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THE Montreal Medical Journal

A MONTHLY RECORD OF THE
PROGRESS OF MEDICAL AND SURGICAL
SCIENCE.

EDITED BY

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Original Communications.

NOTES ON SOME RECENT GALL-STONE CASES.¹

BY

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MR. PRESIDENT AND GENTLEMEN :

It is not my intention to read a paper on the subject of cholelithiasis, nor even on any portion of the subject, but simply to present, in connection with the specimens removed by operation, very condensed reports of the cases upon which I have operated during the past summer and autumn. They are as follows :

CASE I.—Mrs. T., *æt.* 40, a slight woman, normal weight 100 lbs., married 13 years, the mother of three children, the youngest eight years of age, came under observation on the 11th of May, 1897. Her first attack was nine years ago and is described as a severe aching pain through the right side and more or less through the whole upper zone of the abdomen, lasting about half a day, accompanied by vomiting and followed by a tumour the size of a man's fist, just inside the right anterior superior iliac spine. This was tender and painful and she was confined to her bed for seven weeks. During this time the tumour was painful on movement of the body. She was then quite well for three years, except that she felt some pain in the side after every unusual exertion. Six years ago she had a second attack, accompanied by nausea and vomiting and lasting about the same length of time ; although she was not confined to her bed for so long a period and had no tumour following the attack. She then remained well until March, 1897, except that on exertion she felt some pain in the right side. She had a series of attacks similar in character about

¹ Read before the Montreal Medico-Chirurgical Society, Dec. 10, 1897.

the first and fifteenth of March and the first of April (1897), and two others during the month of April, while in bed, which she only left to come to Montreal on the 11th of May. On being questioned, she remembered having had indefinite abdominal pains for years prior to the first attack nine years ago. She had always enjoyed good general health and had never suffered from jaundice, dyspepsia or uterine troubles. During her illness her weight had fallen to 89 lbs. On examination of the abdomen a hard and tender mass was felt just external to, and about an inch below the umbilicus on the right side. It could be traced up more or less indefinitely to the costal margin, in the nipple line, and moved slightly with the movements of respiration. On account of the evident inflammatory nature of the attacks and the situation of the tumour a diagnosis of appendicitis had been made. The operation of cholecystostomy was performed on the 17th of May, when four large and 132 small stones were removed. The four large stones stood one upon another in a column extending outwards from the neck of the cystic duct, the deepest one being firmly impacted in the duct and broken in removal which was effected with much difficulty. The small stones were free in the gall-bladder, which contained a small amount of pus, the latter being sterile on cultivation.

This patient made an uninterrupted recovery, and was discharged on the 5th of July, with the wound not quite closed. Within the last three months I have heard from her that her health is excellent but that the fistula still persists.

CASE II.—Mrs. W., a stout woman, *æt.* 50, an epileptic, married, and the mother of one child, now grown up. Her first symptoms appeared in April, 1895, as an attack of biliary colic, accompanied by vomiting, chills and fever, for which she spent three weeks in the Homeopathic Hospital. She says she was jaundiced then. Since then she has had a great many similar attacks and was admitted to the Royal Victoria Hospital on the 13th of July, 1897, with slight yellowness of the skin. Cholecystostomy was done on the 24th of July, and 124 stones removed. The patient made an uninterrupted recovery and was discharged on the 14th of August in good health and with the wound soundly healed, although there had been for some time after operation a very great flow of bile externally.

CASE III.—Mrs. B., *æt.* 48, the mother of six children, had suffered from a dull pain about the right hypochondrium for 22 years. In December, 1895, she began to have attacks of sharp pain about every three weeks, and about Christmas of that year a dull pain extending into the right shoulder region. In March, 1896, she had the first attack of severe biliary colic, accompanied by chills, perspiration and

vomiting. These attacks continued, sometimes recurring as often as every three weeks, and an attack in January, 1897, was followed by jaundice. In the intervals between the severe attacks she suffered from the dull pain above described. When admitted to the hospital on the 24th of July, 1897, she was a well nourished woman with a systolic murmur at the apex of the heart, but otherwise healthy. A smallish smooth round tumour could be felt in the region of the gall-bladder and on palpation the crepitus of the stones moving upon one another could be distinctly felt. She was operated upon on the 29th of July. The gall-bladder was moderately distended, containing a small quantity of normal bile. Sixty-six faceted stones were removed; 62 of them were free in the gall-bladder and were removed without difficulty. Another was removed with great difficulty from the neck of the duct, and a group of three were impacted in the cystic duct so firmly that an incision was made through its walls, through which they were removed. This incision was closed by fine silk sutures. There was no flow of bile during the operation, after the gall-bladder had been emptied. The gall-bladder was fixed in the wound in the usual way, and after a few days bile began to flow through the tube, though never in great quantity. The patient made an uneventful recovery and was discharged on the 8th of September, with a very slight serous discharge from the site of the wound.

I have since heard that the sinus persists, although her health is good and she is free from pain.

CASE IV.—Mrs. C., *æt.* 47, a large woman with flabby pendulous abdomen, the mother of 11 children, the last born six years ago, was admitted to the Royal Victoria Hospital, in a deeply jaundiced condition, on the 13th of August, 1897, with the following history: She had her first attack of pain in the right hypochondrium in 1881. This was not accompanied by vomiting or chill, but was followed by jaundice. Similar attacks occurred about once in two years up to 1894, when she had a much more severe attack, in which she suffered for 12 days. In the next two years she had one attack each year. Each of these attacks was also followed by jaundice. Since May 1897, she has had many attacks, and the jaundice has never entirely disappeared. The stools have been colourless and the urine dark all the time. The last attack began on the 26th of July, and lasted for three days. Since then the jaundice has been extreme, and has increased rather than diminished. The abdomen was opened on the 17th of August. The gall-bladder was found empty and shrunken. The liver was enlarged and firm, and the lower border thick and rounded. There were many firm old adhesions between the lower

surface of the liver and the adjacent viscera. On exposing the ducts a stone was felt in the common duct, about half an inch from the duodenum. It appeared to be about the size of a large marble and was firmly fixed in the duct, and could not be moved along it in either direction. A longitudinal incision was made in the duct and the stone removed. It was not a hard stone and was broken in removal. As it was turned out of the duct a gush of bile followed. This was sponged out and the incision closed by sutures. A drainage tube was passed down to the border of the duct and iodoform gauze packed around it. The patient made an excellent recovery. The jaundice gradually disappeared, and the stools and urine regained their normal colour in a few days. She was discharged on the 1st of October quite well.

This was a solitary stone which had evidently been in the common duct for a very long time.

CASE V.—Mrs. H., *æt.* 23, married, the mother of two children, the youngest 14 months old, had her first attack of biliary colic on the 1st of April, 1897. From that time to the 1st of June, she had five similar attacks, very severe pain in the right hypochondrium, lasting about four or five hours, accompanied by vomiting and followed by perspiration. The sixth attack on the 1st of June lasted more or less for nine days, and was followed by slight jaundice. Then she had an attack every 24 hours for ten days with more intense jaundice, colourless stools and high coloured urine. From that time until her admission to hospital she had attacks every three or four days, lasting about three hours each, and with persistence of the jaundice. Her physician was able at this time to palpate a tumour in the region of the gall-bladder. On the evening of the 18th of August, she left home to come to Montreal, a distance of some 60 miles, by train. She suffered intensely during the trip and all through the night, but was relieved in the morning. She was operated upon on the 25th, one week later. During this week she had no attacks, the tenderness diminished greatly and the jaundice lessened perceptibly. The first two stools were colourless, the next two slightly coloured, and the last two (in this week) almost normal in colour. Careful examination of the stools, however, failed to discover any gall-stones. It was therefore a question whether this woman should be submitted to operation or not. Operation was decided upon and the abdomen was opened on the 25th of August (as already stated). The gall-bladder was found large and flabby and the bile ducts dilated to the size of a large lead pencil. The head of the pancreas was hard and thickened (apparently inflammatory thickening), but there were no stones in any

of the bile passages. The stone, or stones, had evidently been passed in the last attack, although they were not found in the stools. The patient made an uneventful recovery and was discharged on the 23rd of September.

CASE VI.—Mrs. P., æt 30, a medium sized, well nourished woman, the mother of five children, ranging in age from 12 years to 11 months, was admitted to the Royal Victoria Hospital, on the 13th of September, 1897, with the following history : On the 27th and 28th of August she had had an attack, each day, of biliary colic. Tenderness persisted and a mass was palpable in the right side of the abdomen, below the costal margin. She had suffered from more or less constant uneasiness in this region for six years, and during her labors she had suffered more in this region than in the uterus.

Cholecystostomy was done on the 13th of September. The gall-bladder contained about an ounce of colourless viscid fluid, sterile on cultivation and seven faceted stones. The operation was simple and recovery uneventful. She was discharged with the wound completely healed on the 14th of October, 1897.

CASE VII.—Miss C., æt. 35, unmarried, and previously healthy, while suffering from typhoid fever, (about the end of the second week), was seized with pain, vomiting and a fall of temperature, (to 94.5°F),—a condition of collapse suggesting perforation,—early in the morning of the 21st of September, 1897. She rallied in a few hours, and a painful, tender and rigid condition developed just below the right costal margin. The abdomen was opened in the linea semilunaris on the 24th of September, at 4.30 p.m. There was no general peritonitis, but the gall-bladder was distended and covered with patches of lymph, which extended over the lower border of the liver and to the adjacent coils of colon and duodenum. There was no perforation. The gall-bladder was aspirated and 6 oz. of pus, which gave pure cultures of the typhoid bacillus, withdrawn. It was then incised and 152 faceted stones removed, and the operation of cholecystostomy completed in the usual way. The wall of the gall-bladder was very dark, œdematous and friable. A drainage tube was inserted and bile flowed freely. On account of the pre-existing localized peritonitis an opening was left on the lower angle of the abdominal wound, through which a drainage tube and iodoform gauze packing were carried up along the under surface of the liver between the bile passages and the intestines. The patient's condition was excellent until the morning of the 26th, when symptoms of perforative peritonitis began about 7 p.m., and she sank and died at 4 a.m. next morning, the 27th of September. The wound was dressed at 4.30 p.m. on the 26th and the

tube removed. The intraperitoneal drain and packing were also removed and the packing renewed at the same time, when everything looked quite well and promising. Bile continued to flow from the opening in the gall-bladder to the end, and there was no evidence that it had given way. A partial post-mortem examination was made through the operation wound, 11 hours after death. A general purulent peritonitis was found and four small faceted stones were removed from a pocket at the lower angle of the wound. The walls of the gall-bladder were injected and its mucosa much thickened and of a deep green colour. The surrounding liver tissue was pale and leathery, with multiple focal miliary necrosis. The small intestine was removed and showed the typical anatomical lesions of typhoid fever. A rupture through a typhoid ulcer was found, (but may have been made in the removal of the intestine), about eighteen inches above the ileocaecal valve. In the absence of a complete post-mortem examination of the abdomen, my interpretation of the sudden, fatal termination in this case is, that ulceration of the deeper part of the gall-bladder or the cystic duct had taken place into, or upon the adjacent under-surface of the liver, and that it was the bursting and emptying of this abscess cavity which set up the fatal peritonitis. In no other way can I account for the presence of four gall-stones in the peritoneal cavity, as I am sure they did not escape into the abdomen at the time of operation and the steady flow of bile externally for hours after the fatal symptoms set in, showed that there could not be any direct communication with the abdominal cavity. Moreover, the wound was examined and the gall-bladder sutures were found intact five hours after the onset of the symptoms.

CASE VIII.—Mrs. P. H. A., æt 25, a medium-sized, well nourished woman, the mother of three children, was admitted to the Royal Victoria Hospital on the 10th of October, and operated upon the next day. In August, 1893, two weeks after confinement, she had her first attack of biliary colic, preceded by a chilly feeling and followed by vomiting. She then had attacks every two weeks, until the end of September, 1893, when she had a very severe attack, which was followed by jaundice for 24 hours. She remained well until the 15th of August, 1897, when she contracted measles and the attacks returned; and the gall-bladder became tender and palpable. The last attack of biliary colic was on the 6th of September, 1897.

At the operation, the gall-bladder was tense and distended, and contained several ounces of thick creamy pus, and a single stone. Cultures from the pus showed the colon bacillus only. Her progress after operation was most satisfactory, and she left the hospital in nine days,—October 28th,—to be taken charge of by her own physician.

The wound is completely healed and her general health is first-rate.

An interesting question in this case is whether or not the cholecystitis was caused by the attack of measles.

CASE IX.—Mrs. C., a large, fleshy woman, æt 61, the mother of 14 children, intensely jaundiced, and suffering from two large carbuncles on the right side of the abdomen and on the right loin, was admitted to the Royal Victoria Hospital on the 13th of October, 1897. Her history was as follows: She had always enjoyed the best of health until March, 1894, when she slipped and fell, striking her right side against a barn door. The immediate effects of this injury passed off in a few days, but a month later she had a severe attack of spasmodic pain about the right costal margin, unaccompanied by chill or vomiting. She had similar attacks about twice a year for the next three years, each being accompanied and followed by tenderness, just below the right costal border. On the 10th of August, 1897, a very severe attack came on and persisted, with short intervals of relief, until she came to hospital. It was accompanied by chills, a sense of fulness at the stomach and persistent vomiting. Three weeks after its onset jaundice appeared and grew steadily more and more intense. The stools were colorless and putty-like, and the urine very dark. The carbuncles were treated on the 14th of October, and the abdomen was opened on the 4th of November. A faceted stone was found freely movable in the common duct, and removed through a longitudinal incision, which was closed by suture. The gall-bladder was shrunken and contracted and contained 6 faceted stones, which were removed through an incision in its walls. There was no evidence of communication between the common duct and the gall-bladder, and the wound in the latter could not be brought up to the parietal peritoneum. The liver border was round and firm. A drainage tube was carried down to the wound in the duct, along the under-surface of the liver, and the space packed off by strips of iodoform gauze. The patient made an uninterrupted recovery, and, although still in hospital, she is practically well and ready for discharge. The bile-staining disappeared gradually from the skin and urine, and within a week the stools were of normal color.

An interesting feature in this case is the fact that the group of 7 stones which had hitherto given rise to no symptoms whatever, seems to have been disturbed by the traumatism in March, 1894, and that this disturbance was the starting point in a series of changes which culminated in the conditions above described.

CASE X.—Mrs. C. C., a pale woman, somewhat deaf, æt. 27, the mother of one child, had an attack of biliary colic about a year ago,

accompanied by chills and vomiting. She recovered from this and remained well until November 8th, 1897, when she had another attack. She had a third attack on the 13th of November, and was sent into the Royal Victoria Hospital. She also had similar attacks on the 20th and 23rd of November, and was operated upon (cholecystostomy) on December 2nd, 1897. Seven faceted stones were removed from the base of the gall-bladder, the sac also containing some bile. This sac was found to be completely closed off from the remainder of the gall-bladder, which also contained 6 faceted stones. An incision was made lower down in the gall-bladder, through which these stones were removed, and the incision was closed by suture. A communication was then made through the occlusion, and a drainage tube inserted down to the cystic duct.

This patient's progress since operation has been quite satisfactory.

It will be noted that all these patients were women, who were, with one exception, the mothers of families, and that their ages varied from 23 to 61 years. There were two cases of solitary stone; the others were all multiple.

The operations were: Simple cholecystostomy, 5; cholecystostomy with incision (and suture) of the cystic duct for the removal of a group of impacted stones, 1; incision (and suture) of the common duct for the removal of a solitary impacted stone, 1; incision (and suture) of the common duct for the extraction of a movable faceted stone, and incision of the shrunken gall-bladder in the same patient for the removal of six other similar stones, 1; and in the tenth case the discovery that the stone (or stones) had already passed through the ducts.

Results.—With the exception of the typhoid patient, all recovered, and in no case was there at any time a symptom to cause anxiety. One patient had, at the end of three months, a biliary fistula, another had a sinus persisting, six are completely healed and one was operated upon only eight days ago.

Case VII. is another case in evidence of the frequency of cholecystitis as a sequel to or complication of typhoid fever, and emphasizes the fact that bile, so far from being destructive to the typhoid bacillus, is, actually, an excellent medium for its growth and reproduction. In all the cases the operation was completed at a single sitting.

TYPHOID FEVER WITHOUT INTESTINAL LESIONS—WITH THE REPORT OF A CASE.

BY

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Formerly typhoid fever could not be diagnosed with certainty in the absence of any of the classical symptoms or the characteristic intestinal lesions. With the increase of bacteriological knowledge, however, and the improvement in technique, we are now enabled to include under the category of typhoid many atypical cases about which we must otherwise have remained in doubt. To this result the discovery of the serum reaction has contributed not a little, and we are now enabled to form a more accurate conception of typhoid processes and to recognise the very various aspects which the disease may assume. The occurrence of typhoid fever with absence of the usual ulcerative lesions of the intestines is now recognised by several observers, notably Chantemesse, Vincent, Vaillard, Sanarelli, Roux and others. A number of such cases are on record, but some are not corroborated by bacteriological investigation, so that they are of no scientific value.

A careful search of the literature for the past 10 years has revealed the existence of only 9 such cases which have been confirmed by the discovery of the bacillus of Eberth.

The time has gone by when we could regard typhoid as an infective process localised to the intestines, producing the general symptoms by the secondary action of its toxin. Rather, have recent researches proved that the disease is an infective one, invading the organism through the lymphatics of the intestine and infecting the system as a whole, the intensity of the lesions being generally but not invariably directly proportional to their proximity to the point of inoculation; the brunt of the disease, hence, may fall upon lymphoid tissue, parenchymatous organs, or at times the central nervous system. From this point

of view, which is abundantly supported by clinical evidence, the intestinal tract merely represents a point of departure for the typhoid germ and not the sole place of localisation for its development. Sanarelli is of the opinion that the lesions of the intestine are due to an elective action, not of the bacilli themselves, but their toxins acting from a distance, but this hardly coincides with what we know of the presence of the germs in abundance in the intestinal mucosa. In any case the intestinal lesions should not be regarded as all important, but rather as incidents in the course of a general process. Thus it becomes conceivable that these lesions may at times be wanting. And this is the fact. The prodromal symptoms of the disease, the headache, malaise, anorexia and fever, are to be referred to the nervous system, and the lesions of the intestines may be atypical, delayed, or even absent. Our knowledge, then, of the symptomatology of the disease goes to prove that typhoid is not primarily or necessarily a disease of the intestines any more than variola is merely a disease of the skin. And in support of this view we have the analogous intestinal lesions which are sometimes present in the course of variola, measles, scarlatina, erysipelas and pyæmia. Besides this there is the well known fact that the intestinal lesions bear no relation to the severity of the systemic infection, nor do the objective symptoms referable to the intestine—meteorismus, diarrhœa and the like—bear any relation to the local pathological condition.

Consequently it would be more definite and more accurate to include the typical text-book disease under the term "Enteric Fever," employing the term "Typhoid" in a wider sense to include all pathological processes and conditions resulting from the action of the bacillus typhi or its toxins.

