Gynæcological Society three years ago, which coincided entirely with the views expressed by Dr. Evans.

Dr. F. A. L. LOCKHART wished to lay special stress on one point, and that was the use of antiseptics in midwifery. He thought that even at the present day too many practitioners were either careless or ignorant in this respect, basing his opinion upon a discussion which took place some time ago, in which one speaker stated that he considered antiseptics in the lying-in-room to be injurious, and that he did not always even wash his hands before examining a patient in labour. Another point was in using solutions sufficiently strong to be of service; thus a weak solution of permanganate of potash, which would not stain the tissues, was powerless as a germicide and lulled the

physician relying upon it into a false sense of security. Allowing the patient to sit up in bed, as recommended by Dr. Smith, he thought dangerous.

Dr. J. Alex. HUTCHISON advocated the use of permanganate of potash, and referred to three cases of septic fever in which its use had been followed by good results.

Dr. D. F. GURD said he had had a thousand cases of midwifery and had never given an intra-uterine douche. Among these there had only been four cases of fever, in two of these nervous influences and a morbid fear, for some months previous to parturition, had been a factor in the cause (all recovered). As a rule he did not give vaginal injections, but trusted to quinine and stimulants. He was most careful about the patient's clothing and bedding being clean.

Dr. F. BULLER said that though now an ophthalmic surgeon he had had at one time a large experience in midwifery practice, and that he had never used all the precautions spoken of by Dr. Evans, and he did not have many mishaps. He thought that 99 per cent. of women would get well if left strictly alone. That non-interference does not refer alone to midwifery, but to general surgical work, was borne out by his experience in a military hospital. He had observed that it was the practice of the surgeons to put a probe into every wound, with the result that there were numerous cases of erysipelas and pyæmia. Noting these facts he never interfered unnecessarily with the wounds under his care, and he never had a case of erysipelas or pyæmia.

Dr. EVANS, in replying, said that it was not his practice to disinfect the vagina unless there was evidence of leucorrhœa or gonorrhœa. He allowed his patients to sit up when there was good, firm uterine contraction, and he had never yet seen any trouble result. In irrigation he did not think that the kind of solution made much difference, the chief points being the use of hot water and plenty of it. He agreed that non-interference was best in normal cases, but where there was local disease present it must receive local treatment.

#### **Sarcoma of the Uterus.**

Dr. J. A. MACPHAIL exhibited the specimen and spoke of the rarity of the disease.

Dr. LAPHORN SMITH said that he had removed this sarcomatous uterus from a woman 40 years of age, the mother of twelve children at term and two miscarriages. The last child was one and a half years of age. She had been suffering from menorrhagia all last summer until she had consulted her family physician, who discovered a polypus projecting from the os uteri, and the speaker was sent for to remove it.

This was done and the uterus thoroughly curetted, after which the patient enjoyed good health for six months. At the end of this time menstruation again became profuse, abdomen rapidly increased in size, there was marked pelvic pain, and pain on urination and defecation, with a feeling of obstruction in the rectum. On examination the uterus was found to be the size of an adult head, the sound entering six inches. Immediate removal was advised, and after carefully rendering the cavity of the uterus aseptic by curetting and washing with bichloride, the patient was placed in Trendelenburg posture and the entire uterus removed. The patient was partially collapsed, but rallied quickly under copious enemata of hot salt solution. She was sitting up in two weeks, walking about in three weeks, and went home looking remarkably well in four weeks. This was the third case of sarcoma of the uterus that he had had under his care, one of them being a girl of 14 years, which he had reported to the Society about fourteen years ago.

#### **Syphilis of the Liver.**

Dr. W. F. HAMILTON reported the case. (See page 763.)

Dr. C. F. MARTIN described the pathological condition. (See page 763.)

THE

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## CONVOCATION OF MCGILL FACULTY OF MEDICINE.

The sixty-third session of the Medical Faculty of McGill University was brought to a close on March 31st of this year, and was remarkable especially for the number of graduates. The degree of M.D., C.M., was conferred on no less than ninety students, who had satisfied the examiners that they were qualified to practise. Convocation Hall was, it possible, more crowded than ever with the relatives and friends of the graduates. Mr. J. H. R. Molson, the senior Governor, occupied the chair, in the absence of Sir Donald Smith, the Chancellor. The dais was crowded with professors and lecturers belonging to the various faculties. After the pass lists had been read by the Dean and the prizes presented, the students' valedictory was delivered by Dr. G. R. Deacon, who was also the medallist for the year. Prof. Armstrong followed with the customary valedictory address on behalf of the Faculty.

