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CANADA

MEDICAL & SURGICAL JOURNAL

Original Communications.

AN ENDEMIC OF TYPHUS FEVER IN MONTREAL.

By John D. Cline, B. A., M.D.,
HOUSE SURGEON, MONTREAL GENERAL HOSPITAL.

(Read before the Medico-Chirurgical Society of Montreal.)

As typhus is not a fever of this country, and we have never had it in Montreal except when imported, which has not happened for years, I think these cases are worth reporting. I at first thought that we had discovered an instance of the spontaneous generation of the fever. The conditions in which it prevailed were certainly most favorable for its propagation, if they were not sufficient to produce it *de novo*, the possibility of which is maintained by many able men. I call it an endemic of typhus fever, because its existence seemed to depend on special conditions in a special locality. When these conditions were improved, the fever ceased to spread, and when the cases were removed elsewhere it did not spread by contagion.

J. S., æt. 20, was admitted into hospital on the 29th of January, with symptoms of fever. He had been out of work for some time; had been exposed a good deal to cold, and suffered from want of food. He had been taking refuge at night in the Protestant House of Refuge. Had not beeen feeling well for two or three days, and on this morning felt chilly and then feverish, with pain in the head and back, and inability to eat.

Tongue covered with a white fur, voice husky. Has a slight cough with bronchial expectoration. Cheeks flushed.

Temperature this evening 104⅘°. Ordered pulv. dover gr. x.

Jan. 30*th.*—Temperature 100⅕°. Complains of headache. Ordered a purgative. Evening temperature 102⅕°.

31*st.*—Temperature 99⅗° Feels well and expects to be able to go out soon. Voice still husky, and he has a cough with frothy expectoration. Lungs on examination found to be free from any physical signs of disease. Evening temperature 103⅗°. Complains of pain in head and back, particularly the latter. Vomited once.

Feb. 1*st.*—Temperature 103⅕°. Complains of pain in back. An eruption of reddish spots, not raised, appeared to-day on the abdomen and chest, which was mistaken for a copious typhoid rash. No diarrhœa. Slight tenderness of abdomen which is not confined to the right iliac region. Evening temperature 104⅘°; pulse 92.

2*nd.*—Temperature 102°. Did not sleep last night. Eruption has extended to all parts of the trunk, legs and forearms. It is not in the face and neck. It resembles the rash of measles more than anything I have ever seen. The spots are dusky, irregular, not raised, most of them looking like a mottling under the skin. They do do not altogether disappear on pressure. The patient complains very much of pain in the back. Evening temperature 106⅗°. Pulse 88. Ordered Quin. gr. xxx.

4*th.*—Temperature 104⅘°; pulse 112, full but compressible. Tongue very dry and brown. Sordes beginning to collect about the mouth. Ordered 2 oz. whiskey. Rash less distinct. Abdomen still spotted, the spots not raised at all. Evening temperature 104⅗°; pulse 124.

6*th.*—Temperature 106⅕°; pulse 120. Patient lies constantly on his back, extremely prostrate. His eyes are injected. There is subsultus tendinum and stretching of the hands—a picking motion. Tongue is with difficulty protruded, is dry, brown and cracked. The mouth is filled with a quantity of sticky

mucus. Evening temperature, 104½°; pulse 120. Ordered quin. gr. xxx.

7th.—Temperature 103⅗°; pulse 116.

Tremor is increased; hands are constantly twitching, and also head. Eyes are very much injected. Pupils respond well to light. Evening temperature 106⅕°; pulse 140. Gave quin. grs. xi between 8 and 9 p.m. At 11 p.m., temperature was 102½°. Ordered ½ an oz. whiskey every hour. Patient has to be watched closely in his delirium, which is maniacal. He tries to get out of bed in order to escape from his attendants, of whom he is suspicious: says they are killing him. Hands and head are constantly twitching.

8th.—Temperature 104⅗°; Pulse 124.—Patient has been less restless since 4 a.m. There is slight diarrhœa. He evacuates bowels and bladder in the bed. The rash has been fading in colour gradually till it has all disappeared from the legs. There is still a subcuticular rash on the abdomen, chest, and back, bluish in colour, as if tending to be purpuric, not altogether disappearing on pressure. There are some distinct petechial spots on the side of the right buttock. The tremor is so great as to approach in character to a general convulsion. Prostration is extreme. The patient lies on his back, and appears unable to move a muscle voluntarily. The nurse says that in changing his sheets, his limbs get so rigid as to resist bending. Evening temperature 105⅗°; pulse 136. During the night the prostration steadily increased, and he died at 5 in the morning, that is, on the morning of the 12th day of the fever.

AUTOPSY, BY DR. OSLER, SIX HOURS AFTER DEATH.

Body that of a well-built muscular young man. Rigor mortis not present, but at 3.30 p.m. when the body was again inspected, it was well marked. A dusky redness is noticeable in the dependent parts, and to a less extent in the face and cervical regions. There are petechiæ on the side of the right buttock, and a few bluish indistinctly purpuric spots in the left inguinal region.

Brain.—membranes quite natural, vessels and sinuses moderately full. No lymph or pus at the base, or about the upper end of the spinal cord. At the subsequent dissection of the organ nothing unusual was observed about the brain substance or ventricles.

The position of abdominal viscera is normal. No effusion in peritoneum, pleura, or pericardium.

Heart.—Cavities of the right side are full of dark, fluid blood. Small clot in left ventricle, which is well contracted. Orifices and valves quite healthy. On removal of the organ a quantity of dark blood escaped from the cut vessels.

Lungs.—Right lung is crepitant throughout, dark in colour posteriorly from the amount of blood in this situation. Left lung also crepitant in anterior portions, but has a large area of collapse behind in the lower lobe, which, on section contained much blood, and six or eight small patches of apoplexy.

Spleen—weight 390 grms. (nearly 12 oz.), dark in colour. On section, pulp soft, semi-diffluent. Organ had three fissures in anterior margin, one in the posterior.

Kidneys are of average size, contain a considerable amount of blood. Nothing abnormal in their appearance.

Liver, not enlarged. On section, cut surface of a uniform light clay colour, the lobules indistinct, not congested. The larger hepatic veins contain blood. A small amount of bile in the gall-bladder. Tissue soft, easily torn.

Œsophagus, when slit up, presented at the posterior part of the lower third an elongated perforation, $1\frac{1}{2}''$ by $\frac{1}{2}''$, with smooth, thin, darkly-stained edges. The tissue, in the neighbourhood were also stained with blood-colouring matter. This is to be regarded as a post-mortem perforation.

Stomach contains a small amount of liquid foodand mucus. At the cardia the mucous membrane is thin, but, there is no post-mortem solution of the coats. At the pylorus mucous membrane is thicker. Small intestines from duodenum to

ileo-cæcal valve present a perfectly natural appearance. Peyers patches are remarkable for their number and size, even high up in the ileum an elongated one was found two inches in length. There was neither swelling nor congestion about any of them. Nothing abnormal noticed about the large bowel.