For purposes of comparison the following authenticated cases of typhoid with absence of the usual intestinal lesions may be tabulated as follows:

CASE.	OBSERVER,	CLINICAL TYPE,	PATHOLOGICAL CONDITION.
1.	Banti.....	Ordinary type.	Intestines normal. Spleen and mesenteric glands swollen. B. Typhi in spleen and mesenteric glands.
2.	Thue	Spleno-typhus.	Slight tumefaction of Peyer's glands. B. Typhi in spleen and kidneys,
3.	Vaillard.....	Meningo-typhus.	Peyer's Patches normal. B. Typhi in lungs, spleen, spinal cord. Streptococci in meninges and spleen.
4.	Karlinski....	Enlarged spleen. Typical symptoms wanting.	No lesions in intestines or mesenteric glands. B. Typhi in spleen. Cultures from other organs and blood, sterile.
5.	Karlinski....	Enlarged spleen. Dark red papules on trunk.	Intestines normal. Two areas of softening on septum of right ventricle. B. Typhi in spleen, liver, kidney and heart.
6.	Vincent	Diarrhœa, purpura, coma.	Peyer's patches normal. Congestion of small intestines. Spleen and mesenteric glands not swollen. Bilateral pulmonary congestion. B. Typhi and streptococci in spleen, liver, kidneys and heart.
7.	Du Cazal,...	Ordinary type.	No lesions of intestines or mesenteric glands. B. Typhi in spleen.
8.	Beatty	Jaundice, hæmaturia, coma.	Peyer's patches normal. Mesenteric glands and spleen enlarged. B. Typhi in spleen.
9.	Cheadle	Meteorismus, rose-spots, diarrhœa. B. typhi in urine.	Peyer's patches normal. Spleen not enlarged. Liver and mesenteric glands enlarged. B. Typhi in spleen. Partial serum reaction.

The case which we have the opportunity of reporting is in minor points somewhat different from any heretofore described. Unfortunately the history is imperfect on account of the very critical condition of the patient on admission.

For permission to report the case we are indebted to Prof. James Stewart.

CASE—W. S., æt. 25, labourer, admitted to Dr. Stewart's wards, Royal Victoria Hospital, on July 8th, 1897, complaining of headache, weakness and constipation.

Personal History.—Whooping-cough, scarlatina and mumps in childhood. Used alcohol to excess until three years ago.

Family History—No inherited taint.

On June 28th, patient came to the out-door department, stating that for some indefinite time, (about two months) previously, he had

been suffering from severe headache, loss of appetite, and general weakness. He had been obliged to give up work several times.

On admission he was found to be a powerful young man, very somnolent and mentally dull. Temp. 103.6°, Pulse 104, Respiration 36. Skin warm and moist. The tongue was coated and dry; abdomen distended, tense and tender. Fading rose spots were visible and spleen was palpable. Bowels constipated. The pulse was dicrotic. Apex beat felt in fourth interspace, half an inch beyond nipple. Heart sounds clear.

Respiratory System.—Expansion, greatest on right side. Some impairment of the note in left axilla. A few moist, crepitant and subcrepitant râles heard in right side. The lungs were not examined posteriorly owing to weakness of the patient.

Urine, sp. gr. 1012. No albumen. No sugar.

The blood, as tested by Prof. Wyatt Johnston, gave the typical serum reaction.

From the 8th to the 13th he was semi-comatose and then low muttering delirium set in, with vomiting. At first the bowels were constipated, but after the first week there were involuntary evacuations. The average temperature for the first week was 103° and after that slightly lower. On the day before death it began to rise again and just before the end reached 106.6°: the pulse 160; respiration 62. Cultures made from the blood the day before death were sterile.

Death ensued on the 21st.

Autopsy.—Eight hours after death (by Drs. J. G. Adami and A. G. Nicholls). Body that of a young adult male with the usual signs of death. Pectorals and recti of fair size and colour. No intra-muscular hemorrhages or abscesses. Peritoneal cavity dry.

Cranium.—Brain, weight 1250 grains. Slightly hyperæmic.

Thorax.—Bilateral adhesive pleurisy. Trachea reddened and containing frothy mucus. Epiglottis and vocal cords somewhat œdematous. Peri-bronchial glands enlarged. *Right lung*—very œdematous. Lower lobe presented condition of broncho-pneumonia.

Left Lung.—(œdematous. Lower lobes; areas of broncho-pneumonia. Mucopurulent bronchitis.

Heart.—Right side contains adherent ante-mortem clot. Valves normal. Muscles of left ventricle pale, cloudy, fatty and friable. Double right coronary. Recent milk spot on right ventricle.

Abdomen.—Spleen. Old perisplenitis. Weight of spleen 375 grms. Numerous infarcts. On section dark red and pulpy.

Intestines.—Mesenteric glands were generally enlarged, congested and succulent, especially about the ileo-cæcal region. Rectum congested and had a distinctly diphtheritic membrane which is most marked in a zone one inch in depth, two inches above anus. The membrane higher up diminished and was present as a dirty greenish layer lying on the rugæ. (Condition probably due to enemata of whisky.) Large intestine somewhat congested and rather slaty with very slight prominence of the solitary follicles. The lowest three Peyer's patches of the ileum were very slightly raised above the general surface but showed no signs of inflammation. Remaining

Peyer's glands normal. There was no evidence of ulceration anywhere in the intestine, nor any evidence of healed typhoidal lesions. The duodenum showed marked inflammation on tops of rugae resembling the effects of chlorate of potash.

Stomach.—Moderately small. Posterior aspect greatly congested, extending to lower end of œsophagus. Area of congestion has a characteristically velvety appearance. (Patient had been treated with Yeo's mixture.)

Pancreas.—Pale and glassy looking.

Liver.—Weight 1570 grms. Organ pale, flabby, with moderately obtuse edges. Slight fatty appearance. Bile ducts fairly full of bile. Not specially friable. No focal necroses recognizable. Gall-bladder distended and full of thin greenish bile. Common duct free. Old pericholecystitis.

Kidneys.—Supra-renals cavitated.

Left Kidney.—Weight 210 grms. Capsule peels off with ease. Cortex pale. On section cortex pale and much swollen. Consistency relaxed. Malpighian tufts and straight vessels congested. Fatty change. Sub-acute nephritis.

Right Kidney.—Weight 198 grms. Same as left.

Genito-urinary System.—Otherwise normal.

MICROSCOPICAL EXAMINATION.

Lung.—Areas of broncho-pneumonia. Section stained by Gram-Weigert method showed a vast agglomeration of the micrococcus lanceolatus about the pneumonic patches. By Löffler's method a few large bacilli were noted but did not resemble typhoid.

Heart.—Cloudy swelling.

Spleen.—Hyperplastic and congested. Infarction. Stained by Löffler's method, clumps of *B. Typhi* were seen in pulp. Decolorised by Gram.

Liver.—Severe parenchymatous degeneration amounting in parts to diffuse inflammation with necrosis. Some fatty change. Infiltration of leucocytes in portal sheaths. Proliferation of bile capillaries.

Kidneys.—Sub-acute parenchymatous nephritis. No bacilli seen.

Pancreas.—Slight necrosis of cells.

Thyroid.—Normal.

Mesenteric Glands.—Hyperplasia and acute congestion with commencing necrosis in the centre. By Löffler's method sections show *B. Typhi* in small numbers, in the characteristic clumps.

Peyer's Patch. A section was made through one of the Peyer's glands which presented the slight swelling. All that could be found was a proliferation of the lymphatic tissue in the sub-mucosa which was very generally infiltrated with lymphoid elements. This affected only the sub-mucosa. The patch was not congested and there was no evidence of necrosis. Stained by Löffler's method, in the deeper parts were found small clumps of bacilli resembling typhoid and which decolorised by Gram's method. On superficial part were numerous bacilli of various kinds, evidently intestinal bacteria which stained by Gram-Weigert method.

BACTERIOLOGICAL EXAMINATION.

Cultures from blood taken at autopsy were sterile. Serum gave the typical Widal-Johnston reaction. Cultures from the spleen on agar gave pure growth resembling typhoid. The bacillus was actively motile and negative to Gram. It was grown on gelatin, lactose agar, bouillon, potato and milk, and in every way corresponded to Eberth's bacillus. Litmus-agar cultures have in our experience proved fallacious. Tested by the action of typhoid serum a typical Widal-Johnston reaction was produced. From the liver two varieties were obtained. One gave small round transparent colonies and when grown on the above mentioned media corresponded in every way to the *B. Typhi*, including the typical reaction to typhoid serum. The other presented colonies which were larger and more opaque than the first, and the growth on agar was more luxuriant and opaque in appearance than the typhoid. It however grew otherwise fairly characteristically, except that it curdled milk and did not give the true serum reaction.

It may be said here that these tests were made by both of us independently and the results tallied exactly in each case. Parallel cultures of known typhoid germs were made also as controls, so that the chain of evidence should be as complete as possible.

From a study of the cases above referred to, it will be seen that this atypical typhoid is a very protean disease, its toxic power at one time being concentrated upon the mesenteric glands, at another upon the spleen, the liver and gall-bladder, the central nervous system, upon the kidneys, heart, or lungs, as the case may be.

While in typical typhoid the Peyer's patches suffer the most, yet the relative intensity with which the other organs are affected also varies. Thus, variability, while most characteristic in atypical cases, must be regarded as a feature common to typhoid as a whole. Clinicians have long recognized that one or more of the text-book symptoms may be absent, or in the background, and that cases, while they conform to a broad general type, often present minor differences. With respect to the intestinal tract alone, we now know that there may be all grades from a normal Peyer's patch to the most severe ulceration; not only so, but the usual intestinal lesions may be delayed. Cases have been reported recently where as late as the twenty-first day the Peyer's patches presented merely slight hyperplasia without necrosis. We must recognise then great variety in the intensity and course of the process.

Broadly speaking, typhoid without intestinal lesions falls clinically into three main classes.

1. Typical typhoid, minus the ulcerations.
2. Spleno-typhoid.
3. The nervous type, with extreme intoxication.

To the first group would appear to belong the cases of Banti, DuCazal and Cheadle. Diarrhoea may be present in such cases. Cases of this type are very rare.

The second class, spleno-typhoid, presents a more definite clinical entity, and was first described by Eiselt. This form is characterised by an excessively large spleen, often with acute perisplenitis, and fever of a recurrent type. In such cases the plasmodium malarie and Obermeyer's spirillum are absent. Some of these cases do present ulceration of the intestines, but it is often absent.

Thuc's case and Karlinski's first case are examples of this.

The third class, due to a severe intoxication, are characterised by extreme prostration, delirium, coma, sometimes hyperpyrexia, degenerative changes in the vascular system leading to purpura, hæmaturia, melæna. Jaundice is sometimes present. Many of these cases are, no

doubt, examples of secondary septic infection. To this class apparently belong the remaining cases of the table, including our own.

The case here reported at length presented on admission all the signs of an intense intoxication: extreme prostration, somnolence, high fever, muscular twitchings, delirium, coma, and eventually death. The digestive disturbances were decidedly in the background, thus showing that the activity of the process was more directed to the central nervous system. And there is, indeed, some ground for believing that where the intestinal lesions are slight or absent, the nervous phenomena are both relatively and absolutely more intense.

When we come to the etiology of such cases we enter upon more debatable ground. The usual channel of inoculation is, of course, the alimentary tract, but it is abundantly attested by several observers notably Roux and Sicard, that inoculation through the air-passages is by no means uncommon. Sicard, indeed, thinks that at least 10 per cent. of all cases come about in this way. Roux has noted that in barracks, epidemics of typhoid among the troops often coincided with the process of cleaning the walls and floors. Dufaud also has reported an epidemic where infection was carried by the dust in a building, and the disease only died out on a thorough disinfection of the building with sublimate. Cases occurring along the line of excavations are also known. In this particular, the experiments of Sicard are suggestive. He caused typhoid patients to exhale into flasks of sterilized water, and in nearly every case was afterward enabled to cultivate the Eberth bacillus from the flasks. The results of such experiments, when they appear to contradict our commonly accepted views as to the infectious nature of typhoid, must be accepted with some reserve, until other investigators corroborate them and place the matter beyond a doubt. It would seem probable at first sight that when the infection was acquired through the respiratory tract atypical typhoid would result, and it is by no means improbable that in such cases the brunt of the disease would fall upon the lungs, and that the intestines might only be slightly affected or not at all. In the absence of further information we are, however, unable to speak with any certainty upon this point. There is no doubt, however, that the *B. Typhi* have often been found in the lungs. Certainly the action of the *B. Typhi* at times analogous to that of other germs, notably the micrococcus lanceolatus, the gonococcus, the colon bacillus, and the pyogenic cocci, renders it altogether likely that some of these rare cases may be due to an unusual mode of origin. In our own case, however, we are enabled in all probability to exclude an origin through the respiratory tract, for the pneumonia which was present was clinically

a terminal event, and sections of the lung, stained by the Gram-Weigert method, showed such a massing of the micrococcus lanceolatus about the pneumonic areas that we were forced to conclude that the condition was due to a secondary affection with this germ.

Sections of the Peyer's patches showed, however, bacilli of the morphology of typhoid germs massed in the deeper parts in the characteristic clumps. So that the lowest Peyer's patches may have been the point of origin in spite of the fact that they presented so little divergence from the normal. A further point in favour of this view was the fact that the mesenteric glands were uniformly swollen soft; some beginning to necrose, and others hæmorrhagic. How can we then explain these facts? Observation gives us some information upon this point.

In relapsed typhoid the ulcerative lesions affect those glands which escaped in the first attack, and are also never so intense as the primary ones. Trousseau indeed goes so far as to say that in the relapse the intestinal lesions are not renewed. However this may be, it seems that the intestinal mucosa having once suffered the action of the typhoid virus can resist the force of a second attack, and thus a local immunity is acquired. So that in these relapses the systemic disease may proceed in the gravest manner and even lead to death, while the intestinal lesions are absent. In the case we record, considering that it was an ambulatory typhoid of six weeks' to two months' duration before admission, it is open to assume that the attack we observed was a reinfection, and that at some earlier period of the illness in the previous attack the Peyer's patches had acquired a local immunity. This primary attack need not necessarily have been a severe one. It is quite probable that in the so-called abortive typhoid the Peyer's patches never get beyond the stage of tumefaction, and yet they will have acquired an immunity for a short time. Cases where a second distinct attack follow shortly after convalescence upon a previous one would, at first sight, appear to negative this view, but we must remember that in experimental animals when this local immunity is attained, it only lasts for a short time, and we have no reason to think that it would be otherwise in the human being. This immunity affects the epithelial and lymphoid elements of the intestine and also the phagocytes, so that the bacilli are carried beyond the first barrier of defence, which remains intact, and are dealt with in the more remote parts of the organism.

We have an analogy to this in the well-known fact that the bacillus of tuberculosis sometimes passes through the intestinal mucosa without affecting the lymphoid elements, and may become localized in the mesenteric glands or in the peritoneum.

Or we may assume that certain ptomaines derived from the gastrointestinal tract, either circulating in the blood, or present in the intestinal mucosa, act so as to neutralise the local action of the typhoid virus and bring about intestinal immunity. Finally, we may assume that toxins derived from germs other than typhoid may antagonise their virus and a local immunity be thus acquired.

To decide between these hypotheses is an impossible task in our present state of knowledge. As yet they are merely hypotheses, based, it is true, upon experiment, but exactly the degree of importance they possess in relation to the cases here referred to it is impossible to say. Still they are very suggestive. The first assumption indeed explains the process as a partial vaccination of the Peyer's glands and consequent immunity to a second attack. But why should the glands be singled out? Possibly the action of the intestinal mucosa in excreting circulating toxins may have something to do with this, the poison as it were being concentrated upon the enunctories, and thus an immunity is conferred upon the intestinal glands while other organs are not protected.

The last two hypotheses are based upon the theory of a mutual antagonism between the toxins of various germs. This opens up a vast subject in which we are still groping in the darkness of ignorance. The relations of the *B. Typhi* to the colon bacillus and other members of the colon group, and to the bacteria of the intestinal tract generally, are still unknown, although we are gradually beginning to see the light. But indeed the whole subject is so entangled with the variability in the toxic power of the germs concerned and the question of the resistance of the bodily organism, that the difficulties assume gigantic proportions.

The recent experimental studies of Sanarelli throw considerable light upon this subject.

It may be objected that no proper inferences can be drawn as regards the human organism from a study of experimental animals, but this is not so. The character of the lesions in the lower animals depends very much upon the amount of the toxin inoculated and its virulence. When strong toxins are used, a condition is obtained bearing very close analogies to that which obtains in the case of human beings, including the intestinal lesions.

Sanarelli took two series of guinea-pigs and administered for five days 4 cc. of a typhoid culture in glycerinated bouillon kept for a month in the incubator at 37°C., and then sterilised at 120°. In the first lot of animals the vaccine was introduced into the stomach by means of a sound, and in the second inoculated subcutaneously. The

last series of animals were used as controls to determine the limit of tolerance of the organism. It was found that when the animals which had received the typhoid poison through the stomach up to the limit of tolerance, were inoculated with even small doses of a virulent culture of *B. Typhi* they died in 8 to 24 hours, and presented neither meteorism, abdominal pain, nor intestinal lesions, while animals which had not been vaccinated died in about the same time, but with the intestines intensely congested and ecchymotic, lymphatic glands enlarged, and mucosa destroyed.

From these experiments it follows that when an organism receives doses of typhoid toxin within the limits of toleration, the intestinal tract acquires a local immunity. A subsequent injection with a virulent growth thus may produce death, largely through the nervous system, while the intestine remains normal.

Sanarelli also discovered the curious fact that subcutaneous injections of sterilized products of the putrid fermentation of beef-broth also conferred immunity upon the intestine, thus opening up the question whether ptomaines derived from abnormal conditions of the digestive tract in man may not have some bearing upon the question of the immunity of the intestinal tract.

This observer also noted the fact that in guinea-pigs suffering from typhoid, the colon bacilli in the intestine increased both in numbers and in virulence, killing out all the other germs, and is inclined to attribute some of the secondary processes in typhoid fever to the invasion of the body by these germs which have thus become pathogenic. An immunity of the organism to typhoid also proved to be an immunity against the action of the *B. Coli*. Klein's work, too, on the inhibitory action of certain germs, as the *Prodigiosus*, *Komma bacillus*, and putrefactive organisms, upon the typhoid bacillus is also very important in this connection.

Altogether Sanarelli's work is the most complete and suggestive one which has yet appeared, and we may reasonably hope for important developments along these lines.

We fear that this paper may appear to some too theoretical and visionary. It was not our intention, however, to lay down hard and fast principles, but rather to draw attention to lines of thought suggested by the newer pathology. Clearly our old views of the pathological processes in typhoid fever will have to be considerably modified, in fact almost replaced by a more adequate and elastic interpretation of clinical facts, and our conceptions, while at present losing definiteness, must acquire greater breadth until further research places the subject on a clearer basis.

That the field is an almost untrodden one, and that the clinical opportunities are so very limited, must be our excuse for bringing forward such an immature and altogether inadequate presentment of the subject. We must emphasize, however, our opinion that the current views upon typhoid fever are far too cramped and stereotyped to convey an accurate impression of the true nature of the pathological processes in this disease.

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DOCTORS AND THE LAW.

BY

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(Continued.)

CHAPTER V.

THE DOCTOR'S RESPONSIBILITY, IN REFERENCE TO INSANITY.

Having been requested to supplement a paper on "Doctors and the Law," which lately appeared in this journal, by a chapter on "Insanity" in the same connection, I gladly do so.

The doctor's relation to insanity is two-fold. (1) His services are always required in the confinement of the insane for the protection of society. (2) His expert evidence is necessary to support a plea of "insanity" from the criminal's dock.