Prof. Craik, Dean of the Faculty, then gave his customary annual report of the more important features and incidents of the session. He explained that while the list of graduates seemed large, yet in proportion to the number of students it is not larger than it has been in former years. The percentage this year is 21.6; six years ago it was 21.4, and eight years ago it was 22.5. Thus it can be seen that the number is not proportionately large, proving that the stringency of the examinations has not in any way been relaxed, as might have been imagined. That the school has far outgrown its original provincial character and has become perhaps more thoroughly cosmopolitan than any other medical school on the continent is shown by the fact that of the 414 students who have been in attendance during the session, including of course the 90 graduates, 164, or a little under 40 per cent., are residents of the Province of Quebec; 121, or a little

under 30 per cent., are from Ontario; 85, or rather more than 20 per cent., come from the Maritime Provinces, including Newfoundland; 27 or 6½ per cent., from the United States; 13, or rather more than 3 per cent., from the Northwest Provinces and Territories, and 4, or nearly 1 per cent., from the West Indies and South America.

Feeling reference was made to the death during the year of Dr. E. P. Williams, Demonstrator of Pathology and Assistant Curator to the Museum.

The crowded condition of the hall proved more conclusively than ever before the great necessity for additional accommodation for functions of this kind. The janitors were busy turning people from the door long before the time appointed for the opening of the convocation, and among them many of the relatives of the graduates, who in consequence naturally felt great disappointment.

The following gentlemen, 90 in number, have fulfilled all the requirements to entitle them to the degree of M.D., C.M., from the University :

Archibald, E. W., B.A.....	Montreal, Que.
Argue, J. F.....	Carp, Ont.
Ault, C. R.....	Montreal, Que.
Bonnell, S.....	Halifax N.S.
Brathwaite, J. M.....	Barbadoes, W.I.
Brunelle, P.....	Lowell, Mass.
Carron, F. B.....	Brockville, Ont.
Church, C. H.....	Montreal, Que.
Church, H. M.....	Montreal, Que.
Churchill, J. L., B.A.....	Lockport, N.S.
Colquhoun, P., B.A.....	Montreal, Que.
Corbett, F. A. F., B.A.....	Parrsboro', N.S.
Craig, R. H.....	Montreal, Que.
Crocket, A. P.....	Fredericton, N.B.
Deacon, G. R.....	Stratford, Ont.
Dewar, J. E.....	Glen Sandfield, Ont.
Donahoe, M.....	Cardigan Bridge, P.E.I.
Drum, L., B.A.....	Quebec, Que.
Duckett, F. J.....	Montreal, Que.
Elliott, F. B.....	Mayfair, Ont.
Ellis, G. H.....	Dundela, Ont.
Ewan, R. B.....	Montreal, Que.
Ferguson, J. A.....	Smith's Falls, Ont.
Findlay, C.....	Hamilton, Ont.
Fish, E. C.....	Newcastle, N.B.
Fisk, W. M.....	Abbotsford, Que.
Fraser, A. D.....	Breadalbane, Ont.
Fraser, H. B., B.A.....	Westmeath, Ont.
Foss, A. F.....	Sherbrooke, Que.
Goltman, A.....	Montreal, Que.
Grant, A. J.....	Pembroke, Ont.
Grant, D.....	Pictou, N.S.
Hartin, G.....	Bell's Corners, Ont.