I would draw attention to the following characters of this case:

The course of the temperature; the day on which the eruption appeared, the fourth day of the fever—becoming fully developed on the fifth day; the measley character of the eruption, its distribution all over the trunk, arms and legs; the dusky-red colour of the spots; the fact that they did not disappear on pressure; the subcutaneous mottling, the spots becoming petechial in some places on the tenth day of the fever; the typhoid character of the fever; the prominence of the nervous symptoms—stupor, delirium, deafness, muscular twitching and tremors, indications of prostration, as also the evacuation of the bowels and bladder involuntarily; the presence of bronchial catarrh and slight intestinal catarrh; and, finally, the post-mortem appearances. As to the latter, there being no definite morbid lesion in typhus, they are chiefly valuable as proving conclusively that the case was not one of typhoid or enteric fever. The dull clay-like lustre of the liver on section which was noticed in this case is described by Wilks and Moxon as being almost characteristic. This is a perfect picture of a typical case of typhus fever.

About the same time a number of cases of fever were sent to the hospital from the House of Refuge, most of which were looked upon as cases of typhoid fever. Some of them, however, presented anomalous symptoms, which attracted attention, and even suggested typhus fever to the attending physician. The occurrence of the case of J. S., in which the diagnosis was positive, after death, recalled to mind these cases.

On January 7th, three women named Clarke, McLeod, and Stewart, who were inmates of the House of Refuge, were sent to Hospital, ill with fever. They were under the care of Dr. Roddick. Of these two died, Clarke after an illness of 11 days, and McLeod after an illness of six days. On the former an autopsy was held, and the case was not found to be typhoid fever

as had been thought; while the latter went to McGill College dissecting-room, where it was examined by Dr. Shepherd and found not to be typhoid. The remaining one of these three, Stewart, recovered. Another striking case was Thomas Irvine æt. 35, admitted under Dr Roddick's care on February 9th, also from the House of Refuge. He had been ill two days before admission, had a bronchial catarrh, an ill-defined, dusky-red rash over the abdomen, chest, and back, accompanied by an indistinct mottling under the skin. Great stupor and considerable prostration, passing fæces and water unconsciously. He recovered. Another case which perhaps should be reckoned in the same category was David Howe, æt. 35, admitted on February 5th, also from the House of Refuge, who had an extensive purpuric rash *with fever*, from which he recovered.

Besides these, in the months of January and February we had five other cases of fever sent to the Hospital from the House of Industry and Refuge, which were called typhoid fever and febricula. This makes in all eleven cases. I do not mean to say that all these were cases of typhus, but I would draw attention to the number of cases of fever, some of which were typhus, coming from one institution in such a short time.

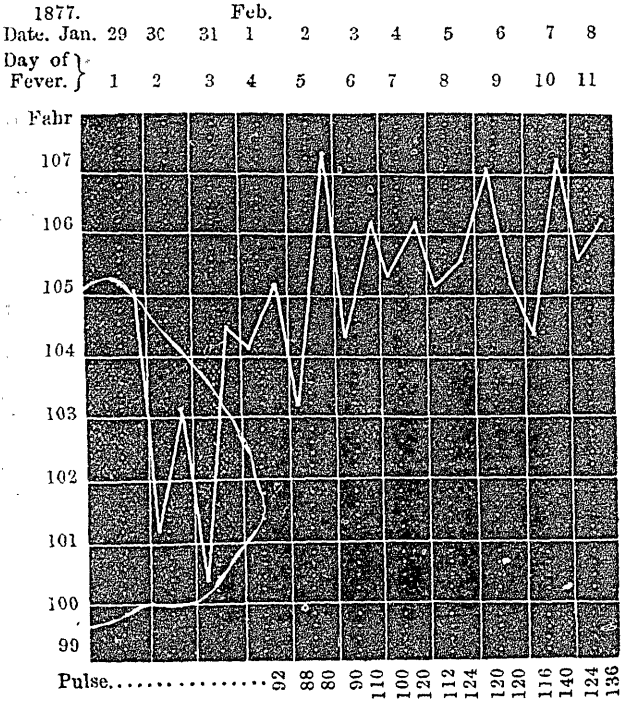
Add to these, two suspicious cases which recovered in the family of Mr. MacMillan, the Superintendent of the House of Refuge, an account of which Dr. MacConnell has furnished me with. A cousin of Mrs. MacMillan, a young woman, was ill with a fever for three weeks, in which there was a mottling of the skin, great stupor and prostration, with not a high temperature, not over 100°; and shortly after her recovery a daughter of Mrs. MacMillan, aged 13, was ill with a fever of the same character. She took it on February 2nd, a rash appeared on the fifth day, over the trunk, legs and arms, mottled and measley in character, the spots not disappearing on pressure; she evacuated her bowels and bladder involuntarily; there was great stupor and prostration, and slight delirium; tremulous hands; temperature 104°; pulse 120 to 140; and a disagreeable odour of breath noticed.

As to the origin of this endemic of typhus it can apparently

TEMPERATURE CHART—TYPHUS FEVER.

JOHN SINNETT, æt. 20.—UNDER THE CARE OF GEORGE ROSS, A.M., M.D., ATTENDING PHYSICIAN TO THE MONTREAL GENERAL HOSPITAL.

(Continued from page 151.)



be traced to on old woman named Jane Bennett, who had been an inmate of the Institution, but had been absent for three months, and of whom all trace had been lost for two weeks before she returned to the House of Refuge in December, 1876, She had been in the house, sleeping in the night-refuge part, for a week, when she became ill of the same sort of fever, the Superintendent says, as the others were afterwards ill with, She died on the day after Christmas. A striking circumstance is that the three women, Clarke, McLeod and Stewart, who were sent to the Hospital on January 7th, were the three who attended to Jane Bennett in her illness, and laid the body out after her death. Two of these three, as I have said above, died, I have every reason to suppose, of typhus fever.

The conditions of over-crowding, and filth of people who suffered from exposure to cold and want of food, the conditions in which typhus fever prevails, existed to perfection in the place from which the cases came. The Protestant House of Industry has a night refuge in connection with it. Last winter, when so much want and suffering existed in Montreal, this place was fearfully overcrowded. The place in which the people are put is in the basement, underground, having no ventilation, and very little light. The crowds that slept here last winter were so great that about 88 cubic feet of space was allowed to each person. Can a more veritable "Black-hole" be imagined ? If many such places were allowed to exist in Montreal, typhus fever would soon be familiar to us.

How it was introduced there can only be conjectured, but I think it must have been through Jane Bennett. Drs. Girdwood and Ross were appointed as a committee by the medical staff of the Hospital to enquire into the origin of the endemic, but they failed to trace it farther back than this case.

PATHOLOGICAL REPORT;

GENERAL HOSPITAL, MONTREAL,

For the year ending May 1st, 1877.

By William Osler, M.D.