(1) *The Protection of Society.*

The end is attained in two ways: (a) By Confinement in Asylums, and (b) By Interdiction.

(a) *Confinement in Asylums.*

The Revised Statutes of Quebec, Articles 3182, seqq., with their amending acts 52 Victoria, chapter 35; 53 Victoria, chapter 41; 54 Victoria, chapter 29; 55-56 Victoria, chapter 30; 56 Victoria, chapter 31; 57 Victoria, chapter 33; 60 Victoria, chapter 38, provide the necessary formalities. As I fear they would prove somewhat a quagmire for the non-legal enquirer, I shall give in some detail those portions which are of interest to the general medical practitioner.

Asylums are Public and Private. There are also what are termed "Unlicensed Houses."

Public Asylums are those which are under the control and supervision of the Government. They are in this Province, the St. Jean de Dieu at Longue Pointe, Verdun, and Beauport, near Quebec. Private Asylums are under its supervision only. (54 Victoria, chapter 29, s. 4; 57 Victoria, chapter 33, s. 1.) Private Asylums are those licensed by Justices of the Peace, assembled in General Sessions. Unlicensed houses do not possess the same powers of detention and privileges as the above.

Two physicians' certificates are essential to the admission of a patient to any one of them, save in the case of an Unlicensed House. In the latter case one certificate suffices, "under special circumstances," provided the second is furnished within three days after admission.

The certificates must be signed by medical men, who are neither partners nor brothers, nor in the relation of father and son to each other, to the proprietors of the asylum or to the patient, and who have each, separately and personally, examined the patient before the application for his entry into the asylum. (57 Victoria, chapter 33, s. 6).

The form of certificate for admission to a Public Asylum is as follows:

PHYSICIAN'S CERTIFICATE.

PLACE AND DATE.

I, _____ being a physician duly authorized to practice and habitually practising as such, do declare on oath that I am not related to, nor as respects the proprietors of _____ asylum, within the conditions prohibited by law, concerning insane asylums, nor with (name of the person making the application) nor with (name of the patient).

That I have this day, separately from any other medical practitioner, visited and personally examined the said _____; that the said _____ is insane and is a proper person to be confined, and that I have formed this opinion from the following facts, which I certify to be true (give the details).

Sworn before me at _____

(Signature)

this _____ day of _____

189 _____

M.D.

(Signature)

Quality.

N.B.—(In cases of idiocy or imbecility state whether the idiot or imbecile be dangerous, a cause of scandal, or subject to epileptic fits, and mention the facts which show that he is dangerous or a source of scandal (57 Vic., cap. 33, s. 6).

In addition a form containing the following questions must be filled in. Relatives and friends must assist by giving information :

1. What is the patient's age to the best of your knowledge?
2. Is the patient married or single? If married, how long? How many children?
3. Where do these children live?
4. What is the patient's origin?
5. Are his parents still living? Where do they live? What is their name?
6. Where does the patient come from? In what municipality was he when sent to the asylum?
7. How long has the patient resided in Canada?
8. What has been the patient's occupation or trade? If a female, that of her husband and father?
9. What are his apparent means of subsistence, as well as of those who are obliged by law to support him?
10. What is the patient's religion?
11. What degree of education? Can he read and write?
12. When did the first symptoms of sickness manifest themselves?
13. How were the first symptoms of disease manifested?
14. Is this the first attack? If not, when did the others occur, and what was their duration?
15. Is there any improvement or aggravation in the disease or is it stationary?
16. When did the first symptoms of the present attack manifest themselves?
17. Has the patient any lucid interval, and do they occur at regular periods?
18. On what subjects, or in what way is derangement now manifested? Is there any permanent hallucination of sight, taste, touch or genital sense?
19. Has the patient shown any disposition to injure himself or others?
20. Was it from sudden passion or premeditation?
21. Has suicide ever been attempted? If so, in what way? Is the propensity now active?
22. What are his habits as to eating, sleeping or cleanliness? Is there a disposition to filthy habits, destruction to clothing, breaking glass, furniture, &c.?
23. What relatives (including grandparents and cousins) have been insane, or had other nervous diseases, such as epilepsy, hysteria, tic, eccentricity, neuralgia, chorea, alcoholism, etc.?
24. Did the patient manifest any particularities of temper, habits or pursuits, or predominant passions, religious impressions? Has he been eccentric?
25. Was the patient ever

addicted to intemperance in the use of ardent spirits, opium, tobacco, in any form, &c., &c. ? 26. Has the patient been subject to any serious bodily disease? To epilepsy, suppressed eruptions, discharges or sores, or ever had any injury to the head? 27. Has restraint or confinement been employed? If so, of what kind, and how long continued? 28. What is supposed to be the cause of the disease? 29. What treatment has been pursued for the relief of the patient? Mention particulars and the effects? 30. Please state any other matter supposed to have any bearing upon the case? 31. For references, address of the nearest relative or guardian, or friend, must be given in full, with place of their residence.

The requirements for admission to a Private Asylum are practically the same, save that it is not necessary to file answers to the above formal questions. They, however, demand in express terms that the two physicians shall have personally examined the person not more than seven clear days previously to the incarceration. (R. S. Q. 3263).

The form of certificate required in this instance is as follows :

FORM OF MEDICAL CERTIFICATE.

I, _____, being a physician duly authorized to practise as such, hereby certify that I have this day, separately from any other medical practitioner, visited and personally examined A. B., the person named in the accompanying statement and orders and that said A. B. is a lunatic (or an insane person, or an idiot, or a person of unsound mind) and a proper person to be confined, and that I have formed this opinion from the following fact (or facts) viz :

(Signed)

Name

Place of abode

Dated at

this

day of

one thousand eight hundred and

(R.S.Q. vol. II, p. 67.)

The same certificate is required for admission to Unlicensed Houses. (R. S. Q. 3267.)

The facts upon which the physician gives his opinion in these certificates may be obtained from his own personal observation and from information received from others. (R. S. Q. 3190.)

No physician being an official visitor to any Private Lunatic Asylum can sign any certificate for admission or attend any inmate professionally, unless directed to visit such inmate by the person upon whose order such patient has been received, or by the Provincial Secretary, or by a judge of the Superior Court, or by the curator appointed to the interdiction of such inmate in the Province (R. S. Q. 3315). The penalty is a fine of \$200. (R. S. Q. 3317.)

It is almost unnecessary to point out that the physician must rigorously conform to the requirements of the law respecting his certificate, for the purpose of avoiding future trouble.

The English Act provides that a medical practitioner who gives a false certificate, or any person not being a registered physician, surgeon or apothecary in actual practice, who gives certificates as such,

is declared to be guilty of a misdemeanor. For any such act done by a registered medical practitioner contrary to any of the provisions of the Act (although not declared to be a misdemeanor) he is subjected for each proved offence to a penalty of twenty pounds,

Fortunately for the medical profession in the Province of Quebec, these provisions do not exist in our Statutes. No Statutory penalty is provided for the non-compliance with the formalities of the law respecting either public or private asylums. Nevertheless the physician would be responsible to the patient for whatever damage he might personally cause to him by his fault or negligence in this respect. Apparently no cases have arisen in this Province in which doctor's have been sued for such damages. They might result from such gross negligence as the absence of a *personal* examination or an examination made too long previously to be reliable. In any event it is well to follow the formalities laid down, with the greatest care.

But apart from the mere formalities of the certificate, the physician must state the grounds upon which he decides that the patient is an idiot, imbecile or insane. There can be no great difficulty concerning the two former, I imagine. The question is as to what facts justify a physician in declaring that an individual is "insane and a proper person to be confined," as required by the certificate. I do not propose to enter into a discussion of the vexed question, "What is insanity?" I am aware that the medical profession, from its vantage ground of science, is able to recognize the disease, where the public and the legal mind cannot do so.

It must be clearly borne in mind that the question, at this stage, is not whether the patient would be responsible under the criminal law. That arises after the act is committed. The question rather is, Does society require to be protected from this individual? Is he likely some time or other to become dangerous to himself or others or to create a scandal? It is upon these latter questions that the physician's opinion is thus required.

In this matter, therefore, we are limited to such insanity as in the opinion of the physician warrants the confinement of the individual suffering from it.

For an enumeration of the facts which justify this opinion, I refer to "Taylor's Medical Jurisprudence," pp. 512, 513.

In addition, the formal questions given above, which our Statute requires to be answered by the physician on information given him by the patient's friends and relatives, give an idea of the nature of the facts, which our law expects him to certify to, as the basis of

his opinion. As these questions have been given in full above, it is unnecessary to repeat them here.

A clear distinction should be drawn between the facts communicated to him by others and those observed by himself. Such expressions as "thinks" or "believes" should be avoided.

I have already pointed out that great care should be taken in following all the formalities required. Neglect in this respect would amount to legal fault, which entails liability in damages, should any be caused thereby.

If, however, the law asks for an opinion, he who gives it is protected if he has reasonable justification for it.

If the physician gives his opinion upon facts and circumstances generally accepted by the medical profession as evidence of dangerous insanity, or that which might create a scandal, he is free from liability. The farther he strays from this principle and permits his opinions to be influenced by extreme theories of mental responsibility, the greater danger will he incur of the courts refusing to approve it. But if the physician acts without malice, in good faith, and upon facts which reasonably justify his opinion, he need not fear the consequences. More than this it is impossible to say, when thus discussing the matter in a general manner.

(b) *Interdiction.*

Article 325 of our Civil Code reads as follows:

"A person of full age or an emancipated minor, who is in a habitual state of imbecility, insanity or madness must be interdicted even though he has lucid intervals."

The interdiction is declared by the court, judge or prothonotary on the advice of a family council. Evidence is usually adduced before it, and the physician is almost invariably called as a witness. He can speak with great freedom in the witness-box. He is compelled by law to state his opinion. The family council and the judge or prothonotary is not in any way bound by it. If he testifies in good faith, without malice, to the best of his opinion and belief, he has nothing to fear. He has no responsibility.

(2) *Expert Evidence on the Plea of "Insanity," in Criminal Trials.*

To enter into the vast field of Medical Jurisprudence on this subject in an article of this nature, is impossible. It is interesting, however, to state that Canada to-day is, I believe, the only portion of the British Empire which has the law concerning the criminal responsibility of the insane in a concrete statutory form.

Article 11 of the Criminal Code reads as follows :

1. " No person shall be convicted of an offence by reason of an act done or omitted by him when labouring under natural imbecility, or disease of the mind, to such an extent as to render him incapable of appreciating the nature and quality of the act or omission, and of knowing that such act or omission was wrong.

2. " A person labouring under specific delusions, but in other respects sane, shall not be acquitted on the ground of insanity, under the provisions hereinafter contained, unless the delusion caused him to believe in the existence of some state of things which, if it existed, would justify or excuse his act or omission.

3. " Every one shall be presumed to be sane at the time of doing or omitting to do any act until the contrary is proved."

Mr. Crankshaw, in his excellent edition of our Criminal Code, thus comments upon this article : " It will be seen by this section that the defence of insanity, in order to be of any avail, must be supported by evidence establishing that the accused committed the offence either

1. While labouring under natural imbecility or disease of the mind to such an extent that he could not appreciate the nature and quality of his act, and could not know that it was wrong, or

2. While labouring under specific delusions causing him, though sane in other respects, to believe in the existence of some state of things which, if it existed, would justify or excuse his act.

So that, if the defence be actual insanity, the mere fact of the accused being insane would not of itself be sufficient. It must be shown also that when he committed the offence the accused was insane to so great an extent, as to render him incapable of appreciating the nature and quality of his act and to prevent him from knowing that it was wrong; and if the defence be that the accused, though sane in other respects, was when he committed the offence labouring under some delusion, it must be shown that the specific delusion under which he was labouring caused him to believe that there then existed a state of things which if it had existed in reality would have justified or excused his act.

Taking the law therefore as here expressed, a man may be insane and still be convicted of an offence. In other words, notwithstanding his insanity, he will be held responsible and punishable, unless his insanity was such that it rendered him incapable of knowing that what he did was wrong; and although a man may be labouring under some delusion when he commits an offence, he may still be convicted and punished for that offence, unless the delusion were such that it made him believe that something then existed which, if it had been a

reality, would have justified or excused what he did, as for instance a delusion that he was being violently attacked and in danger of being murdered, and that he was obliged in self-defence to kill his supposed antagonist.”

Our law as it stands to-day renders useless to the expert in Canada, many of the discussions contained in the text-books. To make his evidence as to fact effective, he must bring it within the principles thus laid down. His own particular theories as to whether, morally speaking, the prisoner should be punished or not, are quite irrelevant.

If I entered more fully into the details of this question, I fear that my remarks would exceed the limits of this paper, perhaps already too lengthy. I therefore content myself with drawing your attention to the text of the law and suggesting its assimilation with text-book lore by each individual reader.

Case Reports.

A CASE OF PANCREATIC CALCULI WITH MELITURIA.¹

BY

RIDLEY MACKENZIE, M.D.,

Assistant Physician, Montreal General Hospital.

My reasons for reporting this case are, that it is the first case of the kind occurring in the General Hospital clinic, according to the records obtainable, and that it is rare to find any gross lesion of this organ associated with diabetes.

The pancreas measures 8 inches in length and is about three times as large as the average pancreas; its thickness is unequal; it is lumpy, with intersecting grey bands, connecting prominent nodules; to the touch it gives a crepitant feeling. On slitting up the pancreatic duct it is found to be unequally dilated. At the head, the duct measures $1\frac{1}{2}$ inches in circumference, at the body it is $\frac{3}{4}$ of an inch, and at the tail it measures $1\frac{1}{4}$ inch. In the main duct and its branches are masses of concretions; the common duct is free from calculi. On section the tissue is tough and full of white concretions, filling the small ducts of the lobules. Practically no normal pancreatic tissue can be seen with the naked eye, chiefly fibrous tissue between the ducts; no evidence of fat necrosis and no sign of hæmorrhages; the concretions consist almost entirely of carbonate of lime.

The microscopical examination of the specimen shows chiefly fibrous tissue with small areas of gland tissue, the cells of which are immature in form, very much smaller than normal, and the ducts are filled with amorphous substance.

The patient was in the wards of the Montreal General Hospital and came under my care during Dr. Lafleur's absence.

Mrs. R., aged 48, widow, no family, weight 140, fairly muscular, and with a good layer of adipose tissue. Her complaints were those of gastritis, vomiting, and distress in the region of the epigastrium.

She was born in Scotland, and has lived in this country for eight years. Occupation that of a cook. Had typhus fever when 20 years of age, smallpox shortly after, and typhoid fever 14 years ago. She has used alcohol in the form of whiskey for some years, taking it usually before breakfast, but not to excess, but of late her chief

¹ Read before the Montreal Medico-Chirurgical Society, November 25th, 1897.

beverage has been beer. Her mother died of hæmatemesis, the cause unknown; father of smallpox; one brother and an aunt died of phthisis; there was no history of cancer in the family.

Her illness commenced in December a year ago, with loss of strength and vomiting after meals. The vomiting would be repeated at intervals; on one occasion the vomit was dark coloured, but usually greenish. She has noticed a loss of weight for the past six months.

The physical examination was as follows: Skin dry, eyesight good, mucous membrane of good colour, tongue clean, reddish, slightly fissured near the tip, dry in the centre; no evidence of any cutaneous affections except a few dark stains on legs. Respiratory system normal.

Heart slightly enlarged; a soft systolic murmur is heard at the apex, not transmitted.

Liver has normal area of dulness.

Abdomen tumid; no tumour palpable; distention is chiefly gaseous; patellar reflexes absent; sensation normal.

The urine collected for eight days and, measured, averaged 44 ozs. per diem. It was light straw coloured. Sp. gravity 1036, acid, slight trace of albumen, and contained 1 per cent. of grape sugar.

The pulse ranged from 54 to 90; temperature, 97 to 98 $\frac{1}{4}$; constipation was present, but the stools were normal.

The patient remained in hospital on a fluid diet for 10 days and left much improved as regards her digestive system.

She returned to hospital six weeks later, on July 29th.

When admitted she was drowsy and complained of headache and weakness. Temperature 95°, pulse 120, small and thin, respiration 28. Her general condition was as before, with the exception of the urine, which contained a good deal of albumen with hyaline, granular casts and sugar.

The drowsiness deepened into coma, and she died 48 hours after admittance.

The report of Dr. Wyatt Johnston, the Pathologist, was as follows: There were firm adhesions to the chest wall of the pericardium and right lung at the upper part. A cavity, the size of a walnut, found in posterior surface of left upper lobe filled with greyish pultaceous matter; no tubercle bacilli present.

Heart large and flabby, ventricles dilated, coronary arteries free, aortic valves thick and shrunken, mitral valves thickened at the edges.

Liver large, coarse looking; greyish and opaque.

Stomach large; no obstruction; mucous membrane thickened and reddish grey.

Kidney large ; hog-backed shape ; slightly rough on surface.

Microscopically showed moderate diffuse increase of connective tissue, vessels thickened ; tufts fibrosed, numerous casts in tubules ; extensive parenchymatous and fatty change of epithelium.

The region of the medulla was specially examined and nothing found abnormal.

Nothing special in intestines.

The condition of the pancreas is described above.

The condition of pancreatic calculi is not a common one, and the literature on the subject is not plentiful. The best paper on the subject that I could find was by George Johnston, in *The Journal of the American Sciences* for 1883. He was able to collect 35 cases from the literature up to that time. He divides the varieties into three forms :

a. Free concretions.

b. Calculous concretions of the duct walls.

c. Acne pancreatica.

The greatest number belong to the first class, as does this case,

The latter class, described by Klebs, consists of a change of the normal pancreatic secretions into a fatty, chalky pap, seemingly an early stage of the concretion variety.

The conditions tending to the formation of these concretions are many and varied, a mucus plug, a catarrhal inflammatory condition of the duct, with thickening of the same, an interstitial inflammation, or a biliary calculus which has found its way into the pancreatic duct, any one of these conditions stagnating the flow of pancreatic secretions and a precipitation of the inorganic constituents.

Cases have been found where there was no obstruction, as in the present case, and yet calculi have been found. It is also found that in normal pancreatic juice there is but a very slight amount of lime ; yet, in the great majority of cases, the calculi are composed almost entirely of carbonate of lime. A comparison of pancreatic and salivary calculi shows that practically they consist of the same salts.

It is not probable that any of the concretions found in this specimen were passed, as there is no history of colic

The impaction of these calculi in the ducts is likely to follow with dilatation of the duct and the formation of cysts, the cysts being of a hæmorrhagic nature. No condition of this kind was found in this specimen suggesting the absence of any obstruction to any juice that may have been secreted. This is also borne out by the absence of fatty stools.

The diagnosis of pancreatic calculi is a difficult one.

Pain, one of the chief symptoms, is of two varieties.

The one dull, heavy, and a sense of weight localized in the epigastrium, lasting throughout the entire attack. The other sharp, severe, sudden in its onset, irregular in its accession, and spontaneously relieved. The first variety is thought to be due to pressure upon the cœliac axis, and would require to have an enlarged and hard pancreas, such as this patient had, and would account for the distress complained of by her.

Vomiting in 4 of the cases collected was one of the most distressing symptoms, in three other cases hæmatemesis, in six diarrhœa, and constipation in six others.

Fat in the stools is another important symptom. This condition has not been noted in many cases, and is not characteristic, as the same condition may be brought about by the obstruction of the bile duct.