Healy, D. J.....	Toronto, Ont.
Hogan, E. V., B. A.....	Weymouth, N.S.
Howell, W. B.....	Montreal, Que.
Hughson, E. R.....	Blenheim, Ont.
Irvine, A. D.....	Westmount, Que.
Johnston, F. E. L.....	Delaware, Ont.
Keith, H. W.....	Havelock, N.B.
Keily, J. K.....	Almonte, Ont.
Kemp, H. G.....	Brighton, Ont.
Kendrick, W. N.....	Austin, Minn., U.S.A.
Lambly, W. D.....	Inverness, Que.
Lauder, S. E.....	Durham, Ont.
Lee, F. J.....	Port Hope, Ont.
Leslie, P. C.....	Montreal, Que.
Lynch, D. P.....	Chapleau, Que.
Martin, R. H.....	Chatham, Ont.
Mason, R.....	Dalesville, Que.
Mitchell, R. W., B.A.....	Montreal, Que.
Moffatt, W. A.....	Ormsdown, Que.
Moles, E. B.....	Arnprior, Ont.
Morse, L. R., B.A.....	Lawrencetown, N.S.
Mowatt, W. B.A.....	Montreal, Que.
Macartney, F. W.....	Montreal, Que.
Macaulay, J. J. F.....	River Dennis, N.S.
Macpherson, D.....	Montreal, Que.
MacTaggart, D.D., B.A.....	Montreal, Que.
McArthur, A. W.....	Williamstown, Ont.
McDonald, H. K.....	Pictou, N.S.
McEwen, D.....	St. Elmo, Ont.
McGannon, A. V.....	Brockville, Ont.
Patrick, D.....	Montreal, Que.
Prescott, A. H.....	Queensbury, N.B.
Robertson, W. A. T.....	Howick, Que.
Robins, G. D., B.A.....	Montreal, Que.
Ross, R. O., B.A.....	Rossville, N. S.
Ryan, J. P.....	Portage La Prairie, Man.
Ryan, E. J.....	St. Kitts, W.I.
Secord, J. H.....	Summerside, P.E.I.
Smellie, W.....	Huntingdon, Que.
Shaw, R. B.....	Cove Head, P.E.I.
Slack, T. J.....	Waterloo, Que.
Smith, S. R. B.....	Brighton, Ont.
Smith, R. E. G., B.A.....	Woodstock, N.B.
Smyth, W. H., B.A.....	Montreal, Que.
Spearman, F. S.....	Hemmingford, Que.
Stackhouse, O. C. S.....	Lachute, Que.
Staples, C. A., B.A.....	Stillwater, Minn.
Steeves, C. P., B.A.....	Lower Coverdale, N.B.
Sutherland, J. A.....	River John, N.S.
Tees, J., B.A.....	Montreal, Que.
Tetreau, T.....	Lawrence, Mass.
Thompson, F. L.....	Perth, Ont.
Tupper, T. S.....	Frédéricton, N.B.
Warren, J. F.....	Harper, Ont.
Wheeler, F. H.....	Florenceville, N.B.
White, R.....	Pembroke, Ont.
Wood, W. S.....	Faribault, Minn., U.S.A.

## MEDALS AND PRIZES.

THE HOLMES MEDAL is awarded to GEORGE DOUGALL ROBINS, B.A. of Montreal, Que.

THE FINAL PRIZE is awarded to GEORGE REGINALD DEACON, of Stratford, Ont.

THE CLEMESHA PRIZE is awarded to ROBERT OSWALD POSS, B.A., of Rossville, N.S.

THE CLINICAL CHEMISTRY PRIZE is awarded to FREDERICK BURKE CARRON, of Brockville, Ont.

THE SENIOR ANATOMY PRIZE is awarded to WILLIAM OLIVER ROSE, of Lakeville, P.E.I.

### HONORS IN THE FINAL BRANCHES.

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|----------------------------|---------------------------|
| 1. Robins, G. D., B.A.     | 10. Fisk, W. M.           |
| 2. Deacon, G. R.           | 11. McDonald, H. K.       |
| 3. Kendrick, W. N.         | 12. Mitchell, R. W., B.A. |
| 4. Archibald, E. W., B.A.  | 13. Smith, R. E. G., B.A. |
| 5. Secord, J. H.           | 14. Slack, T. J.          |
| 6. Carron, F. B.           | 15. Lynch, D. P.          |
| 7. Moffatt, W. A.          | 16. Ross, R. O., B.A.     |
| 8. Argue, J. F.            | 17. Shaw, R. B.           |
| 9. Corbett, F. A. F., B.A. |                           |

### HONORS IN MEDICINE AND CLINICAL MEDICINE.

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|----------------------------|-----------------------|
| 1. G. D. Robins, B.A.      | 7. G. R. Deacon.      |
| 2. J. F. Argue.            | 8. { R. C. Ross, B.A. |
| 3. { E. W. Archibald, B.A. | { R. B. Shaw, B.A.    |
| { W. A. Moffatt.           | 10. R. W. Mitchell.   |
| 5. { W. N. Kendrick.       | 11. F. B. Carron.     |
| { G. H. Ellis.             | 12. J. K. Kelly.      |

### HONORS IN SURGERY AND CLINICAL SURGERY.

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|--------------------------|----------------------------|
| 1. W. N. Kendrick.       | 12. E. V. Hogan, B.A.      |
| 2. G. D. Robins, B.A.    | 13. T. J. Slack.           |
| 3. G. R. Deacon.         | 14. W. A. T. Robertson.    |
| 4. J. H. Secord.         | 15. F. A. F. Corbett, B.A. |
| 5. E. W. Archibald, B.A. | 16. W. M. Fisk.            |
| 6. W. A. Moffatt.        | 17. J. F. Argue.           |
| 7. { F. B. Carron.       | 18. E. J. Ryan.            |
| { P. C. Leslie.          | 19. { R. W. Mitchell.      |
| { R. O. Ross, B.A.       | { D. Patrick.              |
| 10. { H. K. McDonald.    |                            |
| { C. P. Steeves, B.A.    |                            |