(*Continued.*)

Alimentary Canal—Tongue. *Epithelioma.*

Case xlv.—*Epithelioma of right side of Tongue, extending from base to near the apex. Removal of organ with galvanic ecraseur. Suppuration beneath cervical fascia. Pyæmia.*

J. L., æt. 36. (For Clinical report see *Can. Med. & Surg. Journal*, Feb. 1877.) The tissues of the neck behind the deep fascia, principally on the right side and in front, are uniformly infiltrated with pus, which extends also to the anterior mediastinum. There is no definite collection of pus.

Lungs.—Left, healthy looking. Middle and part of the upper lobe of right are firm to the touch, non-crepitant, and the surface section is bathed with a sero-sanguineous fluid. A small purulent focus exists at external part of middle lobe, not an accumulation of pus, but an area 1″ by ¾″ irregularly infiltrated.

Case xlii.—*Epithelioma of Tongue. Secondary nodules in liver.*

A. B., æt. 72.—Tongue almost entirely eaten away by the cancer, the base only remaining. The tissues in the neighbourhood are involved and the internal surface of the lower jaw on both sides is much eroded. Epiglottis and larynx not affected. The *liver* contains three masses of secondary cancer, the largest the size of a horse chestnut, situated superficially and presenting the usual characters of these growths.

The *lungs* present caseous masses at the apices. *Heart* somewhat atrophied. *Spleen* very small, weighing scarcely two ounces.

PHARYNX.—*Miliary Tuberculosis.*

CASE LXXX.—*Chronic Phthisis. Miliary tubercles in lungs and pharynx.*

A. G., æt. 22. *Lungs;* upper lobes riddled with communicating cavities, one of which, the size of a small egg, is filled with a clear, somewhat viscid. jelly-like material. Numerous tubercles and caseous nodules in the lower lobes. *Pharynx.*—Scattered over the posterior and lateral walls are numerous small, firm., granulations, which on examination prove to be miliary tubercles. They are confined to the pharynx. There is no ulceration and the larynx is not involved. With the exception of two suspicious spots in the cortex of the right kidney, the other organs are unaffected.

In another case of chronic phthisis the same condition of the pharynx was observed, and without ulceration.

Remarks.—These cases are of interest as showing the existence of extensive miliary tuberculosis in th epharynx without ulceration, and without involvment of the larynx. The condition is by no means common in phthisis. Attention has recently been directed to the subject in an able article by Fränkel.*

ŒSOPHAGUS.

Post-mortem digestion.—In CASE LXIX, a man dead of Typhus fever, an oval perforation of the œsophagus at the posterior wall, just above the diaphragm, was found. It extended $1\frac{1}{2}''$ in length by $\frac{1}{2}''$ in breadth; the edges thin, dark in colour, not at all congested. A small amount of fluid was in the tissues of the posterior mediastinum. The stomach contained semi-digested food, and its mucus membrane was softened.

STOMACH.—*Cancer.*

CASE XXIV.—*Cancer of the cardiac orifice, involving the œsophagus. Secondary masses in other parts of the organ.*

M. H., æt. 52.—*Stomach.*—The cardiac orifice is blocked by irregular cancerous projections from the mucosa, so that the

* Ueber die Miliartu berculose des Pharynx. "B rliner Klin. Wochenschrift," Nos. 46 and 47, 1876. See CAN. MED. & SURG. JOURNAL, Feb. 1877.

tip of the forefinger is with difficulty introduced. The growth appears as an annular ring, extending for about an inch above and below the orifice. The walls are here much thickened, and the distinction between the coats lost; the surface of the cancer is much ulcerated. For a distance of an inch or more the mucous membrane of the lesser curvature appears healthy, but between this and the pylorus is a long, flat, cancerous mass, not ulcerated. A string of projecting nodules extends along the greater curvature, and on the posteror wall is a thick, flat mass beginning to ulcerate on the surface.

The growth corresponds in histological character with medullary cancer. No secondary masses in any of the other organs.

CASE LXII.—*Medullary Cancer, involving the pyloric zone of the stomach. Perforation, peritonitis.*

F. M., æt. 33, had had for some time indefinite gastric symptoms, accompanied with occasional attacks of vomiting. There was no tumour to be felt externally. He left the hospital, to return a short time after in a condition of collapse.

Abdomen.—Intestines of a bright red colour and covered here and there with flakes of lymph. The omentum is pushed up and lies beneath the costal cartilages. On separating the transverse colon from the stomach a round perforation, about the size size of a sixpence, is seen in the latter, through which the contents of the organ escape.

Stomach.—On opening the organ a large, irregular, cancerous mass, about $2\frac{1}{2}''$ in width, extends around the pyloric zone, but does not involve the orifice. In the centre of this, corresponding to the lower and anterior part of the greater curvature is a round perforation, the margins of which are thin and of a dark colour. The cancer is moderately firm, much raised, the surface ulcerated, especially at the lesser curvature. Though it contains a considerable proportion of fibrous elements, yet the general character of the growth corresponds rather with the medullary form of cancer.

SMALL INTESTINE.—*Incarceration.*

CASE XCII.—*Passage of two feet of the ileum through a loop attached to the sigmoid flexure.*

M. H., æt. 50, taken ill suddenly with vomiting and symptoms of obstruction, which continued 48 hours, when she died unexpectedly in a condition of coma.

On opening abdomen, a small amount of bloody fluid is found in peritoneal cavity. The intestines are slate-coloured, relaxed, smooth, and present no sign of inflammation. On tracing them towards the cæcum it is found that the lower two feet of the ileum have passed through a loop attached to the sigmoid flexure and have become strangulated, being very dark, in places almost black, as if necrosis of the part was beginning. Careful examination of the constricting band shows that it is connected by both ends with the sigmoid flexure, and is composed of fatty and fibrous tissue, looking very like in structure the glandulæ epiploicæ near it. At its upper part, and near the attachment, it is broad, but the part farthest from the large bowel is exceedingly thin. The intestine passes through on the side of the ring next the sigmoid flexure, the lower end of the ileum being uppermost, and nipped about 1½″ from the ileo-cæcal valve. The mesentery passes through on the right side, and at and about the constriction is very dark. The diameter of the ring is about an inch. It is remarkable that though the strangulated portion of the bowel was dark and congested, yet there were no signs of inflammation, or any lymph upon the peritoneum.

Nothing abnormal in other organs.

Ulceration.—Simple.

CASE XCI.—*Round ulcer of duodenum.*

M. G., æt. 12, dead of bronchitis and pulmonary collapse. About 1½″ from the pylorus, on the posterior wall of the duodenum, is a distinct ulcer, the size of a three-penny bit, with slightly raised edges, lying between two valvulæ conniventes. Nothing else abnormal in the intestines.

In two instances—one a case of grey degeneration of the

cord, the other a case of cancer of the uterus—there were simple round ulcers in the ileum.

Typhoid Ulceration and Perforation.—Of seven autopsies in typhoid fever the following are of interest:—

CASE II.—*Perforation of typhoid ulcer during convalescence, owing to an indiscretion in diet.*

A. P., æt. 18, a convalescent for nearly two weeks, during which time the temperature had been normal. A day or two before his intended discharge he eat several mutton chops, and within 24 hours was in a state of collapse from perforation.