Much more might have been done with this case had the condition been more favorable, and I have to regret that nothing of any interest in the obscure causation of diabetes mellitis was brought out.

INTESTINAL RESECTION IN A BOY OF FOUR YEARS— DEATH.¹

BY

E. A. ROBERTSON, M.D.

Cases of sarcoma of the mesentery and intestine are so rare, that I venture to-night to present you with a report of such a condition with the accompanying specimen.

I saw the patient first on the evening of Nov. 25th last. He was a boy of 4 years and 6 weeks old, of gypsy parentage; well grown and fairly well nourished in appearance. His head was large and square. His eyes dull and languid, but without icteroid tint. His face full and plump, but flushed. His body was thinner than his face, but not emaciated. The muscles were flabby. The skin clear and free from eruption. The chest was well formed. The breathing, rapid and laboured, was evidently hampered by the condition of his abdomen, which was distended and rigid. He lay on his right side with his legs drawn up, the right one more so than the left. His temperature was 103°F. in the axilla, and his pulse rapid, though of good volume.

Examination of his abdomen showed a large tumour in the right lumbar region, extending downward to the level of the anterior superior spine of the ilium, and upwards about an inch above the level of the umbilicus. To the left it reached the middle line, and to the right it extended three inches toward the flank. It was hard, freely movable, and presented no signs of fluctuation, though a peculiar gurgling feeling, if the expression may be allowed, was imparted to the hand on gentle pressure: as if the mass consisted of bowel or had bowel between it and the abdominal wall.

The abdomen was distended and tympanitic everywhere except over the tumour, where a dull note was brought out.

The belly-wall was tense and hard, but not very sensitive.

Ascites did not appear to be present.

Liver dulness was normal. Spleen could not be felt.

Heart and lungs normal.

The urine was scanty, but contained no sugar or albumen. The fæces were foetid and not unlike the typhoid stool.

On questioning the parents, who were by no means intelligent, I was told that the symptoms were pain in the belly of a paroxysmal

¹ Read before the Montreal Medico-Chirurgical Society, Dec. 10th, 1897.

character ; profuse sweating ; fretfulness ; loss of appetite ; vomiting of food and green material during the two previous days ; and slight diarrhoea. They insisted that these symptoms had lasted only two weeks at the most, though they confessed that since a fall from a load of hay last summer, the child had not seemed as well as usual, that he had been much constipated and had been losing flesh. They had noticed the loss of flesh, because he had been a very fat child.

The diagnosis of intestinal tumours is always an interesting study, but generally very difficult to make absolutely. Many conditions might cause such a mass in the right lumbar region as existed in this case. Intussusception, enlarged kidney from various causes, faecal accumulation, localized peritonitis, tubercular or otherwise, with gluing together of the bowels ; cysts of the mesentery and malignant disease of the bowel, were all to be thought of. It seemed possible to exclude intussusception. The attack was not sudden enough. The pain was not sufficiently severe. There was not complete obstruction. There was absence of blood in the stool. Vomiting was slight and not stercoraceous, and there had been absence of tenesmus. The tumour was not in the situation in which intussusception is most common, and it was harder and larger than the sausage shaped mass of that condition.

Enlarged kidney was improbable, because the tumour did not extend high enough up, and because of the normal character of the urine.

Faecal accumulation in the situation occupied by the tumour has been stated to be impossible and could be dismissed.

Localised peritonitis with adhesion of several coils of gut, cysts or new growths of the mesentery or malignant disease of the bowel itself were all possible. I believed it to be the first of these conditions, probably associated with ulceration of the mucous membrane of the bowel.

As the diagnosis was thus by no means certain, and the child was evidently in a dangerous condition, I advised removal to the hospital, where an operation might be performed if necessary. This the parents would not consent to.

On the 27th of November, the parents asked me to call Sir William Hingston in consultation. I did so.

On examination, patient was found not to have changed much since my first visit. His pulse was 120 ; temperature 101° F. The pain had been more severe, coming on in paroxysms. Sweating was profuse. Loss of appetite pronounced. Secretion of urine scanty. Vomiting had ceased. Sir William Hingston made a diagnosis of new growth of the mesentery. We decided to await developments. After

watching the case until Dec. 2nd, and finding the patient to be steadily losing ground, with a decided increase of all the symptoms and return of vomiting, we decided to remove the patient to the Hotel Dieu. The parents were by this time ready to consent to an operation.

On Dec. 3rd, there appeared some sloughy, purulent material in a good sized pea-soup-like stool.

We decided to examine under chloroform next morning and operate if we judged it to be proper. During the day the rectum was washed out three times with warm water, and again next morning. A light diet of beef-tea and milk was prescribed, and nothing was given after 7 a.m. on Dec. 4th.

On that day chloroform was given and a careful examination of the abdomen made. It was found that the growth was larger than we had thought and dipped down well into the iliac basin in the cæcal region.

Both Sir William Hingston and I agreed that an operation was necessary.

After preparation of the hands and of the seat of operation I made an incision directly over the centre of the mass at the border of the right rectus; extending from a point a little above the level of the umbilicus downwards three inches. The cut divided some of the outer strands of the rectus. There was but little subcutaneous fat and the belly wall was thin.

Having controlled hæmorrhage, which was slight, the peritoneum was carefully cut through. About two ounces of straw coloured fluid of fæcal odour escaped. The peritoneum was divided on a director the length of the incision, and at once the great omentum appeared in the wound. The opening was enlarged up and down a little with scissors and the hand inserted, when a large mass was felt extending deep down to the vertebral column. The omentum was adherent to its upper surface. These adhesions were tied with catgut ligatures and cut, and the omentum freed and drawn out of the way. More adhesions were found at the sides of the mass. The softer were gently separated and the firmer tied and severed. The tumour was now fully exposed, and was seen to consist of a mass of bowels, hard and leathery, and glued together into one solid lump. At one point was seen a large perforation through which fæcal matter began to ooze.

It was plain that we must remove the mass, as it was obviously impossible to leave a leaking intestine in the abdominal cavity.

The edges of the wound were therefore retracted, the fæcal matter swabbed away carefully, and the tumour delivered out of the abdomen. A mass of small intestines followed and were at once enveloped in warm aseptic compresses, which were changed from time to time

during the rest of the operation. The mesentery, which was thickened and evidently diseased, was ligatured in part; the rest was so friable that it gave way. The ileum and colon were secured with clamps and cut wide of the disease when the tumour was removed.

The ends of the bowel being disproportionate in size, a slice was cut from the ileum diagonally, at the expense of the part opposite the mesentery.

The clamps were taken off, and as no bleeding followed, the cut ends of the intestine were drawn out and irrigated with warm boiled water, in order to empty the bowel completely. A continuous Lembert suture united the colon to the ileum. An attempt was made to sew up the mesentery, but it was so friable the sutures cut through and it was abandoned.

The intestines outside were thoroughly irrigated with warm boiled water, and an endeavour made to return them. As this was difficult, an aseptic compress was placed over them and tucked under the edges of the wound. With very little trouble, the whole were then returned. As the bleeding points had all been secured with catgut ligatures and the hæmorrhage and oozing had been slight, a drain was not thought necessary, and the abdomen was closed with through and through silk-worm-gut stitches. The wound was dressed with iodoform.

The operation lasted an hour and a half, and the boy at the end was very weak, with a very frequent and feeble pulse. He was at once wrapped in blankets and removed to bed, where hot-water bottles were disposed around him and at his feet. An enema of warm beef-tea and brandy was given and a hypodermic injection of strychnia gr. $\frac{1}{120}$.

The child soon came out of the state of anæsthesia, but seemed greatly excited and restless. He vomited several times. His pulse was too rapid to count, and his condition bad. The enemas were continued every 2 hours, but he continued to sink, and at 11 P.M. he died, 8 hours after the operation.

Dr. Nicholls, of the Royal Victoria Hospital, kindly examined the specimen. His diagnosis was sarcoma of the small round-celled variety. In reviewing the case there are some points of interest:

There was an undoubted history of a fall six months ago. Symptoms only became pronounced three weeks before death, and nutrition was well maintained in spite of the great size of the tumour and the impending perforation.

Diminished secretion of urine was pronounced. Ashurst states that this symptom is generally present only in acute intestinal obstruction, and more often where the obstruction is high up and very complete.

The mortality statistics in cases in which resection of intestine has been done does not encourage surgeons to operate except in desperate conditions.

The mortality in all cases ranges from 48 per cent. to 100 per cent. in various tables which have been compiled. In children the mortality, as an average, is higher than in adults.

Cases in which resection has been done in conditions similar to my case are so rare that so far as I know no statistics are available.

Balyer has mentioned four cases of resection of intestine for primary sarcoma of the bowel; of these 2 died, and the result of the others was not reported.

Primary sarcoma of the bowel is extremely rare. Balyer, quoted above, gives only 14 cases. Of these 92 per cent. were in males, and the majority of cases between the ages of 40 and 50. They were all of the small-celled variety. They did not produce intestinal obstruction.

In looking through the literature, I have only been able to find six cases of sarcoma of the mesentery reported. These were reported by Luke of Cincinnati, Stolbe of Leipsic, Masse of Berlin, Tamsburg, See and Arnott of London. Of these one was a myosarcoma, three were of the spindle celled variety, one was a myxosarcoma, the remaining one not classified.

The tumour, when fresh, weighed 585 grammes. Its measurements were 11.5 x 9.7 x by 9 cm. The length of the appendix, which was normal, was 3.5 cm. The length of bowel removed was about 50 cm. The mass contains a part of the ascending colon, the cæcum with its appendix and a long piece of the ileum. All this, with the exception of a few inches of ileum, is welded together into one solid mass. The free piece of ileum is thickened and leathery.

The perforation is near the junction of the ileum and cæcum and forms the outlet of a long tunnel through the thickened wall of the bowel. On the peritoneal surface, the borders of the perforation are raised and thickened. The peritoneum is thickened and covered in places with deposits of lymph, and completely invests the mass. Thus there was no meso-cæcum or meso-colon, a condition often noted by Treves and others.

The walls of the intestines are enormously thickened and friable. No ulceration of the mucous membrane is present except at the seat of perforation.

There is no obstruction anywhere to the passage of fecal contents, the lumen of the bowel being permeable throughout.

Ephemerides, 1897.

By WILLIAM OSLER, M.D.

XX. THE BLOOD COAGULATION TIME IN JAUNDICE.

It has long been well known that in chronic jaundice there is a marked tendency to hæmorrhage, and in operating upon such cases surgeons have to count upon this as a possible serious accident. Within the past few years I have known of three fatal cases of hæmorrhage following operations under these conditions. A recent case suggests the possibility of the value of taking the blood coagulation time.

A man, aged 34, came under my care in May, 1897, with pains of a doubtful character in the abdomen. There was some increased acidity of the gastric juice with which we thought possibly they were connected. He did not improve, and returned at the end of September with jaundice. He had lost a good deal in weight, had much pain in the region of the liver, which was tender and slightly enlarged. The onset of the jaundice with pains suggested gall stones, and Dr. Finney operated. The patient almost bled to death on the table, blood oozing from the skin incision and from the deeper parts, and about the torn adhesions. As all efforts were occupied in controlling the bleeding, it was impossible to make any determination of the nature of the trouble. The wound was packed with gauze, and the patient was taken back to the ward in a very exhausted condition. He bled very actively every time an attempt was made to remove the gauze, and it was at least three weeks before all of it was taken out of the wound. His blood coagulation time, as taken with Wright's tubes, was between ten and eleven minutes, more than double the normal. It certainly would be advantageous to test this point in cases of chronic jaundice before operation, and it might be worth while also to follow out Prof. Wright's suggestion and to give the calcium chloride in full doses for a period of ten days in order to increase, if possible, the coagulability of the blood.

XXI. FACIAL PARALYSIS WITH HERPES ZOSTER.

The association of facial paralysis with herpes zoster has been recently studied by Eichhorst (*Centralblatt f. innere Med.*, 1897, Bd. 18,) who has been able to add seven cases from the literature to the

list of eleven collected by Ebstein. The following case has recently come under my observation.

Dr. ———, aged 56, whom I have seen at intervals for the past two or three years, with chronic bronchitis and emphysema, came complaining of paralysis of the left side of the face with herpes behind the ear. For a week or ten days prior to the the onset of the eruption he had pains of a neuralgic character on the left side of the head. During this attack he came to consult me, and I found a small crop of fresh herpes in the mastoid region, extending to the nape of the neck along the line of the hair. He had evidently suffered a great deal of pain, and had been kept awake at night, and was a good deal pulled down. Two or three days subsequently he noticed that the face was drawn to one side. When I saw him the facial paralysis was complete on the left side, and it has persisted for now more than a month. Apart from the rarity of such cases it is interesting to note the persistence of the neuralgia before the onset of the herpes, the distribution of the herpes in the region of the cervical nerves, and the occurrence of the paralysis in the region of the facial nerve without any herpes in the area of its distribution.

XXII. PARALYSIS OF THE OCULAR MUSCLES IN ALBUMINURIA.

In a case of motor oculi paralysis, in the absence of past diphtheria, we usually look for tabes or syphilis. I had never had my attention called to the possibility of its occurrence in albuminuria and Bright's disease, and I see no mention made in the last edition of Gowers, a work in which one usually finds reference to all recorded complications. Knies in his work on the relations of disease of the eye to general diseases states in connection with paralysis of the ocular muscles in albuminuria that "they are so frequent, however, that in every case of sudden or rapidly developing paralysis of the ocular muscles with the character of basilar, root or nuclear paralysis the urine should be examined for albumin. The cause generally appears to consist of a hæmorrhage in the region of the nerve roots or nuclei, possibly even in the nerve itself." The following case seems to belong to this group.

Mr. B., aged 52, seen in consultation with Dr. Scott, complaining of kidney trouble and diplopia. The patient had been a very healthy man. Syphilis could be positively excluded. Three years ago he had pains in the right back, and once a quite sharp attack, which was diagnosed kidney colic. He had pneumonia five years ago, and with those exceptions he had had no serious illness until June, of 1897, when he began to have headaches which troubled him a good deal.

Dr. Scott examined the urine and found that he had albuminuria. Tube casts were not discovered. He had dyspepsia and lost twelve pounds in weight. About the middle of June he had paralysis of the left external rectus, which caused a very annoying diplopia. The combination of headache with the diplopia led to the suspicion that there might be some serious brain trouble. He was given iodide of potassium; the headache gradually disappeared, and the paralysis of the external rectus has been slowly improving, so that now he has scarcely any trouble from it.

The patient was a very healthy looking man, with slightly more sclerosis of the arteries than his age alone warranted. The pupils were equal, reacted to light and on accommodation. There was no limitation of the fields of vision, the optic nerves were normal, and there were no changes in the retinae. The knee jerks were present and his station was good. The urine at present contains no albumin. The case is of interest as syphilis and tabes could be excluded with certainty.

RETROSPECT
OF
CURRENT LITERATURE.

Medicine.

UNDER THE CHARGE OF JAMES STEWART.

The Roentgen Rays in Thoracic Diseases.

FRANCIS H. WILLIAMS, M.D.—“The Röntgen Rays in Thoracic Diseases.” *The American Journal of the Medical Sciences*, Dec., 1897.

Dr. Williams has examined upwards of five hundred patients by means of the X rays, four hundred of these being medical cases. This article, dealing with diseases of the thoracic organs, is especially interesting to students of internal medicine, and if all that Dr. Williams claims for this new method of examination can be realized, much greater accuracy of diagnosis in the very early stages of disease will be secured.

The direct application of the X rays in examination, it would seem, supersedes the somewhat tedious and certainly expensive method of photography, the observer seeing the condition and describing it or sketching it on paper or upon the chest wall, from which it is afterwards transferred to paper.

Quoting directly from the summary which Dr. Williams makes of his own observations, we find the following chief conclusions:

1. The fluoroscope gives us better assurance that the lungs are in a healthy condition than other methods of physical examination, and in connection with auscultation and percussion, teaches us in disease to interpret better the sign found by the older methods.

2. The fluoroscope gives us earlier evidence of disease in some cases of tuberculosis, and more accurate information of its extent, than can be obtained by the usual physical examination.

3. The fluoroscope gives us more accurate information of the extent of the disease in pneumonia, and of the duration of an abnormal condition of the lungs.

4. It enables us to outline the heart more accurately and completely than has hitherto been possible and to observe certain changes in it.

5. It gives us the means of making an earlier diagnosis of some cases of thoracic aneurism than any other method, and enables us in certain cases to exclude it where it has been suspected.

6. It enables us to ascertain the cause in some cases of dyspnoea that would otherwise be obscure.

He further says the X-ray examination should be used in connection with other methods; the information derived from it in suitable cases is more definite and accurate than that obtained from auscultation and percussion.

Chlorosis and its Etiology.

CHAS. E. SIMON, B.A., M.D. "A Study of thirty-one cases of Chlorosis with special reference to the Etiology and the dietetic treatment of the disease."—*The Amer. Jour. of Med. Sciences*, April, 1897.

In the study of this series of cases Dr. Simon reaches the following conclusions:

1. An anatomical basis of chlorosis has not been satisfactorily determined.

2. A perversion of the appetite, excessive consumption of starches and sugars, is a common symptom of chlorosis.

3. The development of chlorosis is due to an insufficient consumption of animal proteids.

4. Chlorosis is far more common than is generally supposed, and occurs in both sexes and at almost all ages.

5. The diagnosis of chlorosis should be based altogether upon an examination of the blood.

6. The term chlorosis should be discarded and "simple anæmia" substituted.

7. Iron is not a specific in the treatment of chlorosis.

8. In the treatment of the disease attention should primarily be directed to the diet.

9. In cases in which iron fails, satisfactory results may be obtained, without medication, from a suitable diet, in which animal proteids, bone-marrow and dark beer are the principal factors.

10. The beneficial effects of bone-marrow are not due to the amount of iron which it contains.

Angina Pectoris.

J. H. MUSSER, M.D. "Angina Pectoris: its relation to dilatation of the Heart."—*The Amer. Journal of Med. Sciences*, September, 1897.

After indicating the physical signs from which a diagnosis of cardiac dilatation may be made, Dr Musser details cases illustrative of the following points:

1. When dilatation of the heart supervenes in a patient the subject of an attack or attacks of angina pectoris, the subjective symptoms may subside. At the same time the physical type of the individual changes.

2. Angina pectoris may occur in a patient who has had dilatation of the heart when the organic condition (dilatation) is removed by treatment.

3. True angina, when it occurs in dilatation of the heart, admits of a prognosis more favourable than when it occurs with other mural conditions, as myocarditis or hypertrophy without dilatation.

4. Grave cases of dilatation of the heart, conversely to the above, may be looked upon as amenable to successful treatment if the patient should have paroxysms of true angina pectoris.

5. In the treatment of angina pectoris digitalis is of doubtful value, not to be given unless there is an excess of dilatation.

6. The pain of angina pectoris appears to be due to increased intraventricular pressure, although other causes are no doubt operative.

Abscess of the Brain following Suppurative Process in the Frontal Sinus.

DR. TREITEL, IN BERLIN. "Ueber Hirnabscesse nach Stirnhöhlen-esterung."—*Deutsche Medicinische Wochenschrift*, No. 47, 1896.

The relationship existing between suppurative process in the brain and in the middle ear is well established and widely recognised.