### HONORS IN OBSTETRICS AND CLINICAL OBSTETRICS.

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|---------------------------|----------------------------|
| 1. R. E. G. Smith, B.A.   | 13. F. A. F. Corbett, B.A. |
| 2. G. D. Robins, B.A.     | 14. L. Drum, B.A.          |
| 3. E. W. Archibald, B. A. | 15. H. K. McDonald.        |
| 4. W. N. Kendrick.        | 16. { D. P. Lynch.         |
| 5. J. K. Kelly.           | { W. Mowatt, B.A.          |
| 6. { G. R. Deacon.        | 18. { W. M. Fisk.          |
| { E. J. Ryan.             | { T. Tetreau.              |
| 8. W. A. Moffatt.         | 20. { H. M. Church.        |
| 9. { J. F. Argue.         | { R. W. Mitchell, B.A.     |
| { F. B. Carron.           | { R. O. Ross, B.A.         |
| 11. { E. V. Hogan, B. A.  | 23. C. A. Staples, B.A.    |
| { J. H. Secord.           |                            |

## HONORS IN PRACTICAL PATHOLOGY.

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|--------------------------|------------------------|
| 1. G. D. Robins, B.A.    | 5. G. R. Deacon.       |
| 2. E. W. Archibald, B.A. | 6. R. O. Ross, B.A.    |
| 3. { W. N. Kendrick.     | 7. F. B. Carron.       |
| { W. A. Moffatt.         | 8. C. P. Steeves, B.A. |

## HONORS IN OPHTHALMOLOGY.

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|-------------------------|----------------|
| 1. J. H. Secord.        | 3. W. M. Fisk. |
| 2. R. W. Mitchell, B.A. | 4. E. C. Fish. |

## HONORS IN GYNÆCOLOGY AND CLINICAL GYNÆCOLOGY.

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|-----------------------------|---------------------------|
| 1. E. W. Archibald, B.A.    | 17. W. M. Fisk.           |
| 2. G. H. Ellis,             | 18. { J. K. Kelly.        |
| 3. R. B. Shaw.              | { T. J. Slack.            |
| 4. W. N. Kendrick.          | 20. J. L. Churchill, B.A. |
| 5. F. J. Duckett.           | 21. P. C. Leslie.         |
| 6. J. H. Secord.            | 22. { E. V. Hogan, B.A.   |
| 7. G. R. Deacon.            | { W. A. T. Robertson.     |
| 8. D. P. Lynch.             | 24. F. H. Wheeler.        |
| 9. { F. A. F. Corbett, B.A. | 25. W. A. Moffatt.        |
| { R. W. Mitchell, B.A.      | 26. { J. M. Brathwaite.   |
| 11. { S. Bonnell.           | { A. D. Fraser.           |
| { H. W. Keith.              |                           |
| 13. { F. B. Caron.          |                           |
| { L. Drum, B.A.             |                           |
| { G. D. Robins, B.A.        |                           |
| { R. O. Ross, B.A.          |                           |

## HONORS IN HYGIENE.

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|---------------------------|-----------------------|
| 1. G. R. Deacon.          | 17. C. A. Staples.    |
| 2. W. N. Kendrick.        | 18. D. McEwen.        |
| 3. R. O. Ross, B.A.       | 19. D. P. Lynch.      |
| 4. L. R. Morse.           | 20. J. E. Dewar.      |
| 5. R. E. G. Smith, B.A.   | 21. F. W. Macartney.  |
| 6. G. D. Robins, B.A.     | 22. { F. L. Thompson. |
| 7. F. A. F. Corbett, B.A. | { H. K. McDonald.     |
| 8. A. J. Grant.           | 24. Drum, L.          |
| 9. R. B. Shaw.            | 25. { J. F. Argue.    |
| 10. W. A. Moffatt.        | { J. L. Churchill.    |
| 11. C. P. Steeves.        | { D. Grant.           |
| 12. J. K. Kelly.          | 28. F. J. Lee.        |
| 13. E. C. Fish.           | 29. { P. C. Leslie.   |
| 14. J. H. Secord.         | { R. W. Mitchell.     |
| 15. G. H. Ellis.          | { W. A. T. Robertson. |
| 16. W. H. Fisk.           | { W. Smellie.         |

The next annual meeting of the Canadian Medical Association will be held in the city of Montreal on the 26th, 27th and 28th of August of this year. At a recent meeting held here the following members of the profession were appointed a committee of arrangements, namely: Sir William Hingston, Drs. Roddick, Buller, Marsolais, Blackader, Brunelle, Demartigny, Armstrong, Perrigo, Desjardins and Birkett.