Abdomen.—Coils of small intestine of a rose-red colour; several pints of a dirty fluid, mixed with fæcal matter, in the peritoneal cavity. A few flakes of lymph on some parts of the ileum, but the congestion is confined to the coils near the abdominal walls. On carefully examining the intestines a small perforation is seen, situated about eight inches above the valve, and through it fæcal matter exudes. On slitting up the ileum the perforation is found at the bottom of an ulcer about the size of a copper. It is button-hole in shape, 4‴ in length, 2‴ in breadth, and looks like a small transverse rent in the muscular coat. There is no inflammation about the ulcer, but it and the others in the bowel appear healing.

CASE XXVIII.—*Perforation of a deep ulcer at end of second week.*

A. B., æt. 40, had been ill with typhoid fever two weeks; symptoms of peritonitis 18 hours before death.

Abdomen.—Intestines of a vivid red colour, and the general peritoneum inflamed. On carefully working down the coils from the duodenum, no lymph or adhesions are met with until the ileum is reached; on tracing it towards the pelvis, the coils are found matted together and covered with thick greyish-yellow lymph. About a foot from the valve a perforation is seen, fluid fæces of a yellowish colour flowing out, so revealing it.

Intestine.—On slitting up the jejunum and ileum the mucous

membrane is found pale, and in the lower two feet of the latter there are six or eight round, deep ulcers, the largest about the size of a shilling, presenting an irregular perforation. The mucous membrane about the ulcers is not injected, nor are their edges raised.

CASE XCIII.—*Typhoid Fever. Perforation. Peritonitis.*—J. E., æt. 29. In hospital 9 days.

Peritoneum.—Coils of intestine present a vivid red appearance, being covered here and there with flakes of lymph, and stained with fæcal matter. About two pints of a dirty semi-feculent fluid in the cavity. About twelve inches from the valve a perforation is seen.

Intestine.—As the lower part of the ileum is approached there are several ulcers, most abundant in the foot of gut above the valve. Most of these are small and round, not elongated, and have yellowish-stained sloughs adhering to them; about a foot from the valve is one the size of a shilling, which has perforated. In most of them the sloughs are only beginning to separate. Near the valve are six or eight round, punched-out ulcers, the bases of which are formed by the muscular coats of the intestine. No ulceration in the cæcum or colon.

The following also present features of interest, as showing what a slight amount of intestinal disturbance may accompany fatal cases:—

CASE XXXIII.—*Four round ulcers in the ileum. Peyers patches not generally involved. Slight hypostatic pneumonia.*

A. B., æt. 32, a small, feebly developed man. In hospital 8 days.

Intestines.—Several intensely black patches, quite superficial, on peritoneal surface. Mucous membrane of jejunum covered with a flaky, yellowish matter, very closely adherent, and washed off with difficulty. In the ileum, five inches from the valve, there is a somewhat cliptical ulcer, placed rather transversely to the axis of the gut, and about the size of a penny. The base is made up of the circular fibres, and the edges are neither

elevated nor congested. Two other smaller ones are situated close to it, and five inches higher up is a fourth, also small, and having a punched-out appearance. The patches above this are not elevated, but have a peculiar mahogany-brown colour, and on close inspection the individual follicles are seen to be a little swollen. The solitary glands are scarcely visible. No ulceration in the large bowel. *Mesenteric* glands moderately swollen.

CASE XXXIV.—*Slight swelling of Peyers glands, only one small spot of ulceration.*

J. G., æt. 40, a stout man, of intemperate habits. In hospital five days. Temperature not high, and general symptoms not bad; no delirium, but he was excessively timid and nervous, so much so that the House Surgeon expressed the belief that he was frightened to death.

Intestines.—Peyers patches slightly swollen, their bases congested and the follicles in each very distinct. The solitary glands in the neighbourhood of the valve are enlarged. In only one small patch, about a foot from the end of the ileum, is there any trace of ulceration, and on this it is not at all advanced. No affection of the large intestine.

Mesenteric glands a little swollen.

Spleen weighs 15 oz., and is very soft.

Heart.—Right and left segments of aortic semi-lunar valves have merged together, presenting one sinus behind, with an indistinct separation near the attachment to the aorta. Segment a little thickened, but valve sppears competent.

CÆCUM.

CASE XXXII.—*Round ulcer of cæcum, perforation, general peritonitis.*

M. G., æt. 19, a well-built young man. In hospital four days and a half, with symptoms at first like obstruction of the bowels, subsequently those of peritonitis. Three weeks before he had an attack of what was supposed to be strangulation, and from which he recovered.

Abdomen.—General peritoneal surface much inflamed, and of a deep-red colour. On separating the coils of small intestine patches of lymph are met with, uniting them together. A pint of fluid in the cavity. The intestines are swollen and distended, the walls soft and tumified. The inflammation is much more extensive toward the pelvis and in the neighbourhood of the ileo-cæcal valve. Evidences of a bygone peritonitis are seen in the form of slight opacities and puckerings on the serous surfaces, both visceral and parietal.

Small Intestine.—Mucous membrane tumified; otherwise unaltered.

Cæcum.—The inflammation about it is most intense, and the lymph most abundant. On carefully separating it a round patch, $2\frac{1}{2}''$ in diameter, is seen on the abdominal parietes, of a greyish-red colour, and somewhat depressed. Corresponding to the centre of this is a round perforation of the cæcal wall, $1\frac{1}{2}''$ in diameter. the coats of the intestines about it being much inflamed. On slitting up the gut a single ulcer, which has perforated, is seen on the upper and outer wall; its edges are thin, and the mucous membrane about much inflamed. Nothing else noticeable in the large intestine.

Remarks.—Perforation of the cæcum is rather an unusual accident, much more so than perforation of its appendix. In this case the trouble probably originated in an attack of the *typhlitis stercoralis* of Rokitansky, induced by the lodgment of hard masses of fæces. There were evidences about the perforation, between the cæcum and iliac fascia, of inflammation (perityphlitis) of an older date than the general peritonitis; and there can be no doubt that it was in the first illness that the perforation happened, its evil effects being limited by a local inflammation, which subsequently, owing to some not ascertained cause, spread to the general peritoneum. There was a very marked contrast between the area of inflammation immediately about the perforation and that towards the head of the cæcum; the former was darker, more greyish in colour, and the contiguous surfaces were not so easily separated. It is important

to note, with reference to the diagnosis, that the symptoms appeared to point to obstruction of the bowels; doubtless, a more thorough inspection would have satisfactorily decided the question.

Appendix vermiformis.—In three cases there were found in it firm concretions of fæcal matter, oval in form, and about the size of date stones. In Case xxviii., mentioned above, its calibre was obliterated for the first half inch of its length, patent for an inch beyond the obliteration. In another case of typhoid fever, it was also partially closed. It was ulcerated in a case of phthisis, chiefly at the cæcal end, which was almost entirely closed by the swelling of the membrane, in consequence of which the tube was dilated with the retained secretions, being nearly the thickness of the thumb.