It would appear, however, from this writer's statistics that about 33 per cent. of the abscesses of the brain had their origin in some suppurative ear disease, while the balance is divided among other causes.

From the fact that in 120 cases of frontal sinus suppuration analysed by Engelmann, only five cases of abscess were discovered, it appears that this was not a very common etiological factor. This view seems to gather strength from Dr. Treitel's search through the literature, which resulted in finding but 21 recorded cases of disease of the brain following a suppurative condition in the frontal sinuses, and of this number, thirteen were abscess formations.

It is of much importance, however, as an etiological factor. In the cases carefully analysed it was found that the posterior wall of the sinus became carious, and thus the brain at that part became involved. It is possible, that where a non-carious process in the sinus is followed by a suppurative process within the skull, or where in obscure cases no pus is found in this sinus, that extension may take place through the horizontal plate of the ethmoid bone, which is commonly affected in frontal sinus cases.

Tabes and Aortic Insufficiency.

DR. H. RUGE AND DR. W. HUTTNER. "Ueber Tabes und Aorten Insufficienz."—*Berliner Klinische Wochenschrift*, No. 35, 1897.

That aortic insufficiency and tabes dorsalis are seen associated in a number of cases sufficiently large to suggest something more than coincidence is well established, although Leyden and a few other noted observers, speak against these diseases having a common origin in syphilis.

Dr. Ruge and Dr. Hüttner in Prof. Gerhardt's Clinic at Berlin, having examined 138 cases of tabes dorsalis, found 12 cases having valvular disease, nine of which were pronounced aortic incompetency. two mitral regurgitation with slight changes in the aortic valve, while one case was that of aortic stenosis.

Thus in 6.5 per cent. of cases of tabes, aortic regurgitation was noticed.

In $\frac{1}{2}$ of these cases so complicated it appeared that syphilis was more or less certain as a factor; at any rate altogether too frequent to allow of this being considered merely as a coincidence.

A search through the literature on this subject supports the stand taken by these two observers, and numerous quotations of cases are made; some, however, are not willing to regard the degenerative changes in the cardiac valves as due to syphilis.

The aortic valve, compared with the mitral valve, is affected in the proportion of 10 to 2, while other statistics show a relation of 17 to 7.

The Joint Complications of Gonorrhœa.

DR. F. KONIG, IN BERLIN. "Ueber Gonorrhœische Gelenkentzündung."—*Deutsche Medicinische Wochenschrift*, No. 47, 1896.

The various articular complications following upon an infection with gonococci Dr. König classifies under four groups:

1. Hydrops of the joint.
2. Hydrops of the joint of sero fibrinous or catarrhal variety.

3. Empyema of the joint.

4. Phlegmon of the joint, in which the surrounding soft parts may become extensively involved as well.

Another group might be considered, viz.: that known as neuralgia of the joint due to this cause. Prof. König does not consider that such a division is warranted since such pains are associated, in his mind, with distinct organic changes within the joint. The careful search for the micro-organism of gonorrhœa in the writer's experience has not been rewarded by discovery, and many of his cases are classified on a purely clinical basis.

The first two groups are generally light and rarely call for radical measures.

That which concerns the other two recognised groups is vastly different. A tendency to ankylosis is very marked in such cases, even more so than in any other form of articular disease.

The treatment recommended in gonorrhœal arthritis varies with the variety of the disease with which the clinician has to deal. In those cases in which there is not more than an *hydrops* of the joint Dr. König recommends the withdrawal of the fluid and then the injection of carbolic acid.

The phlegmonous cases generally need puncture or incision with thorough clearing away of the fibrinous exudate. Treatment with strong solution of carbolic acid is also recommended in these cases.

Less radical measures are sometimes of use in reducing the swelling, and among vesicants Dr. König speaks most favourably of the tincture of iodine, which must be applied very frequently if good results would follow.

Rest in hand and foot joints and extension in hip joints are important measures in the treatment of these forms of arthritis.

The treatment of a joint after ankylosis has taken place is very unsatisfactory. The use of the Röntgen rays may decide the question as to the presence of bony ankylosis.

Any attempt to mobilize such joints is attended with such pain, and is so wearing upon a patient from the length of time passive movement and massage must be kept up, that failure is almost certain. However, something may be done by such means in some cases.

The Cause of Splenic Enlargement in Cases of Hepatic Cirrhosis.

DR. F. PARKER WEBER. "The cause of splenic enlargement in cases of hepatic cirrhosis."—*The Edinburgh Medical Journal*, Dec., 1897.

Until recently the generally accepted explanation of splenic enlargement in cases of cirrhosis of the liver was passive congestion. This

view of the cause is being called more and more into question, for the following reasons adduced by Dr. Weber :

1. In cases of chronic passive congestion in valvular heart disease the spleen is generally found small. Kelynack's finding of the spleen in a considerable number of post-mortem cases shows the spleen of hepatic cirrhosis to have an average weight of 12.93 ounces against an average of 7.32 ounces in cardiac cases.

2. The greatest enlargement of the spleen is not found in those cases of cirrhosis where portal obstruction is greatest, but rather in those cases where portal obstruction is least and where ascites is delayed.

The real cause of splenic enlargement in such cases of cirrhosis seems to be a toxic substance not necessarily microbic, which calls forth in the spleen the change—a "vital reaction"—by which enlargement is brought about.

This toxic substance may be something normally excreted by bile, for the enlargement is most marked in those cases where the *biliary* flow is most hindered.

On the other hand the enlargement in the two organs may arise from a common cause, although it is more reasonable to regard the changes as primary in the liver, and that from this the auto-intoxication has originated.

W. F. Hamilton.

Surgery.

UNDER THE CHARGE OF GEORGE E. ARMSTRONG.

Tetanus.

GOODRICH. "The geographical distribution, prophylaxis and therapeutics of tetanus."—*Annals of Surgery*, December, 1897.

DENNIS. "The treatment of tetanus."—*Annals of Surgery*, December, 1897.

Although it can hardly be said to be a common disease in Canada, yet cases of tetanus do occur now and again, and the results are so often fatal that any new light on the prophylaxis and treatment can not but be of great interest. The tetanus bacillus flourishes best at body heat, or heat in slight excess of normal human temperature. The nations that inhabit tropical regions are reported as "exceedingly susceptible" to the disease, but it is highly probable that surroundings play a much greater part than any supposed racial vulnerability and the fewer cases occurring in the north are evidence of the inability of the bacillus to flourish in cold climes.

In India tetanus is very prevalent. In one hospital in Calcutta eighty-three cases were treated in five years. In another fifty-six were treated in a like time. In Bombay 1,955 cases were reported in five years. Remarkably numerous are the cases among the grain dealers of Bania, who work in dust, and who frequently use manure as poultices for wounds and boils.

"Larrey had great experience of this disease during Napoleon's campaign in Egypt," says Erichsen. Larrey had scores of cases after the battle of Waterloo, and this was merely a repetition of his experience after Dresden. On the other hand, cases were rare after the engagement at Moscow, and this in spite of the cold weather and the frightful exposure endured, which were factors supposed by the older authorities to favour the development of the disease.

But few cases are reported from England, Ireland and Scotland. It occurs quite frequently in some parts of the United States.

It is said that the specific organism of tetanus abounds in and upon stable floors, but the equine theory of the disease was disproved by the experiments of Dantes, who made cultures in the New Hebrides Islands from the mud with which the natives poison their arrows, and

found the bacilli of tetanus and of malignant oedema where no horses exist.

In the matter of treatment, the preventive should receive first attention. The best results are to be obtained by careful disinfection of the wound in the first instance. Wounds inflicted by rusty nails, and wounds which have been brought in contact with garden earth or manure or soil suspected of containing tetanus bacilli, should be thoroughly washed and scrubbed with warm water and soap and then with some germicidal solution.

Tizzoni and Cattani, as the result of experimental demonstrations, believe that silver nitrate in one per cent. solution is the most potent germicide for the tetanus bacillus for general use in wounds as a preventive injection. They claim that the bacilli and spores are destroyed in one minute.

Larmant says that iodoform applied to a wound comparatively fresh is capable of neutralizing the tetanogenic virus.

Roux has tested the power of tincture of iodine in this line, and recommends its use in all dirty wounds. Tizzoni and Cattani have corroborated his experiments.

Sternberg has shown that a 5 per cent. solution of carbolic acid, or a 1 to 1,000 solution of bichloride of mercury, to which is added a $\frac{1}{2}$ per cent. solution of hydrochloric acid, will kill the spores in ten minutes.

The bacillus of tetanus cannot live in the presence of oxygen, and therefore hydrogen peroxide is probably a good local application.

The washing of these suspected wounds should be thorough. All scabs should be removed and at once burned, since the bacilli have been found in these crusts. It would seem also that the spores develop better under special circumstances of a mixed infection, and this fact furnishes another strong reason for carefully cleansing these wounds in order to destroy the microbe of suppuration, notably the streptococci and the staphylococci.

The actual cautery has been recommended, but its use would require anæsthesia. Some have advised the amputation of the wounded member. This is an extreme measure that would need to be undertaken immediately after the infection to be of any service, and only under very exceptional circumstances could it be very seriously considered.

It is a good plan to make a series of cultures from the contaminating material in the wound and obtain a solution of them for hypodermic injection into a mouse. If the mouse develops tetanus, which it will do if infected, or if the microscope reveals the bacterial drumstick

in the cultures, practise excision of the injured area or destruction by the actual cautery.

As the elimination of the toxins of tetanus is chiefly by the kidneys, the imbibition of large quantities of fluid is indicated. The saliva has also been said to be a channel of elimination. The function of the skin has not been proved to be of any avail in eliminating the poison.

In the treatment of tetanus it cannot yet be shown that antitoxines gives much better results than the old method of treatment by antispasmodics, etc. There is this to be said, however, that cases are badly reported, and that the cases treated by the antitoxine alone without other aid are not numerous. Again, probably the great majority of the cases treated by antitoxine have been reported; it is highly probable that many of the cases treated in the old way have not been published, particularly if they ended fatally.

It would seem from the tables collected by Goodrich that the rate of recovery is higher under the antitoxine treatment in those cases having short incubation. The supremacy of the antispasmodic treatment seems most marked in cases of unknown incubation, where, in most instances, no wound was discovered. Goodrich thinks that of the different antitoxines Tizzoni's product has undoubtedly been the most successful. On the other hand, Welch believes that the longer the period of incubation the better will be the results from the use of antitoxine, and that this remedy is of little value with a short incubation period—that is, less than seven days.

Dennis emphasizes the method of administration of antitoxine, and thinks that it is sometimes given in doses too small and too infrequently repeated; for example, one surgeon reports three cases of tetanus treated by antitoxine, but in all three the serum was only given once in one case, twice in another, and three times in the third. All these patients succumbed, but the test was not a fair one, as the remedy was improperly used. The dose should be at least twenty cubic centimetres, three times daily, and in some cases even larger.

Antitoxine is also being used as a immunizing agent in cases where there has been reason to fear the development of tetanus, as in wounds infected with garden earth, plaster, manure, or stable dust. If as good results can be obtained in immunizing against tetanus as have been obtained in immunizing against diphtheria, the antitoxine will prove a valuable preventive, if not as successful a curative agent as one might desire.

Bazy, a French surgeon, had four fatal cases of tetanus in his practice in one year, and subsequently began injecting twenty cubic

centimetres of serum into all patients who suffered from lacerated wounds into which extraneous matter had of necessity entered. Since he adopted this practice tetanus has not followed in those cases in which a strong probability existed that this dreaded disease might develop.

Lambert mentions that Nocard, in veterinary surgery, immunized 375 animals, and in no single case did tetanus develop, while he had 55 cases of the disease in animals in the same environment.

The use of the antitoxines should be continued for some time after symptoms have disappeared, and when used for immunizing purposes a dose should be given in the second week, and probably repeated again in the third week. The reason for this is that the antitoxine does not kill the tetanus bacilli nor the spores, but it destroys the action of the toxins. So that if some of the spores remain quiescent they may develop into bacilli after the antitoxine has been eliminated. Toxines then produced will be absorbed and additional antitoxine must be administered.

Geo. E. Armstrong.

Gynaecology.

The Treatment of Abortion.

HENRY J. GARRIGUES. "The Treatment of Abortion."—*Medical News*, Nov. 6th, 1897.

Garrigues does not approve of the two terms abortion and miscarriage having different meanings according to the period of gestation reached, but considers that both should mean the interruption of pregnancy at any period previous to the possibility of the birth of a viable child; that period is the end of the sixth month, the birth of a fetus between that time and the termination of the normal period of gestation being called a "premature labour." Abortion is most frequent during the third month of pregnancy, the frequency diminishing in the second, fourth and fifth months.

He divides the treatment into prophylactic and curative, the first being especially required in habitual abortion, *e.g.*, in syphilis, where by treating both husband and wife future abortions may be prevented. Change of residence will be found to be necessary where the district is malarious, or, if the uterus be in any abnormal position, it should be replaced. Where no cause is to be found, the patient should be kept in bed for a week at the time when menstruation is about due, and should be given viburnum during that time and general tonics in the intervals.

Where abortion is merely threatened, rest in bed and the exhibition of viburnum, opium and salines, with the local application of an ice-bag to the hypogastrum will often be successful in arresting it, but, where it is inevitable, the writer strongly advises speedy removal of the ovum. He does not approve of tamponade of the vagina unless the patient is very weak and you desire to allow her to rally, or else where it is necessary for her to be removed to some other building. Where a tampon is required, he packs the upper part of the vagina with iodoform gauze, introducing one end into the uterine cavity, and fills the lower part of the vagina with pledgets of absorbent cotton, wrung out of a one per cent emulsion of creolin.

Where active interference is indicated, instruments are preferred to the fingers for the purpose of effecting dilatation of the uterine canal, and Thomas' large, dull wire currette, aided by the finger, is used for

separating and extracting the ovum, although the Récamier curette is better where the age of the ovum is less than two months.

Where the uterus is small, the vagina only is packed, but where gestation has reached the third month, it will be best to also pack the uterus with iodoform gauze after complete removal of the ovum, an intra-uterine douche of creoline emulsion (1 per cent.) being previously given.

Amputation versus Repair of Cervix.

THOMAS ADIS EMMET. "When to amputate in preference to the repair of a lacerated cervix."—*American Gynecological and Obstetrical Journal*, September, 1897.

Dr. Emmet formerly held that in almost every case of lacerated cervix the tissues could be brought so near to a normal condition by local treatment that a repair of the laceration was sufficient to effect a cure, but, in the above paper, he acknowledges that there are many cases in which this line of treatment will fail and where it will be necessary to amputate the cervix.

Among the patients requiring amputation of the cervix are the majority of hospital patients who cannot afford time to lie up and be treated for a sufficiently long period. Another class includes those women whose nutrition has been very much impaired through the sympathetic system, and as a result of the long standing injury. Here, no improvement in the general health can take place as long as the cause of the irritation exists, and if this is not removed as speedily as possible, there is a strong probability that the constitution will become fatally undermined, the writer mentioning also the frequency with which carcinoma develops—synchronously with a laceration of the cervix.

For some reason which is not stated, Dr. Emmet does not practice the operation known as Schroeder's amputation of the cervix, but follows a method of his own, in which he removes a conical portion of the cervix, the apex of the cone being uppermost, and sutures the mucous membrane covering the vaginal portion of the cervix to that lining the canal of the latter, with the usual suture in each lateral angle. After the cervix is drawn down as far as possible, in order to put the blood-vessels on the stretch and so prevent hæmorrhage, the cone is removed piece by piece with scissors, great care being taken not to open into the bladder or peritoneum.

The material used for the sutures is silver wire.

F. A. L. Lockhart.

Syphilis of Sexual Organs in Woman.

NEUMANN. "Syphilis of sexual organs in woman."—*Wein. Med. Woch.*, No. 20, 1895.

Neumann says that of the earlier exanthematous syphilides, none can be clearly diagnosed on the cervix or vagina above the vulva, except mucous papillary growths. Of primary lesions only 55 were detected in 800 infected patients; in 51 the portio-vaginalis, and in 4, the vagina was attacked—about 1 in 15 cases. Gummata are far more frequent, chiefly in the introitus and lower third of the vagina. Obstinate recurrence of these syphilitic lesions of the vagina have been observed. Syphilis of the tube and ovary is a rare and very indefinite complication. There has been only one case of syphilis of the body of the uterus recorded. Metritis and endometritis often kill the fœtus in syphilitic patients, but Neumann does not think these complications are in themselves specific. They come on in any woman otherwise out of health, and the debility caused by the syphilis, not the infection itself, may produce the endometritis. Syphilitic disease, however, of the placenta is well recognized, and is the cause of death of the fœtus for want of nourishment.

There is a case now under my care in the Montreal General Hospital of a large excavated ulcer on the anterior lip of the cervix. There is additional history of direct infection from the husband. There are no other points of infection either on the vulva or vagina. This patient, on admission, had a bubo of the right inguinal region, outside Poupart's ligament. These glands have been excised and found to be disintegrated and contain pus. The hypogastric glands, I have no doubt, are also infected and will some day give trouble in the formation of a retroperitoneal abscess. The cervical ulcer was destroyed thoroughly with the thermo-cautery. There are no evidences, as yet, of secondary exanthemata, which will be carefully watched for.

Pathology.

UNDER THE CHARGE OF J. G. ADAMI.

Upon Glycerinated Vaccine Lymph.

THORNE THORNE, AND COPEMAN, S. M. "Report to the Local Government Board on the Preparation and Storage of Glycerinated Calf Vaccine Lymph."—London, 1897.

COPEMAN, S. M., AND BLAXALL, F. R. "On the Influence of Glycerine, of Lanoline and of Vaseline, in Inhibiting the Growth of Micro-organisms commonly found in Vaccine Lymph."—Twenty-fifth Annual Report of the Local Government Board, 1895-96, p. 283.

Absolutely essential for the preservation of public health as is the process of vaccination, and mild as is the course of vaccinia in the vast majority of cases, it must be admitted by all who have studied the minute anatomy and the bacteriology of the skin, that, however carefully the inoculation be performed, there remains a remote danger of secondary infection. However healthy the individual, there are parasitic upon his skin numerous bacteria of many species. However carefully we attempt to sterilise the skin, it is impossible to destroy all these bacteria, for some find their way down the hair follicles and along the ducts of the sebaceous and sudoriparous glands to the deeper layers, and, as Welch and his associates at Johns Hopkins have shown in their admirable studies upon this subject, although the strictest antiseptic methods have been employed, a skin-wound cannot be rendered perfectly free from germs; even with the most thorough technique the growth of these parasitic bacteria cannot be prevented. Happily the form usually parasitic upon the skin are free from pronounced pathogenic action. Nevertheless it may happen that pathogenic pyococci, the bacillus pyocyaneus, streptococci and other microbes possessing definite virulence are to be detected.

Thus we cannot be surprised if such pathogenic forms are to be isolated from the contents of vaccinal pustules, and if occasionally their growth leads to more than local disturbances; if, in short, there should at times be erysipelatoid, septic or other complications, despite all reasonable care.

But the converse is equally true: the greater the care, the more we preserve the region of inoculation and of eruption in a cleanly condi-

tion, the more we assure ourselves that the lymph employed is uncontaminated, the less do complications manifest themselves, until in the hands of cautious and conscientious vaccinators such complications approach the vanishing point.