The local secretary for the Province of Quebec is Dr. J. G. McCarthy, 61 Drummond street, Montreal. The general secretary is



Dr. F. N. G. Starr, 471 College street, Toronto, to whom all communications of a general character, having reference to the meeting, should be addressed.

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Dr. John Herald has been appointed to the chair of clinical medicine in Queen's University, made vacant by the death of Dr. Herbert Saunders.

The *Australian Medical Journal* and the *Intercolonial Journal of Medicine and Surgery* have amalgamated under the title of the *Intercolonial Medical Journal of Australasia*.

In consequence of the death of the editor of *The Annals of Ophthalmology and Otology* the conduct of that quarterly periodical has passed into the hands of Dr. Casey Wood, of Chicago, who will have charge of the ophthalmological department, and Dr. T. Melville Hardie, who will act as editor of the department of otology and laryngology.

## Obituary.

### DR. HERBERT SAUNDERS.

The death of Dr. Herbert Saunders, coming so soon after that of the late Dr. K. N. Fenwick, removes from Kingston one of its most prominent and efficient physicians and from Queen's University the Professor of Clinical Medicine. Dr. Saunders occupied as prominent a position in medicine in Kingston as did the late Dr. Fenwick in Surgery. He is said to have been generous to a fault and kind to the poor. What greater tribute can be paid to any man?

Dr. Saunders was well known in Toronto and in Montreal, and was esteemed and respected for his high attainments as a physician and for his kindly and generous character as a gentleman.

Dr. Saunders was born in London, England, in 1847. He was the son of a Church of England minister. His early education he received at home. At the age of 17 he entered Queen's College, Kingston. His professional course was taken at the Royal Medical College, where he graduated M.D. in 1869. He then returned to England and passed his examination in the Royal College of Surgeons.

Dr. Saunders leaves a wife and eight children to mourn his loss. During the past twenty-three years he has acted as surgeon of the Kingston Field Battery, and at his death he held the rank of surgeon-major.

Some weeks ago Dr. Saunders was overseeing some work on a drain which entered his house, when he inhaled sewer gas which escaped from the opening. He contracted cedema of the larynx in such an aggravated form that he could not swallow a mouthful of food for five days. After a week's illness there was a marked sign of improvement. His throat became much better and it was thought that he had a chance of recovery. But his lungs became involved, and finally he died of exhaustion and heart failure.

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#### NEW BOOKS, ETC., RECEIVED AND NOTED.

Subphrenic Abscesses. By Carl Beck. Reprint from the Medical Record, February 15, 1896.

Inversion of the Vermiform Appendix—Diagnostic Palpation of the Female Pelvic Organs. By Geo. M. Edebohl, A.M., M.D. Reprint from the American Journal of Medical Sciences, June, 1895.

The Technique of Urethral and Intravesical Irrigations for the abortion of Gonorrhoea and Treatment of other Genito-Urinary Diseases. By Fred C. Valentine, M.D.

Report of a case in which Laparotomy was performed for Intestinal Perforation occurring in the course of Typhoid Fever. By L. W. Hotchkins, M.D. Reprint from the New York Medical Journal, January 11, 1896.

The Sensory Nervous System in Diagnosis—The Reflexes. By Chas. H. Hughes, M.D. Reprint from The Alienist and Neurologist, January, 1896.

Chronic Perivesical Inflammation. By L. W. Hotchkins, M.D. Reprint from the Annals of Surgery.

Researches into the Anatomy and Pathology of the Eye. By Treacher Collins, F.R.C.S. London: H. K. Lewis.

Voice Building and Tone Placing. By H. Holbrook Curtis, Ph.B., M.D. New York: D. Appleton & Co.

Brain Surgery for Epilepsy; Neuralgia of the Fifth Nerve; Modern Surgery of Serous Cavities; Rupture of Left Lateral Ventricle. By B. Merrill Ricketts, Ph.B., M.D.

Toxic Anisotropias. By G. E. de Schweinitz, M.D. Philadelphia: Lea Bros. & Co.  
A Text-Book upon the Pathogenic Bacteria. By Joseph McFarland, M.D. Philadelphia: W. B. Saunders.

Transactions of the American Ophthalmological Society, Thirty-first Annual Meeting. Hartford: Published by the Society.

Transactions of the American Climatological Society, Vol. XI, 1895. Philadelphia Printed for the Association.