The following is the only instance of perforation noticed :—

CASE LXXXVIII.—*Abscesses in the mesentery. Suppuration of portal vein. Empyema. Perforation of appendix. General peritonitis.*

J. L., æt. 42. History of case subsequently.

Abdomen.—General peritonitis; 80 oz. of turbid fluid removed; intestines covered over with thick yellow lymph, most abundant on the coils of the ileum and on the pelvic organs. The *appendix* lies directly over the promontory of the sacrum, and is about the length and size of the index finger. It is much swollen, and the walls soft. On carefully removing it the fluid contents escape from an oval perforation on the under side, which is adherent to the tissues over the sacrum by thick lymph. On slitting up the cæcum, which is healthy, a probe cannot be passed into the appendix, nor can its orifice be seen. From the side of the latter the probe enters a small sulcus which passes for two or three lines beneath the mucous membrane of the cæcum. About 1¼″ from the cæcum is a round perforation, ⅛″ in diameter, the margins thin and dark-coloured. There is no foreign body or concretion.

PERITONEUM.

Acute Inflammation.—In eleven cases of acute peritonitis, the following were the causes:—Three, perforation of typhoid ulcers; one, perforation of cancer of stomach; one, perforation of cæcum; one, perforation of appendix vermiformis; one, rupture of an abscess in broad ligament; two followed the operation of ovariotomy; one, cancer of the liver; and one followed delivery in a woman with Bright's disease.

Tubercular Peritonitis.

CASE VII.—*Acute tubercular inflammation of the peritoneum. Small caseous mass in left lung.—Right-sided pleurisy. General hyperplasia of the bone marrow.*

J. McT., æt. 35. — Had been a soldier for twelve years, latterly a sailor; admitted in September, 1875, complaining of weakness, loss of appetite, and frequent attacks of vomiting. No albumen in urine. Blood normal. Systolic murmur at apex. No enlargement of abdominal organs. Tenderness on deep pressure along right costal border and ensiform cartilage. The vomiting became more marked, and he had occasional attacks of diarrhœa. The symptoms pointed, though vaguely, to disease of the stomach, either round ulcer or cancer. The vomiting was with difficulty controlled, and patient became very weak and anæmic, the skin slightly icteric. Towards January he got so feeble that he was unable to move from bed, and the vomiting was so persistent as to necessitate feeding per rectum. Through January and February the vomiting became less, and the patient wasted slowly, the case being regarded as malignant disease, involving perhaps the peritoneum. In the beginning of May the peritonitis became acute and general, and he died on the 25th, profoundly exhausted. For some weeks before death hæmorrhages occurred in various parts of the skin.

Peritoneum. 56 oz. of a turbid, slightly bloody fluid, in which are flocculi of lymph, in this cavity. Here and there the coils of intestines are matted together by easily separable adhesions. The transverse colon and stomach are in this way glued together, the former covers also the anterior border of the liver. The

entire peritoneum, except the portion over the stomach, is of a dark red colour, infiltrated, sodden, and readily stripped off from the subjacent tissues. Localized patches of lymph occur here and there upon it. The whole membrane presents a great number of small white areas, flat, not projecting above the surface, and ranging in size from a hemp seed to a split pea. As a rule they are isolated, but occasionally groups are seen. They exist in about equal numbers over the intestines, mesentery, and parietal peritoneum. Beneath the latter are from eight to ten larger white patches, which, on section, have a caseous appearance, are firm to the touch, not encapsuled, and extend to the depth of about $\frac{1}{4}''$. On examination of these small and large white masses, they are found to be almost entirely subperitoneal, and composed of aggregations of corpuscles of a lymphoid character, a little smaller than the colourless blood corpuscles, and with one, rarely two, nuclei. In sections through those on the intestinal wall, the corpuscles are seen to infiltrate to some extent the muscular coats. The mesenteric glands are but little enlarged.

Heart; ecchymoses on pericardium, walls flabby, muscle pale, very little blood in the chambers.

Pleura, 35 oz. of turbid fluid in right sac. Visceral and parietal layers congested, and covered with flakes of lymph. A few ounces of fluid in left sac.

Lungs.—Right, crepitant, except at extreme base. Lower lobe collapsed. Organ contains a good deal of serous fluid. Left, upper lobe crepitant, lower collapsed and œdematous. At anterior border of upper lobe is a firm, somewhat triangular shaped, block of condensed tissue, which on section is made up of a small cavity, looking not unlike a dilated tube, and one or two caseous knots, the lung for a short distance about being solidified, and of a greyish colour. No miliary tubercles in either lung.

Spleen, 5 oz., unaltered.

Liver 2lbs. $2\frac{1}{2}$ oz.. anæmic, and yellowish in colour.

Kidneys, normal in size, but very firm in texture. In the cortex of the right are several small purulent depots, about which the substance is much congested.

Stomach.—Mucous membrane of normal thickness, but is soft and readily torn. No trace of cicatrices or tumour. It contains about a pint of fluid.

Small Intestines contain yellowish liquid fæces; walls are thick, owing to an infiltrated swollen condition of all the coats. Mucous membrane is dark in colour. Peyer's glands not enlarged.

Large Intestine contains large masses of yellowish solid fæces.

Brain presents nothing abnormal.

Medulla of bones.—That of the long bones has a uniform greyish-red colour; nowhere having the yellowish fatty aspect of normal marrow. In the cancellated portions and short bones it had a lighter red colour. On examination there were; (1). red-blood corpuscles, presenting considerable differences in size, some hardly the $\frac{1}{3500}''$ in diameter, and many curiously irregular in form. (2). Ordinary marrow cells, and lymphoid corpuscles, which together constitute the chief mass of the tissue. (3). Nucleated red-blood corpuscles—the embryonal or transitional forms of Neumann, of which in each specimen examined four or five examples were met. They are larger than the ordinary coloured forms and have usually a single nucleus. The colouration of these corpuscles is nearly, if not quite, as marked as in the ordinary forms. (4). Cells containing red-blood corpuscles of which a few examples occurred. There are no myeloplaques.

Clinically, as well as pathologically, this case presents many points of interest. The prolonged gastric irritation, which was the prominent symptom during the first five months of his illness, receives no suitable explanation in the condition found post-mortem. Are we to suppose the peritoneal trouble to have begun with the onset of the symptoms in September, or were these latter due to some constitutional dyscrasia, upon which the affection of the peritoneum was grafted, dating only three weeks before death, when symptoms of acute inflammation of the membrane developed? Certain cases of tubercular peritonitis are notoriously obscure, the symptoms pointing rather to disease of

some viscus covered by the peritoneum, as the bladder or intestines, than to an affection of the membrane itself: and in this case the gastric trouble may have been caused by the chronic irritation induced during the gradual eruption of the tubercles. The condition, however, at the time of death was rather one of acute peritonitis, as evidenced by the injection and tumefaction of the coats of the intestines, and there was nowhere that matting of the coils together by firm adhesions and tubercular matter which is seen in many cases of chronic tubercular peritonitis; but it is a question whether the recent inflammation may not have been super-added on a membrane already studded with tubercles, though, with the exception of the large masses on the parietal peritnoneum, they did not look very old.