Can we, it may be asked, hope eventually to rid ourselves wholly of this remote danger of septic infection? Is there any likelihood that the good effects of vaccination can be attained by other means, or that we shall be able to render the system immune to small-pox without setting up, what I have previously in this JOURNAL pointed out, can only be regarded as a mild, attenuated form of the disease? The answer to this question must be a qualified negative. Of other diseases, in which the specific or causative microbe has been discovered, we know this, that the most long continued immunity is obtained by inducing a mild form of the disease, and by inoculating the attenuated germ. Immunity, it is true, can be gained by other means, by injecting the products of bacterial growth (toxines), or again the substances developed in the blood and tissues of animals that have been rendered immune (antitoxines). But immunity so induced is of short duration. With our present method of vaccination the immunity against small-pox lasts only for from four to twelve years (as the result of a single vaccination); any milder method would be too transient in its benefits. Add to this that we do not as yet know what is the pathogenic agent in small-pox, and so cannot as yet employ the toxines, while experiments made with antitoxines have been most unsatisfactory. If, therefore, we wish to immunise against small-pox we must continue to confer the mild disease, and must inevitably set up a mild cutaneous eruption with its remote dangers of secondary infection. We must find satisfaction in the fact that the unpleasant character of the local eruption, in vaccination, and the remote danger to which I have referred, are as nothing compared with the public and personal security gained by this procedure.

Accepting then that it is our duty to vaccinate, it is evident that it is equally our duty to minimise the tendency towards the development of secondary infection at all stages of the induced disease. Such secondary or complicating infection may arise from two, or more correctly, three sources: (1) The presence of pathogenic micro-organisms parasitic upon or in the skin; (2) Contamination of the vaccine lymph; (3) The introduction from without of pathogenic micro-organisms into the vaccinal eruption. Happily the danger from the *first* of these sources can be rendered minimal. Virulent microbes rarely enter deeply into the healthy skin; hence sterilisation of the surface of the skin by approved methods antecedent to inoculation

tends to remove or destroy the harmful bacteria which may be present. The forms which cannot be destroyed because of their situation in the deeper layers are almost constantly either quite harmless or of very feeble virulence, and while these are liable to proliferate in the vaccinal pustule they neither spread into the surrounding tissues, nor are they liable to cause sepsis by the absorption of their products of growth. The *third* source also is capable of being guarded against; if the scarification be made with a sterilised instrument, if the region of the eruption be kept clean and protected against injury, if again the crust or scab be preserved intact, and if, further, the inflamed area be kept dusted with boracic acid or other powdered antiseptic, there is very little chance of infection during the progress of the development of the eruption.

Contamination of the vaccine lymph is a danger which even at the present day is too little regarded here in Canada, as in English speaking countries generally. It is true that the process of arm-to-arm vaccination is steadily dying out, but our governments have as yet failed to make any regulations compelling the public to be served with lymph that has been tested and found free from extraneous germs, and the time is ripe for legislation to this effect.

Examine bacteriologically the fresh lymph obtained from any human being or calf, and it is found to contain abundant bacteria. As I have already stated, these in general are harmless; nevertheless it is possible that among the harmless there may creep in by accident or chance forms that are dangerous. In the calf this danger may be largely though not entirely controlled by killing the calf after the lymph has been collected, and examining the various organs. This is done in Germany, when if any lesion is found the lymph is condemned. Or again, the danger of tuberculosis may be controlled by the diagnostic employment of tuberculin. In man it is not possible to make such thorough investigation of the individual supplying the lymph, and very rightly, therefore, arm-to-arm vaccination has received now-a-days general condemnation.

Copeman found that there are at least three species of microbes, one or more of which are almost universally present in every sample of human or calf lymph examined. These are the *M. epidermidis albus* (a form usually found in the upper layers of the skin of healthy individuals apart from vaccination), the *Pyococcus aureus*, and the *Staphylococcus cereus flavus*.

The two last forms are found often as the agents of pus production. As Welch has shown, the first, also under special circumstances may lead to suppuration. This, however, must be admitted that the *S.*

cereus flavus has feeble pathogenic powers, as also that the *Pyococcus aureus*, together with another pus producing organism occasionally present (the *Streptococcus pyogenes*, vary greatly in virulence, so that very frequently inoculations of pure cultures lead to little beyond local and transient irritation. We are still in ignorance of the laws governing these variations in virulence of some of the most widely diffused pathogenic microbes. Yeasts, sarcini and other non-pathogenic organisms are also to be found in most samples of freshly obtained lymph, whether human or bovine.

So long ago as 1869 Müller showed that vaccine lymph might be diluted with glycerine and still retain its properties unimpaired. The dilution was apparently utilised for many years purely as a means of increasing the amount of material available for vaccination. A point which apparently has escaped Dr. Copeman's notice is, that for some years prior to his researches, the British Army Veterinary authorities at Aldershot, under the able direction of Captain Fred. Smith, had employed dilution with equal quantities of pure glycerine and water as a routine practice, inasmuch as after many experiments they found that such dilution was the best means of preserving lymph during transmission to India and other tropical stations, and that such lymph appeared actually to increase in potency. Indeed, in 1890 Dr. Smith and I undertook sundry observations based upon these preservative properties, our observations leading, it is true, to no definite results. Our main attempt was to determine whether the glycerine extracted and preserved some ferment-like body from the (unknown) vaccine germ, or whether this germ could be grown and studied upon media rich in glycerine.

It was, however, left to Copeman to explain the main action of this admixture with glycerine. He showed, at the meeting of the International Congress of Hygiene, in London, in 1891, that the addition of suitable quantities of pure, acid-free glycerine to vaccine lymph inhibits the growth of extraneous micro-organisms, and that in the course of a few weeks they are practically all killed out. Thus then lymph treated with glycerine becomes in the course of a month or so free from contamination. All pathogenic microbes present by chance in such lymph and all harmless bacteria, save these possessing spores, die off: if spores be present they do not germinate. Here clearly is a means of preparing a virus that is absolutely safe, i.e., that will not, when inoculated, introduce into the system any extraneous pathogenic germs capable of setting up complications. What is more, the lymph actually appears to gain in strength; whether simply from the destruction of counteracting germs, or from some multiplication of the vaccine,

virus, it is as yet impossible to state. But gain undoubtedly three is. At the animal vaccine establishment of the Local Government Board in London (where after the manner of British Government offices innovations show themselves slowly, and admixture with glycerine had not been generally employed, even though its utility had been demonstrated by an official of the board)¹ "it has hitherto not been deemed necessary, or even expedient, to make one calf serve for more than some 200 to 300 vaccinations. It is no unusual thing abroad to provide from a single calf an amount of glycerinated lymph that shall serve from 4,000 to 6,000 vaccinations, and in Berlin we were assured that the glycerinated lymph which was prepared in our presence from one calf would suffice for no less than 15,000 vaccinations."

Although in English-speaking countries the use of glycerinated lymph has not become general, it is universal in Germany and is employed in the government stations of France, Belgium and Switzerland; for Copeman's observations have been confirmed by numerous other workers. The second report referred to in our heading gives full and valuable details of the methods employed in Paris, Berlin, Dresden, Cologne, Brussels and Geneva for the preparation and storage of vaccine lymph. Those interested in the subject will find here full descriptions of the great advances that have been made during the last few years in the preparation of this material. Space forbids that I should cull from the report a statement of how the model vaccine establishment is throughout directed in accordance with laws laid down by the bacteriologist. I need in addition but to refer to Dr. Blaxall's experiments contained in the first report referred to. Lanoline and vaseline have been advocated by some as possessing superiority over glycerine. Dr. Blaxall demonstrates that this is very far from being the case. Making examinations of fresh vaccine lymph with glycerine, vaseline and lanoline respectively, it was found that the number of bacteria in the two latter steadily increased, whereas the bacteria in the glycerine emulsion steadily diminished. At the end of four weeks none of the agar plates made from the glycerine emulsion showed any colonies at all. At the end of six weeks the glycerine stock emulsion continued absolutely sterile, while plates from the other two were so flooded with colonies that the first plates were useless, and only upon the second plates in which there had

¹ Since this article was written I am glad to see that the British Government has at last recognised the value of Dr. Copeman's procedure and is taking steps to make the use of glycerinated lymph compulsory.

been a further great dilution of the stock were the colonies sufficiently far apart to be counted. Thus :

Glycerine.....		0 colonies per plate.
Vaseline (Plate II).....	8,000	“ “ “
Lanoline (Plate II).....	10,000	“ “ “

What is the moral to be drawn from the above observations ? It is this :

1. That the admixture of glycerine with the vaccine lymph obtained from the calf leads, under due precautions, to the destruction of all harmful micro-organisms, so that such glycerinated lymph in twenty-eight days can be used with full security—that is, is free from dangerous contamination.

2. The same can be stated of no other preparation of lymph at present known to us. Even when prepared with the greatest care, “ points ” are liable to be contaminated—as again is undiluted fluid vaccine lymph put up in sterilized and hermetically sealed tubes. All these forms, if tested, show abundant cultures of various bacteria, notably of forms undistinguishable from pus-producing micro-organisms ; and though in the vast majority of cases these produce no evil effects, still there is no absolute security that in a given individual the employment of one or other of these forms will not directly lead to untoward complications.

3. When we can employ uncontaminated lymph (glycerinated lymph properly kept) the employment of contaminated lymph is indefensible.

4. It is therefore the duty, not only of the profession, but also of the government, to take such steps as will lead to the compulsory employment of properly prepared glycerinated calf lymph, to the exclusion of all other forms. Thereby one possible source of danger in vaccination will be completely eradicated, leaving only the possibility of complications due not to the vaccine lymph itself, but to either the use of imperfectly sterilized instruments in the performance of the operation, or to the entrance into and growth in the inflamed area of pathogenic microbes. Either of these possible complications can be reduced to a minimum by the simple means of due care and cleanliness.

J. G. Adami.

Reviews and Notices of Books.

The Medical News Visiting List for 1898. Weekly (dated, for 30 patients); Monthly (undated, for 120 patients per month); Perpetual (undated, for 30 patients weekly per year); and Perpetual (undated, for 60 patients weekly per year). The first three styles contain 32 pages of data and 160 pages of blanks. The 60-patient Perpetual consists of 256 pages of blanks. Each style in one wallet-shaped book, with pocket, pencil and rubber. Seal Grain Leather, \$1.25. Thumb-letter Index, 25 cents extra. Philadelphia and New York: Lea Brothers & Co.

A visiting list is an indispensable convenience for the active practitioner. The *Medical News Visiting List*, opens with 32 pages of printed data of the most useful sort, including an alphabetical Table of Diseases with Approved Remedies, a Table of Doses, sections on Examination of Urine, Artificial Respiration, Incompatibles, Poisons and Antidotes, a Diagnostic Table of Eruptive Fevers, and a full-page plate showing at a glance the incisions for ligation of the various arteries, an invaluable guide in such emergencies. It is issued in four styles, adapted to any system of records and any method of keeping professional accounts, and is durably and handsomely bound in the size of a wallet for the pocket.

Clinical Methods. A guide to the practical study of Medicine. By ROBERT HUTCHISON, M.D., M.R.C.P., Demonstrator of Physiology, London Hospital Medical College, and HARRY RAINY, M.A., F.R.C.P., Ed., F.R.S.E., University Tutor in Clinical Medicine, Royal Infirmary, Edinburgh. London; Cassell & Co., Limited.

This is a book which it is a pleasure to own, for in it one possesses a comprehensive, clear, and remarkably up to date guide to clinical diagnosis, which is yet compact enough to be carried in the coat pocket.

The illustrations are plentiful and excellent. Among them we notice especially a very fine collection of typical pulse tracings and some diagrams and tables illustrating the localisation of function at various levels of the spinal cord.

The coloured plates showing the different varieties of white blood corpuscles and the more common bacteria are also good.

As examples of the more recent additions to medical knowledge which receive recognition, we might mention Widal's serum test for typhoid, and the Neuron theory of the nervous system.

The examination of the heart, lungs, urine and special senses all receive due attention; also the blood, clinical bacteriology and the special examination of children.

Even those possessing other books on the same subject will find this a valuable addition to their library.

W. S. M.

Society Proceedings.

MONTREAL MEDICO-CHIRURGICAL SOCIETY,

Stated Meeting, October 29th, 1897.

ROBERT CRAIK, M.D., PRESIDENT, IN THE CHAIR.

Dr. Geo. Fisk, of Montreal, was elected an ordinary member.

Ulceration of the Bowel Resembling Typhoid Fever.

Dr. J. G. ADAMI showed this specimen, a report of which will be published later.

Dr. A. G. NICHOLLS stated that at the time of the autopsy Peyer's patches higher up in the ileum showed signs of healing typhoid lesions. The spleen had not been that of typhoid fever, being rather smaller than normal.

Dr. WYATT JOHNSTON thought that the ulcers were strongly suggestive of typhoid fever, especially as they were accurately in connection with lymphatic structures. They, however, showed more evidence of cicatrization than was usual, and there was an absence of pigmentation, whereas healing typhoid ulcers were usually slaty. He considered that the absence of the serum reaction was not of much moment at so late a stage. Several fatal cases had been recorded where it was absent just before death. The blood from the present case gave negative results, even in 1—2 dilutions. He thought that the nature of the disease here could only be decided from cultures. It was not unusual to find the spleen not enlarged at this stage of the disease.

Cholecystitis Enterica.

Dr. C. F. MARTIN read the report of this case. (See page 572 of the December number.)

Dr. JAMES STEWART referred to the great difficulty met with during life in making a diagnosis in this case. Thus, appendicitis, typhoid perforation, and cholecystitis were all entertained. A definite diagnosis of typhoid had been made before the patient entered the hospital, and by some the symptoms were all explained by a perforation having taken place. Others considered the case to be one of appendicitis, and the unusual seat of the pain for this condition did not entirely exclude this disease, as in some cases the appendix had been found lying quite as high up in the abdomen. The limited localization of the symptoms over the gall-bladder pointed strongly to this organ.

and caused him to decide upon cholecystitis, the absence of jaundice was, however, confusing. The fact that typhoid bacilli might be the cause of a cholecystitis was not admitted by the surgeons.

Pyopneumothorax.

Dr. W. F. HAMILTON presented a patient and demonstrated the above condition, drawing attention to the following points of interest in the case :

1. The occurrence of pneumothorax was of tuberculous origin, as bacilli had been found in the sputum and also in the purulent effusions from the pleural cavity on two occasions.

2. The case had an exceptionally chronic course, fourteen months having elapsed since it was first recognized.

3. There was strong evidence to show that the tuberculous process began in the left lung, and after pneumothorax occurred the process had not manifestly advanced.

4. The freedom from fever, chills and sweats was to be noted as rare with pus formation, while an increase in the body weight had been observed.

5. The recurrence of febrile temperature, with increased cough and expectoration, was simultaneous with signs of commencing lesion in the opposite lung.

Dr. J. B. McCONNELL said that it was stated that ten per cent. of all cases of phthisis developed pneumothorax, accounting for nine-tenths of the cases. An interesting point about the present case was why, with such a large amount of pus being produced in the thorax, there had been no temperature and the patient's strength had been maintained so long.

Dr. GEORGE WILKINS referred to another instance in which a large amount of pus had been present in the thorax for considerable time without causing any elevation of temperature. The patient was a young man who came to his office complaining of a small tumour in the right side which turned out to be empyema. The only subjective symptom was shortness of breath.

Typhoid Fever without Intestinal Lesions.

Dr. A. G. NICHOLLS read a paper with the above title. (See page 9.)

Dr. WYATT JOHNSTON thought the case reported was an extremely interesting one, and pointed out that this was one of the cases where serum diagnosis had given a positive result which the post-mortem had apparently shown (until bacteriological examination was made) to be incorrect. He thought it was very important in any case where there was discrepancy between the serum test and the diagnosis to do the test quantitatively.

Dr. JAS. STEWART said that this case illustrated the great practical value of bacteriology in clinical medicine. At the outset, during life, the serum diagnosis had been the only means of determining the nature of the disease, and after death, if it had not been for the bacteriological examination made by Dr. Keenan, the real disease would have been overlooked.

Dr. GEO. WILKINS had hitherto believed that typhoid fever always required the presence of an ulcerative condition of the intestines. Although the lymphatic tissue was the usual channel of entry of the bacilli, he thought that there must be other sources as well, otherwise it would be difficult to explain the presence of bacilli in the urine in the cases cited, where the lymph glands were not involved.

Dr. J. B. McCONNELL thought that one was not warranted in making a new type of "typhoid without intestinal lesions," as even in the case reported, there were slight lesions in the lymphatics. The idea that it was possible to have such slight intestinal involvement enabled us to take a broader view of the disease and cease to describe as complications those nephritic, pulmonary, cerebral, and other varieties occasionally met with, but rather to regard the affection as one in which the specific cause might exert its influence in various parts of the body and produce its typical manifestations from other points than the intestinal canal.

Dr. NICHOLLS, in reply to Dr. Wilkins, said that he did not mean to imply that the bacilli were confined to the lymphatic system. They eventually did get into the blood and thence to all parts of the body. Dr. Adami had suggested that the lymphatic system acted as a sieve and thus accounted for the relative infrequency in which they were found in the blood.

In reply to Dr. McConnell's criticism on his choice of a title, he pointed out that the intestinal lesion had been so slight that had it not been looked for specially it would not have been detected during an ordinary examination. The hyperplasia of the Peyer's patches affected was so extremely slight that the condition did not suggest typhoid fever.

Stated Meeting, November 12th, 1897.

ROBERT CRAIK, M.D., PRESIDENT, IN THE CHAIR.

Excision of the Tongue.

Dr. G. E. ARMSTRONG exhibited a patient operated upon for cancer of the tongue and gave the following report:

I have recently had in the wards of the Montreal General Hospital

an unusual number of cases of cancer of the tongue. There has been a marked difference in the location of the cancer. In this man the disease began on the right border of the tongue, well back, opposite to the molar teeth. He first entered the Montreal General Hospital in June last. The growth was then small and limited to the border of the tongue. A small piece was snipped off, and Dr. Wyatt Johnston reported it to be an epithelioma. The man declined to have any operation performed, saying that he preferred to die with his tongue in his mouth. He returned to the hospital in the beginning of October. Infiltration had taken place rapidly during the interval and in a downward direction. The whole floor of the mouth was involved. He could hardly speak so that he could be understood, and he said that the constant pain day and night was so severe that he could get but little rest, and begged to have the tongue removed on account of the pain. The deep involvement of the floor of the mouth and the presence of enlarged glands in the submaxillary region determined me to remove the tongue by Kocher's method. I performed the tracheotomy and excised the tongue at the same operation, and I saw no reason to regret doing so. The lateral incision of Kocher enables one to remove enlarged lymphatic glands and the submaxillary gland. The mouth is then entered laterally just beneath the lower jaw. The patient being tracheotomized, the pharynx can be plugged with a sponge and blood be prevented from entering the air passages. The access to the floor of the mouth is good, and during convalescence the patient breathes a pure air through the tracheotomy tube, and thus the danger of aspirative pneumonia is lessened. I believe this method of removing the tongue to be an admirable one, when the floor of the mouth is deeply infiltrated and the glands at the side of the neck enlarged.

In another case upon which I have just operated the disease was seated just at the bottom of the frænum. It was placed so low just below the border of the jaw, that it was difficult to remove a piece for the microscope. In this case I did the old operation, originally devised by Roux, and generally known in England as Syme's. That is a median incision through the lower jaw. This method enabled me to get well at the seat of the trouble, and I think I effected a more thorough and wide removal of the diseased area in this case by a Syme's operation than I could have done by any other.