The anæmia and wasting, together with the gastric irritation, presented a clinical picture not unlike certain of those constitutional affections dependent upon some profound alteration in the constitution of the blood, such as pernicious anæmia; and the finding *post-mortem* of a condition of hyperplasia of the bone marrow, I at first regarded as lending support to this view, seeking in it the explanation of the deterioration of the blood; for there can be no doubt that alteration in the medulla of the bones may seriously influence the composition of this fluid. Moreover, the peritoneal affection was not what I had been accustomed to see in tubercular conditions of this membrane, for, with the exception of the large masses on the parietal layer, the tubercles were not firm and nodular in character, but had rather the appearance of localized lymphoid infiltrations. Since the occurrence of this case, however, two other instances have come under my notice of hyperplasia of the bone-marrow in chronic wasting diseases, so that I am now less ready to refer this one to the category of myelogenous affections, and regard it rather as a case of tubercular peritonitis, latent in its course, and towards the end accompanied by an acute inflammation of the membrane, the consequence, probably, of a fresh outbreak of tubercles.

The absence of the tubercles in the other organs is a condition which not unfrequently obtains in this affection.

Reviews and Notices of Books.

Clinical Studies, illustrated by cases observed in Hospital and and Private Practice.—By Sir John Rose Cormack, K.B., F.R.S.E., M.D., Edin., M.D., Paris, Chevalier of the Legion of Honour, Physician to the Hertford British Hospital of Paris, &c., &c. London: J. & A. Churchhill, 1876. 2 vols. 8vo.

This collection of essays by Sir John Cormack, most of which have already been published, now appear together in a new and convenient edition. The writings of this physician have always commanded respect as coming from a man who had invariably cultivated the habit of close and accurate observation. They have always, moreover, been marked by a degree of originality which greatly enhances their freshness and interest. Amongst those which date farthest back, we find the author's inaugural dissertation on the presence of air in the organs of circulation, which was written in the year 1837. The other papers were published at various times between this and quite a recent period. In the first volume we have articles on the fever epidemic of Edinburgh in 1843-44, on cholera, scarlatinous nephritis, puerperal convulsions, infantile remittent, together with several others of considerable medical interest. The second volume contains, besides the inaugural thesis above alluded to, essays upon reflex convulsions of infancy, diphtheria, the paralytic affections of diphtheria, chronic poisoning by chloroform, concussion of the brain, &c. The section devoted to diphtheria is of a recent date and is especially valuable, since it gives the results obtained from the observation of a great number of cases. From the variety of subjects treated, the eminently practical manner in which they are handled, and the profusion of illustrative cases, this collection of Sir John Cormack's will be found by every physician a most interesting literary possession.

The Medical Jurisprudence of Insanity. By J. H. BALFOUR BROWNE, Esq., of the Middle Temple, London. Second edition. Philadelphia: Lindsay & Blakiston, 1876.

The first edition of Mr. Balfour Brown's work appeared in 1871. The fact of a second edition of a book of this *kind* being called for within three years, speaks volumes for the amount of information it contains, and the want which evidently existed for such a work.

The book has been considerably enlarged, and Mr. Browne tells us in his preface that he has re-written and re-arranged it, and reconsidered, and in some instances recast, every proposition; as it is, Lindsay & Blakiston, in their American reprint, present us with a volume of nearly 700 pages. The fact that such an amount of space is taken up by a discussion of the Medical Jurisprudence of Insanity, argues a thoroughness and completeness in the mode of treatment of the subject. In this particular an examination of the book shows that it is not wanting. Mr. Browne speaks not only of the Forensic aspect of insanity but boldly tackles the subject in its medical aspect as well, a perhaps somewhat questionable undertaking for a lawyer.

In a work on insanity by a lawyer we are naturally curious to know what he has to say in defence of the "legal test" against the many attacks which we of the medical profession are constantly making against it. Turning to the chapter on Capacity and Responsibility of the Insane, the first in the book, we are not surprised or disappointed to find that he adopts the views almost universally held in legal circles, and accepts the answers of the judges to the House of Lords at the time of the celebrated trial of McNaughten for the murder of Mr. Drummond in 1843; we quote his words, "Now, we hold that the test of insanity proposed by the judges is sufficient in all cases to discover the punishability of a criminal who labors under mental disease." Mr. Browne argues most ably in defence of this dictum, to which we from the medical standpoint are so much opposed.

In the next chapter the author speaks of the causes of

insanity, and in the first sentence, anticipates and answers the rather natural objection, that the cause of insanity scarcely falls within the scope of a work on medical jurisprudence as discussed by a lawyer, but he excuses himself by asserting, and here we are with him, that an intelligent study of insanity depends very much upon a study of nervous conditions which lead up to it. The following chapters are taken up with classifications of insanity, and a description of the various forms of the disease with the legal relations of each. In chapter xv. the interesting state of somnambulism is taken up. Mr. Browne fully enters into a discussion of the many curious facts recorded of persons addicted to sleep-walking, and also of the dreaming condition. The very important subject of the legal relations of somnambulism, and the responsibility for actions committed in this condition receives its due meed of attention. In the sixteenth and seventeenth chapters of the book, under the heading of drunkenness, the author treats of all forms of unsoundness of mind which may result from the ingestion of alcoholic liquors, from simple intoxication to delirium tremens and *mania à potu*, that paroxysm of acute mania which in some persons is apt to come on as alcoholic intoxication is passing off. Amid much that is good we consider this to be one of the best chapters in the book.

Chapter xxv is devoted to the subject of medical experts, and in the first section the author attacks men like Herbert Spencer and Professor Huxley, who "assert that no good is to be got out of the osteology of thought which lies in mathematics, or the vague knight-errantry of thought which lies chronicled in history, but that in the facts of science alone there is nourishment for minds." After animadverting upon the increased claims of science in general, in these latter days, he proceeds to speak of the claims of science in relation to jurisprudence, which he asserts to be no less grasping, and in no case so much so as where questions of mental health are involved. In this connection Dr. Maudsley comes in for a large share of adverse criticism, seeing that he "is one of the prophets of this new religion of science. He writes perspicuous books without putting

much in them. What is new in his books is of questionable veracity, and what is true cannot lay claim to novelty. Still he writes well, and his books are read, and possibly he is believed in." We should rather think he is believed in and that too to a very considerable extent, seeing that many of the arguments he advances. and the facts he adduces are exceedingly hard to get over, and that the records of criminal law courts during the last two or three decades afford so many instances in which, had medical evidence been allowed to influence the jury we should have had fewer cases of insane people condemned to death, and then snatched from the executioner by the influence of that same science here so much decried. In this same chapter Mr. Browne treats the medical profession to some advice as to their manners in the witness box, and the best mode of giving their evidence. This is, we are bound to say, exceedingly good in its way, but we are afraid with the author that like most advice, it will not be taken. There can be no doubt that if medical men submitted with better grace to the oft-times vexatious examinations to which they are subjected in court, the profession as a body would occupy a much more enviable position before the public.

The author charges the medical profession as a whole with great ignorance on the subject of insanity. To this charge unfortunately we must plead guilty. There are great difficulties in the way of helping students to a practical knowledge of insanity, but we venture to hope that the time is not far distant when our asylums will be made available for clinical instruction of this kind. Such opportutities have within the last few years been afforded the students of certain of the London medical schools, who have been admitted, under certain restrictions to the practice of some of the Lunatic Asylums, in and about the British Metropolis.

While there are a good many things in this book that we must find fault with, there is also a great deal that we have to commend. As an exposition of the legal aspects of the subject treated it is probably not equalled by any work in the English language. Having said this much we must also say

that the author manifestly cannot understand, as indeed it was not to be expected, without the long necessary training, the medical aspects of insanity. We sincerely hope we have said enough to induce every medical man, as well as every lawyer, to add this book to his library.

Extracts from British and Foreign Journals.

Unless otherwise stated the translations are made specially for this Journal.

Quinine Exanthem.—Prof. Köbner, of Breslau, reports the case of a large, powerfully built woman, 28 years of age, who was attacked with a syndrome closely resembling that of scarlet fever, whenever she took even a small dose of quinine. The symptoms consisted in a chill, which was sometimes repeated, as a feeling of precordial anxiety, nausea, vomiting, intense headache, high fever, and angina. A few hours after the chill an erythrematous eruption made its appearance on the face, and spread rapidly over the entire body. It was attended by intense burning and itching, by slight œdema of the face, and injection of the conjunctiva. The color disappeared for a moment on pressure. The eruption on one occasion completely covered the entire body; in another it was confluent on the upper part of the body, but discrete on the legs. On this occasion the eruption on the leg was slightly papular, and the lower border of the confluent part was not sharp, but gradually faded into the healthy skin. After a variable length of time, according to the amount of quinine taken, the symptoms abated and desquamation began. The angina affected only the posterior wall of the pharynx, the soft palate and pillars being normal. Three times in the course of five months the patient was seized with these attacks. The first time, the exanthem broke out after 3½ grs. quinine had been taken. As a diagnosis of scarlet fever was made the quinine was continued for eight days, and the eruption persisted for the same length of time. Desquamation

then began, and continued for six weeks, and on the soles of the feet for nine weeks. The fever was high and persistent, and the prostration was very great.

Three months later the exanthem reappeared, after a dose of only 1½ grs. of quinine. The stage of eruption lasted four days, and the desquamation three weeks. The third time the exanthem made its appearance after a dose of only 1½ gr. of quinine. The stage of eruption lasted only two and a half days, and the desquamation fourteen days. The affection this time ran a milder and shorter course than on the two previous occasions.

Dr. Von Heusinger, of Marburg, states that he has met with two cases, in which symptoms entirely analogous to those described above, were produced whenever even very small doses of quinine were administered. In these cases, however, the eruption was confined to the face. Both patients were women. One of them was at one time able to take quinine without inconvenience.—*Berliner klinische Wochenschrift*, May 28th and June 18th.—*Medical Record.*

Treatment of Ranula.—Dr. Panas has frequently succeeded in curing ranula by the injection into the tumour of from four to ten drops of a concentrated solution of chloride of zinc. Among others he cites one obstinate case in which excision, seton and drainage had successively failed; the contents of the cyst were always reproduced, and finally operative interference was abandoned, except when attacks of suffocation rendered palliative puncture necessary. Ten drops of a solution of chloride of zinc, of the strength of one to ten, were injected without previous evacuation of the cyst, and shortly afterwards the injection was repeated with a 20 p. c. solution. In less than five weeks from the time this treatment was begun, a complete cure had been produced. This treatment is applicable to all varieties of mucous and serous cysts. It has succeeded in a case of subhyoid cyst, which had resisted cauterization and the injection of tincture af iodine; it yielded to a single injection of chloride of zinc.—*Le Bordeaux Médicale*, July 31st.—*Med. Record.*

Podophyllin in the Treatment of Hepatic Colic.—The *Gazette de Hopitaux*, of July 7th, says:

In a paper published a few months ago in *Lo Sperimentale*, Prof. Bufalini reported two cases of severe hepatic colic that were cured by the use of small daily doses of podophyllin. The first case was that of a woman, 45 years of age, who had suffered for a long time from violent attacks of hepatic colic Her only relief was obtained from the use of active purgatives, which would cause the discharge of large calculi. An enteritis finally set in, which compelled her to stop the use of purgatives. Prof. Bufalini then ordered small doses of podophyllin (gr. one-sixth per diem), and both the hepatic colic and the intestinal catarrh rapidly disappeared. The use of podophyllin was continued for a year, and during that time and the two years that have since elapsed, the colic did not return.

The second case was that of a lady who had suffered for over two years from violent attacks of hepatic colic, and frequently passed calculi. All the usual methods of treatment had been tried without benefit, but the use of one-sixth of a grain of podophyllin per diem was soon followed by a cessation of the attacks, and gall-stones were no longer passed. The use of podophyllin was after a time discontinued, and for eight months afterwards the health of the patient continued good; the attacks of colic then returned, and calculi were again found in the fæces, but on resumption of the treatment they disappeared almost immediately.

To these cases Dr. Mercadié adds that of a lady who suffered for a long time from intensely severe attacks of hepatic colic, that were repeated two or three times a month. He had been unable to do more than relieve her by injections of morphine. He finally ordered a small dose of podophyllin to be taken every night, and since the treatment was begun (two months ago) no attacks have been experienced. During the first fifteen days of this treatment the stools were examined, and several times were found to contain calculi.—*Medical Record*, Sept. 15.

Treatment of Nasal Catarrh.—Dr. Hartmann, of Berlin, recommends the use of Politzer's method for distention of the middle ear, in the treatment of acute nasal catarrh. By the compression of the air in the nasal cavities, the collected secretion in the frontal sinuses and other cavities opening into the nasal fossæ is forced out, and the pains and other disagreeable sensations in the head are thereby greatly relieved. In order to prevent any undesirable effects on the middle ear, the external auditory canals should be closed with the fingers, whereby a too forcible driving outwards of the drums is prevented.

In non-syphilitic ozæna, Dr. Hartmann believes ulceration of the mucous membrane to be very rare, the bad smell being dependent on decomposition of retained secretion. He also believes that the great dilatation of the nasal cavity, which is very frequently found on one or both sides in cases of ozæna, renders the removal of the secretion difficult, and favors its stagnation. Where douches or injections cannot be used, he recommends the use of a small brush, fastened at the end of a flexible wire, to remove the tenacious secretion.—*Memorabilien* Heft 6, 1877.