I think that most surgeons consider Whitehead's operation, with or without preliminary ligature of the lingual arteries, as the operation for removal of cancerous disease of the protruding portion of the tongue, but I am satisfied that it is unwise to allow oneself to be

limited to one operation. Disease chiefly seated in other than the protruding tongue may sometimes be more thoroughly extirpated by other methods.

But in the future we must aim at arriving at a correct diagnosis earlier in the course of the disease, and by early and complete extirpation strive to remove the whole of the infected area, which all pathologists agree is at first a local disease, and thus prevent recurrence.

Death by Electricity.

DR. WYATT JOHNSTON reported five cases, in three of which death was due to the passage of the electrical current through the body. In one of the others a motor man, having climbed to the top of his car to look after the trolley wire, received a shock which caused him to fall to the ground. He picked himself up and was sent home, but died a few hours later from what the autopsy showed to be a fracture of the base of the skull, with intracranial hæmorrhage. The medico-legal diagnosis was very easy in this instance, but was less so in the second case, where a line-man working in wet weather on the cross bars of a telephone pole received a shock from an electric light current which had fouled a telephone wire. He was seen to fall to the ground and died a few minutes later. An autopsy by Dr. Villeneuve showed the cause of death to be a hæmorrhage at the base of the skull, some of the blood having been inspirated into the lungs and finer bronchi. Examination made independently by both himself and Dr. Villeneuve showed no signs of burning on any part of the body. The company were held responsible, although the fact that death was not due to the shock was evidenced from the time that must have elapsed to allow the blood to be drawn into the lungs.

Case three (communicated by Dr. Villeneuve) was that of a man who picked up one end of a broken live wire to show that there was no danger in so doing. The marks of the burning were present on the hands and ecchymoses on the surface of the body. No autopsy.

In case four a man made a connection between two wires by stepping on one while the other was touching his arm. The leather in the sole of his boot was burnt and his jersey charred, but the burns upon the skin were of very slight degree—an interesting point.

In case five a man received the fatal shock from a badly insulated wire while sitting between two other men upon the cross bar of an electric light pole. Some minutes elapsed before the body was taken down, and during this time the current was passing. The burns here also were extremely slight, in spite of the long exposure, and no second point of contact could be found. A small morsel of a clay

pipe which the man held between his teeth was inspired into the smaller bronchi, and the blood at the autopsy was found fluid, and remained so for one week. This condition was due to the continuous passage of the current, other causes of absence of clotting having been examined for and excluded.

It was not generally known that not only the fatal shock but also the typical changes could occur with such slight lesions through contact with a live wire.

Dr. G. P. GIRDWOOD related a case of lightning stroke which had come under his observation and in which very extensive burning of a slight degree had occurred without a fatal result. He pointed out that the effect of the electric fluid upon the body depended both upon the suddenness of the shock and the duration of the current, the latter factor producing the electrolytic action upon the fluids of the body.

Dr. F. W. CAMPBELL referred to a case where a man, after exposure to a very severe thunder storm, but without being actually struck by the lightning, had gradually lost every hair on his body. Other instances of baldness produced under similar conditions were also on record.

Experiences of Two Hundred and Forty-eight Cases of Abdominal Sections.

Dr. LAPHORN SMITH read a paper with the above title. The cases extended over a period of eight years and showed a total mortality of $6\frac{1}{2}$ per cent. varying between 17 per cent. in 92, to $3\frac{1}{2}$ per cent. in 96.

The cases included the removal of two large tumours of the kidney, eleven large ovarian tumours with two deaths, fourteen abdominal hysterectomies with four deaths, nine ventral and umbilical hernias with no deaths and sixty-two double pus tubes with five deaths.

He alluded to the many cases in which it had been impossible to obtain the patients' consent to an operation, although he could confidently say they would be benefitted thereby; of such were cases of diseased tubes suffering from recurring attacks of pelvic peritonitis and incurring the risk of having recto or vaginal fistula formed with perhaps fatal results. In cirrhotic ovaries, operation was not proposed until a year of local treatment had failed to obtain relief.

With regard to the conservative treatment of diseased ovaries, *i. e.* cutting out cysts without excision of the organ, Dr. Smith stated that his experience led him to the conclusion that it was a mistake.

Among the interesting cases mentioned was one of obstruction of the bowels occurring ten days after removal of the appendages. At the second operation, performed nine hours after faecal vomiting had set in, the bowel was found kinked and adherent to the abdominal wall, and on being freed a perfect recovery resulted.

Seven cases of tubal pregnancy, in four of which a correct diagnosis had been made, were reported. All recoveries. The particulars have been already published.

Hernia following operation had been unknown during the last three or four years; this he attributed to the fact that the sutures were left in place for one month. Since using the Trendelenburg posture, drainage had been practically discarded altogether; the abdomen was flushed out with a large quantity of salt solution, and from one to eight quarts of it left in the abdomen. This procedure served to satisfy thirst, prevent adhesions, wash out the kidneys and strengthen the pulse.

Dr. F. A. LOCKHART thought that Dr. Smith was to be congratulated on his success with his cases of ectopic gestation. He felt that the question of conservative surgery was a trying one, whether it arose concerning the surgery of the pelvis or that of other parts of the body. It was always a difficult matter to decide whether or not one ovary was to be left, but thought this should always be done when it was healthy. Even if after operation the remaining organ gave trouble, this was often to be accounted for by its increased activity, causing it to become swollen and tender, and rest and local treatment often effected a cure.

Stated Meeting, November 26th, 1897.

ROBERT CRAIK, M.D., PRESIDENT IN THE CHAIR

Dr. R. A. Kerry and Dr. D. D. McTaggart, were elected ordinary members.

Lichen Ruber.

Dr. F. J. SHEPHERD exhibited a patient, a man aged 35, who had suffered from lichen ruber for seven years. Coincident with the appearance of this disease he became paralysed in the left side, especially was the paralysis marked in the left arm. The patient's appearance was very characteristic; the general redness of the surface, with some healthy patches of skin on abdomen and back; the loss of hair of head, eye-brows, eye-lashes, pubic hair, and axillary hair; the ichthyotic appearance of the skin in parts and in other places such as legs, elbows, buttocks, the acuminate condition of the eruption about the hair follicles and the plugging of the follicles with dried epidermis; the absence of any tendency to form vesicles or pustules.

This disease is sometimes called "pityriasis rubra pilaris," and there has been much discussion about it, it having been confounded with pityriasis rubra, lichen planus, &c. It was first described by Duvergie,

then more fully by Hebra, who included with it the lichen planus of Erasmus Wilson, which inclusion has caused much confusion.

The prognosis is always grave, no case of true lichen ruber having had a favourable termination. Treatment is of but little use. Cod liver oil and local washings, and the application of unguents is all that can be done, Arsenic is only of use in the early stages.

The paralysis existing in this patient, Dr. Shepherd thought, was an accidental complication and not the result of the disease.

Dr. W. F. HAMILTON, a few months since, had had under his care an old gentleman of sixty years of age suffering from Bright's disease, whose body from head to heels was covered with an eruption presenting the following characteristics: Very deep redness, desquamation, areas of a peculiar coppery colour, evidently staining due to former involvement of the part, enlargement of the glands in the neck and axilla, and extensive papular areas which seemed due to local irritation from scratching. Dr. Hamilton had been puzzled between lichen ruber and pityriasis rubra. The disease had lasted twenty years and involved every part except the face and the hands. Finally the case was looked upon as one of pityriasis rubra with nephritis. The patient died a few weeks ago from Bright's disease.

Removal of Foreign Body from the Cheek.

Dr. J. M. ELDER exhibited a steel pen which he had removed from the cheek of a young man. The history, in brief, was as follows:

The patient, aged twenty-four, consulted him for a swelling on the left cheek; and, on examination, a fluctuating tumour was found high up under the zygoma at the anterior border of the masseter muscle. Seventeen years previously, while running with a pen in his hand, the boy had fallen and the penholder had entered his left cheek in an upward direction opposite the angle of the mouth. The penholder was withdrawn, and as there was no nib on it none was supposed to have been there at the time of the accident. On opening through the buccal mucous membrane, some fluid and pus escaped, and Dr. Elder had great difficulty in removing small portions of the nib that were caught in the forceps. The wound soon healed, but two weeks later a fluctuating abscess formed opposite the old scar on the skin. This was incised and by means of a fenestrated Volkman's spoon, the pen, as shown, was turned round, the point gripped with the forceps, and drawn out without difficulty. The interesting point of the case was the length of time a steel object could remain in the tissues without being very much corroded, and without causing any symptoms.

Dr. ROLLO CAMPBELL referred to a case he had seen in the London Hospital of a somewhat similar nature. A patient shortly after being

sent in was found to have some interference with the venous return through the back of the orbit and died that night with symptoms of pressure on the brain. At the autopsy, a portion of a penholder was found, the supposition being that it had entered through the nose.

Diabetes Mellitus.

Dr. RIDLEY MACKENZIE reported this case. (See page 27.)

Stated Meeting, December 10th, 1897.

ROBERT CRAIK, M.D., PRESIDENT, IN THE CHAIR.

Drs. W. M. F. Nelson, M. Lauterman and G. D. Robins were elected ordinary members.

Intraligamentous Myoma.

Dr. WM. GARDNER reported this case and exhibited the tumour which he had removed as follows :

Madame V., æt 32, married nine years, nullipara ; was admitted to the gynæcological service of the Royal Victoria Hospital on November 6th, 1897, complaining of abdominal pain and enlargement, profuse and painful menstruation, and difficult and painful micturition and defæcation.

Soon after her marriage the patient noticed a lump of the size of an orange in the hypogastrium. There was progressive enlargement for two years subsequently, when a surgeon of another city operated, removing a part of the tumour. The same surgeon again operated two years later, but with only partial success.

On examination the abdomen was enlarged equal to a six months' pregnancy by an uneven, very firm, almost hard, fixed mass. Vaginal palpation revealed the pelvic cavity completely filled almost to the lower outlet by the tumour. The examining finger could be passed upwards only close to posterior surface of the pubes, but could not be made to reach the cervix uteri or fundus of the vagina. The operation was exceedingly difficult, tedious and long, involving, as it did, a most extensive enucleation, during which important blood-vessels and the left ureter must have been in imminent danger. The position of the uterus and bladder pushed up into the abdominal cavity, and to the extreme right of the pelvic brim, must have involved immense stretching of this duct, and a very close relation to the tumour, in a furrow of which it might have lain, as so often observed in similar cases. These dangers were, however, averted.

The altered relations of the peritoneum, by reason of the situation, size and direction of the tumour, were interesting. The anterior lamina of the broad ligament was raised so that on the left side the

peritoneum was separated from the anterior abdominal wall to the extent of at least eight inches, while behind the tumour had separated the layers of the meso-colon of the sigmoid flexure and lay closely in contact with it.

The operation was completed by amputation of the uterus at the supra-vaginal cervix, and the packing of the enormous cavity, now, however, much contracted, by iodoform gauze. The considerable loss of blood and long duration of the operation brought the patient before its close to a very critical condition. By the use of sub-mammary transfusion of normal salt solution and hypodermics of strychnia, she was kept alive and got to bed. Reaction was not fully established till six hours later.

Convalescence has been retarded by a severe attack of bronchial catarrh and some suppuration of the cavity whence the tumour was enucleated, but there is no reason to doubt ultimate complete recovery. The weight of the tumour was six pounds.

Dr. F. J. SHEPHERD asked, regarding the enucleation of these large tumours whether it was ever done rapidly, or always slowly, as in the present case, ligating the vessels as one went along. From his experience with tumours of the thyroid he had come to the conclusion that the slow method was always the best, the rapid being often disastrous

Case of Ruptured Tubal Pregnancy—Laparotomy—Recovery.

Dr. G. T. Ross said that he had visited the patient (on 28th November) and her history in brief was as follows: After the last *accouchement*, ten years previously, menstruation had been regular until November of the present year, when about a week after the ordinary period she had had another bloody discharge, lasting seven days and, following that, more or less nausea and vomiting until, on November 26th, she had unusually severe pain on the right side for twenty-four hours with chills and fever. The family physician at the last named date called in a consultant, when pregnancy was diagnosed and a favourable prognosis given. Three days later Dr. Ross was asked to see her, and the following condition was present:

Patient was found with a temperature of $101\frac{1}{2}^{\circ}$, and pulse of 122, great prostration, blanched face and anxious countenance. Nausea and vomiting were present. There was great tenderness over the abdomen extending up to the epigastric region, but palpation gave no evidence of any special resistance or any tumour. *Per vaginam*, the uterus was not found enlarged, but there was specially great tenderness on the right side of this organ. Although there were few positive symptoms pointing to extra-uterine foetation, he regarded the case as such, to the exclusion of other conditions, considering that rupture of

a tubo-ovarian gestation would account for most of the symptoms. On his advice the patient was removed to the hospital and a laparotomy performed.

Dr. LAPHORN SMITH reported the operation as follows : The patient, whose history has been already given by Dr. Smith, was a Jewish woman, Mrs. K., 28 years of age. The operation took place just a week ago to-day, and there is hardly any doubt but that she will make a good recovery.

On examining her I found her with a very weak and rapid pulse, slightly elevated temperature and distended abdomen. On examination the uterus was found normal in size and position, and nothing could be made out the matter with the tubes and ovaries. It was thought advisable to delay operating a little until the bowels could be moved and the pulse improved. This proved unwise, however, for her pulse grew worse, until it reached 150, and in twenty-four hours she was vomiting worse than ever, some of the ejecta appearing decidedly faecal. This led me to suspect the possibility of obstruction of the bowel, and made me more anxious still to operate at once and at all hazards, although she refused to submit to operation until the last minute. On opening the abdomen black blood gushed forth, and on introducing the hand large clots could be felt filling the cavity. The right tube, from which the blood was pouring, was seized and tied and removed with the ovary. The fetus, about an inch and a half long, was found among the clots. The fetus and placenta had been expelled through the tear in the tube, the distended and torn tube being entirely empty. The quantity of clots and fluid blood removed was estimated by my assistants at between three and four quarts. After this had been removed a gallon of hot salt solution was poured into the abdomen and left there. Besides that she received three quarts of salt solution by enema the first day, which she retained, and two quarts the second day, by the end of which time her pulse, which was 150 before the operation, had fallen to 80. I think we have reason to be proud of our profession when we see a general practitioner of it diagnosing accurately and at once such an obscure case. Unless this diagnosis had been made and acted upon, this woman was condemned to certain death.

This is my ninth case of laparotomy for tubal pregnancy, and so far all the patients have recovered.

I would like to call attention to the value once more demonstrated in this case of artificial serum in the abdomen and administered by enema. The result on the patient's pulse was marvellous and unmistakable.

Intestinal Resection in a Child Aged Four.

Dr. E. A. ROBERTSON read the report of this case. (See page 31.)

Sir Wm. HINGSTON said he had nothing to add to the report of the case, which was very clearly given; but had a suggestion to make in the way of a correction of terms. He had always objected to the term "exploratory incision," as he did not consider that an operation for the purpose of establishing diagnosis was justifiable. In this case it was not an exploration; the diagnosis was made beforehand, and not till then did they proceed to perform the operation. Although death had taken place, it did not alter his opinion that the operation was a justifiable one, and the only one possible under the circumstances.

Dr. F. J. SHEPHERD was much interested in the case, but must take exception to some points raised by Dr. Robertson. He did not believe in fæcal accumulation as a cause of tumour; when there was a fæcal accumulation it was always produced by a stricture either malignant or otherwise. No operator had ever seen such a condition simulating tumour, and he was not aware that any pathologist had ever seen it *post-mortem*. Another point was the mortality statistics presented by Dr. Robertson; in abdominal surgery old statistics were useless, or worse, they were misleading; methods had so altered in the last ten years that one should not go back beyond that period to obtain a basis for estimating mortality. He did not agree with Sir William Hingston concerning the uselessness of exploratory operations; he thought in cases like this it was impossible to make a positive diagnosis, and that an exploratory operation was justifiable. He would like to ask how Sir William, in this case, made a positive diagnosis of mesenteric tumour. He would like to draw Dr. Robertson's attention to a paper on Solid Mesenteric Tumours in the July number of the *Annals of Surgery*, where 57 cases are collected, also to the speaker's own case which was shown to this Society last winter.

Some Recent Gall-Stone Cases.

Dr. JAMES BELL read a paper with this title. (See page 1.)

Dr. F. J. SHEPHERD considered cholecystotomy one of the most successful operations in modern surgery. Incision of the common duct was not to be classed in the same category, as it was a much more serious operation. He was surprised that among such a large number of cases there was no case of malignant disease. The frequency with which gall-stones existed in the female gall-bladder was not sufficiently recognized. Dr. Shepherd thought it was due to the constriction of the abdomen which caused obstruction of the cystic duct. In a case last summer, the speaker had cut down and come upon a

distended gall-bladder which simulated appendicitis. The case recovered.

Dr. Shepherd also asked whether, after incision of the common duct, Dr. Bell preferred to sew it up or simply to pack it around with gauze, leaving in a drainage-tube. In a recent article, Mr. Jordan Lloyd mentions that he cut down on the ureter for impacted stone; after first making an abdominal incision to determine the place of the stone, he opens into the ureter outside the peritoneum and does not close the incision up again; no leakage of urine took place from the incision in the duct.

Dr. W. F. HAMILTON referred to the following case of cholelithiasis as of interest. A young French-Canadian, a painter, came to the hospital complaining of severe pain in the region of the liver off and on for five to seven years. At that time there was a slight icteroid tinge to the conjunctiva; the urine contained bile, and there was tenderness over the gall-bladder. The temperature was slightly raised. The speaker suspected catarrhal duodenitis, and expected catarrhal jaundice to develop. The following morning, however, on examining the stools, quite a large gall-stone was found. The surface of the stone suggested the presence of others. He left the hospital in a few days fully relieved.

Dr. G. A. BROWN drew attention to the fact that some days might elapse after the stone had left the duct before it appeared in the stools. He related one in which three days had passed before it was found in the stools.

Dr. E. A. ROBERTSON thought the statement that the stone was sometimes passed without causing any symptoms was most improbable.

Dr. BELL in reply, said that two of the cases had been sent to him as cases of appendicitis, and that the physical signs and symptoms had given good ground for this diagnosis. He always sutured the gall-bladder to the peritoneum only, and always closed the incision in the ducts by suture, using fine silk as suture material. He also introduced a drainage tube and packed off the space with gauze, but did not feel safe in trusting to these alone, where it was possible, he preferred to close the incision by suture. He did not think the incision in the ureter, as mentioned by Mr. Jordan Lloyd, for the removal of ureteral calculi, was quite a parallel case, as there was always a great gush of bile when the stone was extracted from the common duct. Besides, the ureteral wound was extraperitoneal. He was quite sure that gall-stones often existed for a very long time without giving rise to any symptoms, and referred to case IX. in this series as evidence that a number of stones had existed for a long time in the gall-bladder, and

only gave rise to symptoms when disturbed by an accident. One case had had high runs of fever, and three of the cases where cholecystitis existed, (besides the typhoid case) had had moderate fever. He had not discussed the prevention of gall-stones, as the cases reported were those in which the stones, not only already existed, but had given rise to serious symptoms. He was quite sure, however, that the size and number of the stones found in a given case was not determined by the age or sex of the patient. In general terms, he thought it might be stated, that stagnation of the bile in the gall-bladder was an important factor in the causation of gall-stones, and that constriction of the waist as seen in women, and certain positions, such as that assumed by a man sitting at a desk, contributed to this end by making it more difficult for the gall-bladder to empty itself.

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THE VICTORIAN ORDER OF NURSES.

In Montreal and several other places the arrangements for the early inception of the Victorian Order of Nurses have reached an advanced stage, so that before many weeks will have passed this beneficent scheme will have become an accomplished fact. There can be no doubt that there are in many places crying needs for nurses. At present the nurse's work is practically confined to the well-to-do in the cities and larger towns. In the villages and country places, and among the poor of the cities, the sick have to be nursed by their own relatives or friends. Every physician practising in the country knows what it is to attend a trying case of illness without a nurse to help him, but how few country practitioners have experienced the relief that comes when an accomplished nurse is present to assist him in his work and to see that his instructions are carried out. Any medical man who has treated a case of typhoid fever in the country without the aid of a nurse, and who has had a similar duty to perform in a city, but aided with a nurse, knows the great difference it makes, not only to the patient, but to himself as well. The first to find the benefit of the work of the new organization will be the doctor in out-of-the-way places and his patients. In some places there has been among a few medical men a misunderstanding of the aims of the Victorian Order, but as the objects of it become better understood we will hear less and less of any opposition to it and more and more of its usefulness. Nearly every measure of usefulness that we consider to-day essential to the well-being of our common humanity has had its origin and progress opposed by men, acting, no doubt, in the best of faith, but unfortunately possessed with a very limited field of vision.

How coldly Florence Nightingale was at first received by the military and medical men of the Crimea is a matter of history. All who

were in practice when the present system of nursing was first introduced into our hospitals know that even many medical men were decidedly opposed to it. It would be difficult to meet with an hospital physician at the present time who would recommend a return to the old system of nursing.

The Victorian Order of Nurses is founded on the system of district nursing in England and Scotland, instituted some ten years ago, and which has proved to be an eminently practical and successful method of enabling all members of a community to avail themselves of the services of good nurses when sickness enters their homes.

We have had experience of the working of this system in some of the country districts in the Highlands of Scotland, and know that there is no class of the community who think more highly of it than the medical practitioners. What has proved so successful there will through time prove equally successful here.

MEDICAL LIBRARY OF THE MEDICAL COLLEGE, MCGILL UNIVERSITY.

Donations to the Library from June 2nd to November 30th.

To the following authors the Library is indebted for copies of their works :

Edmund Cantley, M.D., Cantab, etc.—*The Natural and Artificial Methods of Feeding Infants and Young Children*, 1897.

Sir Dyce Duckworth, M.D., LL.D.—*The Sequels of Disease*, 1896.

Samuel Fenwick, M.D., F.R.C.P., and W. S. Fenwick, M.D., M.R.C.P.—*The Student's Guide to Medical Diagnosis*, 1897.

George M. Gould, A.M., M.D.—*The Meaning and Method of Life*, 1893 ; *An Autumn Singer*, 1897 ; *Porderland Studies ; Anomalies and Curiosities of Medicine*, 1897 ; *The American Year-Book of Medicine and Surgery*, 1897 ; *An Illustrated Dictionary of Medicine, Biology and Allied Sciences*, 1896 ; *The Student's Medical Dictionary*, 1896 : *A Compend of the Diseases of the Eye and Refraction*, 1897.

W. Marcet, M.D., F.R.S.—*Contribution to the History of the Respiration of Man*, 1897.

R. Osgood Mason, A.M., M.D.—*Telepathy and the Subliminal Self*, 1897.

S. Weir Mitchell, M.D.—*Clinical Lectures on Nervous Diseases*, 1897.

Dr. Monro.—*History of the Chronic Degenerative Diseases of the Central Nervous System*, 1895.

A. R. Simpson, M.D.—*Contributions to Obstetrics and Gynæcology*, 1880, and pamphlets :

E. Hugh Snell, M.D., B.Sc., London—*Compressed Air Illness*, 1896.

S. Edwin Solly, M.D.—*Handbook of Medical Climatology*, 1897.

W. Sydney Thayer, M.D.—*Lectures on the Malarial Fevers*, 1897.

H. H. Tooth, M.D.—*Secondary Degenerations of the Spinal Cord*.

The Library is also indebted to the following contributors :

Professor Adam—*Daily Journal of the British Medical Association*, Sixty-third Annual Meeting, London, 1895 ; *Fortschritte der Medicin*, 1896 ; A large collection of letters from celebrated physicians.

American Medico-Surgical Bulletin, 2 Vols, 1895-6.

Professor Blackader—*Centralblatt für Therapie*, Bds. 13 and 14, 1895-6; *Fortschritte der Med.*, 1895; *Transactions of the American Pediatric Society* Vols. 3, 4, 5, 1891-93. Berlin University, 144 Theses.

Boston City Hospital Reports, 8 Vols.

Bulletin of the Harvard Medical Alumni Association, 3 Nos., 1897.

Buffalo Medical Journal, Vol. 35, 1895-96.

Chicago Medical Recordet, Vol. 12, 1897.

Professor J. C. Cameron—Complete set *Nouvelles Archives de Obstetrique et de Gynécologie*, 10 Vols.; *New Sydenham Society's Lexicon of Medicine and the Allied Sciences*, Vols. 1, 2, 3 and pts. 16 and 17; *Mères et Nourrissons*, by A. Boissard, M.D., and G. B. Barbezeux, M.D., Paris, 1892; *Johann Ludwig Casper's Handbuch der Gerichtlichen Medicin*, Bds. 1-2; *Précés de Médecine Judiciaire*, by A. Lacassagne, M.D., 1886; *Rapports sur les Comptes de la Corporation de la Cité de Montréal et Rapports des chefs de Department*, 6 Vols., 1875-1880; *Transactions of the Edinburgh Obstetrical Society*, 10 Vols., 1888-97; *British Gynæcological Journal*, Vol. 12, 1893.

Editors of the *Medical Bulletin*—Vols. 15-16.

Editors of the *Montreal Medical Journal*—*The Journal* for 1896-97; *Medical News and Abstract*, Vol. 39.

Glasgow University, 1 Vol.

Guy's Hospital Reports, Vol. 37, 1896.

Angus Hooper, Esq.—*Bandaging and other Operations of Minor Surgery*; *Inaugural Dissertation on Tic Douloureux*, by F. W. Hart, 1835; *Dissertatio Medica Inauguralis de Rabie*, by T. B. C. Trestler, 1821.

Dr. Kirkpatrick—*Minor Surgery and Bandaging*, by H. R. Wharton, M.D.; *International Journal of Surgery*; *Pacific Medical Journal*, Vol. 36, 1893; *Medical Journal and Western Lancet*, Vol. 31, 1888; Pamphlets.

Dr. Martin—*Vorlesungen über kinder krankheiten*, by E. Henoch, M.D., 1887.

Massachusetts General Hospital—*Semi-Centennial of Anæsthesia*.

Middlesex Hospital, Report 1896.

Pathological Laboratory of the College of Physicians and Surgeons, 3 Vols.

Presbyterian Hospital Medical and Surgical Reports, Vols. 1-2, 1896-97.

Proprietors of the *London Lancet*—*Life and Times of Thomas Wakeley*, by S. S. Sprigge, 1897; *The Lancet and the Hyderabad Commission on Chloroform*.

Provincial Board of Health, Ontario, Fifteenth Annual Report, 1897.

Royal College of Surgeons, 1 Vol.

Dr. James Ross—*A Treatise on the Throat and Practice of Midwifery*, Vol. 1, 1774; *An Essay on Diseases Most Fatal to Infants*; *Pharmacopœia Extemporanea*, 1719.

Royal College of Physicians, Edinburgh—*Reports*, 6 Vols., 1889-97.

Lady Russell Reynolds—*Essays and Addresses of Sir J. Russell Reynolds*, 1896.

Professor Shepherd—*Semi-Centennial of Anæsthesia*, 1897; *Transactions of the American Dermatological Association*, 1897; 80 pamphlets.

State Board of Health Massachusetts, 10 vols.

State Hospital Bulletin, 6 Vols., 1896-7.

Saint Bartholomew's Hospital Report, Vol. 32, 1897.

Transactions of the American Electro-Therapeutic Association, 1897.

“ “ “ *Pediatric Society*, Vol. 8.

“ “ *Association of American Physicians*, Vol. 12, 1897.

“ “ *American Climatological Association*, Vol. 12, 1897.

“ “ *American Surgical Association*, Vol. 15, 1897.

“ “ *College of Physicians*, Vol. 18, 1896.

“ “ *Colorado State Medical Society*, 1896.

“ “ *Clinical Society of London*, 1897.

“ “ *Medical Society of the State of New York*, 1897.

“ “ *Pathological Society*, London, 1896.

“ “ *Royal Academy of Ireland*, Vol. 14, 1896.

Dr. Webster—*Proceedings of the Royal Society of Edinburgh*, 1896-7.

A handsome reading desk has also been presented to the Library by Professor Shepherd.

COMPLIMENTARY SUPPER TO DR. W. H. DRUMMOND,
AUTHOR OF "THE HABITANT."

On the evening of December 23rd, Dr W. H. Drummond was entertained at supper in the St. James' Club by the following medical friends: Drs. Armstrong, James Bell, Birkett, A. A. Browne, K. Cameron, F. W. Campbell, G. G. Campbell, Craik, Elder, England, Evans, Finley, W. Gardner, Garrow, Girdwood, W. D. Hamilton, W. F. Hamilton, Sir W. Hingston, J. A. Hutchison, Lachapelle, Lockhart, McCallum, McCarthy, McConnell, Tait McKenzie, McPhail, Perrigo, Shepherd, Grant Stewart, J. Stewart, Webster, Wilkins, C. W. Wilson.

The supper was decided upon only two or three days beforehand and no effort was made to organise a large and formal gathering. Had such a plan been attempted there would have been no difficulty in getting together a very much larger body of Dr. Drummond's medical brethren, who would have been glad to do honour to the author of "The Habitant."

The Chair was occupied by Sir William Hingston, who presided with his customary grace and dignity, his remarks being at all times characterised by their fitness and felicitousness. After the toast of "The Queen" had been drunk, Sir William proposed "Our Guest" in a very happy speech, expressing the genuine congratulations of those present on Dr. Drummond's literary venture, with the hope that it might be only the precursor of a long series of successes.

Dr. Drummond replied in the following words:

"Mr. Chairman and Gentlemen, or if you will permit me to use the term inclusively, *friends*, I am naturally very proud, and very, very grateful for the position in which I find myself placed tonight, for in the wildest flights of imagination the diaphanous casement of my brain (as dear old Father Prout puts it) had never, I assure you, been penetrated by the thought that some day, "Some day," or rather, some evening, my beloved *confrères*, the medical men of Montréal, would extend to me the honour of a dinner—and when the news was gently conveyed to me the other day by our genial friend, Dr. Armstrong, it was as unexpected as undeserved. However, when a committee of physicians and surgeons, such as the present one, unanimously decide upon the line of treatment in any particular case, what can the wretched victim do but submit quietly to the anæsthetic, and let them "Fire away, Flanagan."

But seriously, Mr. Chairman and Gentlemen, Why this special act of favour? Was it a recognition of the fact that my attempt to pro-

vide for our country a literature purely "Canayen" in character, had met with a partial degree of success.

It could not have been for any other reason. My name will probably never be found in medical text-books, attached for instance to some great medical or surgical discovery, but in conjunction with my good friend, Dr. Charlie Wilson, perhaps for a few years there may linger in the minds of those present to-night, memories (not altogether unpleasant I hope) of the Wilson-Drummond enunciation; for, gentlemen, I have no hesitation in saying that, so far at least as *you* are concerned, to Dr. Wilson belongs the major part of the *discovery*. For from the very first moment that the Doctor left his native fastnesses of Buckingham, P.Q., for, possibly, the more congenial atmosphere of Montreal, he patiently experimented and demonstrated, largely before medical audiences, until now the Wilson-Drummond enunciatory *r le* is apparently accepted by some of the most distinguished men in the profession.

" There was a Duke of Buckingham, who never did a thing
But strut around the court, and keep the lasses on a string,
I believe His Excellenza was perhaps a trifle gay,
But the *present* Duke of Buckingham isn't built that way."

No, gentlemen, Doctor Wilson was the first to recognise the premonitory symptoms of the hitherto unknown Canadian disease. What did he do? Being of course a firm believer in the science of inoculation, he at once proceeded to infuse, cautiously perhaps at first, little by little, virus, supplied *not* from the laboratory of Merck, but from the Wilson-Drummond laboratory, into the systems of those who would consent to the operation, the Doctor, naturally, hoping by this means to stay the threatened march of the disease. Medical men are ever, in the interests of science, among the first to risk experiments, hazardous, not only to life, but also to reason, and many underwent the painful ordeal. The disease, however, continued to spread; the devoted Doctor laboured assiduously and the amount, especially of night work, which he was compelled to undergo, threatened seriously to undermine his health.

New centres of contagion sprang up, and the disease, which at first was purely *endemic*, at last became *epidemic*, and the unfortunate enthusiast of inoculation was reduced to despair.

Finally, one never-to-be-forgotten evening, while the Doctor and myself were closeted together in the sacred recesses of my most private boudoir (garnished with the usual accompaniments) he, my friend, Dr. Wilson, broke the Sabbath stillness of the surrounding air by exclaiming, " Billy, for God's sake what is to be done? You will have to write a text-book, a kind of *vade mecum*, paying particular

attention to the disease which I, alas! have so vainly endeavoured to combat. Then everyone can have the disease all to themselves, and *stick to it.*"

And this, gentlemen, is the story of "The Habitant."

In the analysis of everything that is human, the medical man is indeed a *specialist*; therefore, in if painting types, in delineating human weaknesses, passions, and foibles, I have gained *your* applause; I am more than satisfied that my work has at least been *fairly* well done."

After Dr. Drummond's speech, a very pleasant time was spent, contributions in the shape of song, speech or story being furnished by each one present. It is impossible to refer to these in detail, yet it will not be invidious to single out two or three for special mention. Dr. Wilson's recitations of selections from "The Habitant" were a great treat. They were rendered in a most sympathetic spirit and with rare artistic finish. There is no doubt, as the Chairman stated, that a considerable proportion of the interest which has been taken in Dr. Drummond's poems, in Montreal at least, has resulted from Dr. Wilson's masterly presentation of them during the past few years.

Dr. Drummond's reading for the first time of a new poem, entitled "*Phil-O-Rum's Canoe*," was listened to with keen interest.

Another feature of the evening was Dr. Craik's closing speech, which focused the attention of all present. In a few well-chosen sentences, the Dean spoke weighty words of wisdom regarding the importance of literary studies to the medical man, who, too often, owing to the pressure of his work, allowed his mind to be cramped within the purely professional limits of his life. He urged upon his hearers the value of continual attention to "*Belles Lettres*," not merely as a pleasant recreation in itself, but also as a means of opening new avenues of interest, of keeping the mind in a sympathetic attitude towards the whole world of thought—in a word, of enabling them to attain the highest ideal of the cultured physician.

We congratulate Dr. Drummond on the success of the supper given in his honour; still more on the triumphal progress which his book has made.

We doubt if any poet has ever known ten thousand copies of his first volume to be bought by a ravenous public within a few weeks of publication. Yet this has been Dr. Drummond's good fortune.

We do not know what his future literary ventures may be, but we feel sure that they will be worthy of the man,—worthy of his first success. Modern literature has too many examples of men who, having achieved fame by their early strenuous labours, thereafter pour forth their drivelling, slovenly stuff upon the credulous public.

It is some satisfaction, however, to know that such persons sooner or later find their Gehenna, though too often with the spoils of unrighteous mammon, which they have gathered in their downward course.

We trust also that Dr. Drummond, having proved himself a master in delineating various types of French-Canadian character in the well-known patois of the *habitant*, will soon cultivate the muse in pure rich mother English.

Dr. Drummond's work is an evidence of his exquisite cultured poetic faculty.

It is not too much to expect that, following Kipling's example, in having first achieved a reputation as a truthful and sympathetic painter of the scenes and types familiar to him from his early days, he may wander far afield in fancy's realms, achieving for himself a splendid reputation as one of the great imperial singers of our race.

ANNUAL DINNER OF THE UNDERGRADUATES OF THE FACULTY OF MEDICINE OF MCGILL UNIVERSITY.

The Undergraduates of the Medical Faculty of McGill held their annual dinner at the Windsor Hotel, on the evening of December 16th, 1897. The Faculty was well represented, and among the guests were Principal Peterson, Dean Walton, Sir James Grant, Sir William Hingston and others.

After doing justice to the sumptuous repast furnished by the management of the Windsor, the President of the dinner, Mr. H. J. Schwartz, '98, in an appropriate speech, proposed the health of "The Queen," and it was responded to in the usual manner by "God Save the Queen," and three hearty cheers, such as only medical students can give. Mr. G. A. Fagan, B.A., '98, proposed "Old McGill," and Principal Peterson responded for the University. "The Dean and Professors" was proposed by Mr. B. Francis, '98, and Dean Craik and Professor Buller replied on behalf of the Faculty. "Sister Universities," by Mr. H. Hill, '00, called forth a response from representatives of 'Varsity, Queen's, Trinity, Dalhousie, Bishops, and Laval Universities.

Sir James Grant, in rising to respond for Ottawa and Queen's, alluded to the fact that he was able to represent more than one University, and touchingly referred to "Old McGill," his Alma Mater. He felt that this was a fitting occasion on which to glance at the wonderful progress of medical science during the "Victorian Era." The year Her Majesty ascended the throne marked the advent of the

treatment of the insane without physical restraint. A second great advance was the adoption of the principles of preventive medicine, and to-day no university course was considered complete without a chair of Sanitary Science. Following these, the speaker noted the introduction of chloroform by Dr. afterwards Sir James Simpson, in 1846, the practical abandonment of blood-letting, the advent of nitroglycerine, chloral hydrate, serum-therapeutics, and the advances in abdominal surgery. Sir James also referred to the improved methods of diagnosis of disease, the most recent of which was the application of the X-rays to that purpose.

The toast of "Medicine '98" was proposed by Mr. W. McKechnie '99, and responded to by Mr. A. M. Smith, '98, in a neat speech. Dr. Wyatt Johnston proposed the "Freshmen," and Mr. W. Little, '01, replied.

During the evening Messrs. Scanlon '98, Harvey '98 McKay '01, and Lamb '01, rendered solos, the students joining in the choruses.

NEW BOOKS, ETC., RECEIVED AND NOTED.

Proceedings of the Pathological Society of Philadelphia, Oct. 28th, 1897. Vol. I., No. 1.

Primary Sarcoma of the Iris: A statistical study, with the report of an additional case in which the growth was successfully removed by iridectomy. By Clarence A. Veasey. A.M., M.D., Philadelphia. Reprint from *Annals of Ophthalmology*, Vol. VI., No. 4, Oct., 1897.

Proceedings of the Society for the Study of Inebriety. H. K. Lewis, London.

Diseases of the Eye. By Edward Nettleship, F.R.C.S. Lea Bros. & Co., Philadelphia, 1897.

Mediterranean, Malta or Undulant Fever. By M. Louis Hughes. MacMillan & Co., London, 1897.