The Communication of Syphilis from a mother to her Fœtus.—In a clinical lecture delivered at the London Hospital, Mr. Hutchison records some cases bearing on a question which hitherto there has been little positive evidence to decide—namely, the form which syphilis takes in an infant when it has not been precisely inherited, but acquired during intra-uterine life by blood transmission from the mother. The first case was one in which the mother contracted an indurated chancre, about six weeks before delivery. At delivery no eruption had appeared, but soon after it, she suffered from secondary syphilis in a severe form, having a most copious eruption, which showed a tendency to ulcerate. Thus probably during the last weeks of the child's intra-uterine residence the blood of the mother contained the virus in its most

active stage, the exanthem being just about to appear. The infant suffered from severe symptoms at about the same time as the mother. There was nothing in the case, except perhaps the copiousness and pustular character of the eruption in the child, in the least different from what is seen in the hereditary disease. So severe, however, was the affection, that in spite of careful treatment, it withered away and died before the period had been reached at which the inherited form begins to differ from the other.

The second case was one in which the mother contracted the disease from her husband about five weeks before her confinement. About two months after her delivery the infant had a rash, and the mother still had the remains of the primary sore. The mother suffered decidedly, but not very severely, but the father was under treatment for more than a year. Mercury caused diarrhœa in the child, and but little was given. It pulled through, however, and lived to display at the age of five, characteristic interstitial keratitis; it had also syphilitic arthritis, with effusion into both knee-joints, and some persistent thickening of the tibiæ. These have all passed off, and at the age of ten the child is in fair health, but bearing the unmistakable evidence of his taint. In this instance then, the disease in the child, though acquired only just before birth, closely resembled, in all respects the hereditary form.

In the third case the mother came under notice five weeks after delivery on account of a chancre on her tongue. She had first noticed the sore about six weeks before her application, and she was covered with a pustular eruption, which had been out three weeks. The infant was healthy at this time, and remained quite free from symptoms until nearly eight weeks old, when a well-marked syphilitic rash came out. It was treated as usual and recovered. In this instance the mother's blood probably did not become infective till just before her confinement, at the date of her noticing the sore on her tongue.

In a fourth case a woman who had previously borne two healthy children contracted syphilis from her husband during her third pregnancy, but at what exact date was not ascertained.

The child, a girl, came under treatment at the age of twelve with troublesome keratitis. She had characteristic teeth, and there was a history of prolonged symptoms during infancy.

Mr. Hutchinson concludes that it appears probable from these facts that syphilis received by a child in utero is the same disease as that obtained by true inheritance, and that it does not assume the very mild form generally shewn by syphilis transmitted from the fœtus to the mother through blood communication, but it is sometimes of a very severe type.—*Medical Times and Gazette.—Obstetric Journal.*

Diphtheritis and Tracheotomy.—(The city of Berlin may fairly lay claim to the unenviable distinction of being the head-quarters of diphtheria. For many years this disease has continued its ravages amongst the youthful population without interruption. This much may be gathered from the annals of one public institution known as v. Langenbeck's Klinik, which has been able to furnish statistics of 567 cases in the period of six years and seven months, dating from January 1st 1870, to July 31st, 1876.

Dr. Krönlein has made these statistics the basis of a lengthy article in von Langenbeck's Archives for Clinical Surgery, of which the following is a *resumé*.—F. B.

If any conclusion can be drawn from the number of cases which occur in Hospital practice, the endemic of diphtheritis which prevails in Berlin has, during the last ten years, been steadily increasing, and to this one endemic all the cases referred to below may, strictly speaking, be considered to belong. This is a point of some importance in the matter of drawing general conclusions, inasmuch as they might not be applicable at other times or in other places, since the character of this disease is known to depend in a great measure on its locality, and other circumstances which need not be mentioned. Hence it must be borne in mind that the following remarks only refer to the endemic diphtheritis such as occurs in Berlin.

Most of the cases were brought to the Hospital in a condition

of more or less advanced asphyxia, and in many death from this cause seemed imminent, so that, as a rule, immediate operation was demanded, *ex indicatione vitali;* but whenever there appeared to be a chance of saving life without tracheotomy the operation was delayed, the object on the one hand being, when possible, to avoid operating merely as a prophylactic measure and on the other, not to allow the case to advance to the last stages of asphyxia before having recourse to surgical interference. In the most desperate cases the principle was never lost sight of that as long as any sign of life existed it was the surgeon's duty to give the patient the only remaining chance of relief, without regard to any circumstances, singly or combined, that might contribute to the apparent hopelessness of the case.

In reviewing the tabulated statistics of the 567 cases, several important questions are suggested; first as to the total mortality. This we find to be 66.4 per cent., or almost exactly two thirds. Secondly, as to the death-rate during different years and different seasons of the same year. The tables show that, notwithtanding the constant increase in the number of cases from year to year, the mortality, though varying somewhat, as constantly diminished. In the year 1870, it amounted to 77.6 per cent., in 1876 it was only 60.3 per cent. Many circumstances may have contributed to this diminution, to no single one of these, however, could any definite share be assigned, it would therefore be out of place to offer any explanation of the fact. Hitherto nothing approaching to certainty has been determined with respect to the influence of season, and this in the main accords with our experience, though the disease would appear to be more prevalent during the second half of each year than it is in the first: the total number of cases treated in five years between Jan. 1st, and July 1st, being only two-thirds of the number treated during the same period between July 1st and January 1st. The month of June affords the least number of cases, October the greatest, but the percentage of deaths does not seem to be influenced by the season of the year.

The tendency to diphtheritis increases up to that of the third year of life, but after the end of the fourth year diminishes

steadily until the sixteenth year; nearly one-fifth of the whole number occurred in the third and fourth years of life.

The age of the patient is of much importance in a prognostic point of view; from the 7th or 8th year the mortality increases in inverse proportion to the age of the patient, that is to say, the younger the individual the worse the prognosis; from the 8th to the 16th year the rate of mortality remains unaltered.

Of all the cases which occurred during the first year of life 89.4 per cent. died. In the 8th year, the death rate was 44.4 per cent. Of the few cases recorded as occurring after puberty only 25 per cent. were fatal.

Turning now to the question of tracheotomy, it must be remembered that nearly all of the 576 cases were brought to the hospital only after all the ordinary medical means employed with a view to arresting the disease had been tried in vain. The operation was performed whenever indications for its performance were present, in only a very few instances the friends or parents refused their consent and took the child away. There could be no better proof than this, of the popularity which the operation of tracheotomy has attained in Berlin. It was found to be indicated in 504 cases and not indicated in 62 cases. Thus only 10.9 per cent. were not operated upon. In 71 cases occurring during the second year of life the operation was found unnecessary in only one instance; in 34 cases during the 7th year 9 did not require operation. The youngest child operated upon was only three months old.

Of the 504 tracheotomized 357 or 70.8 per cent. died. As already stated, the death rate of all cases diminished year by year; the same satisfactory statement is true of all those in which tracheotomy was done. In 1870 83.7 per cent. died, in 1876 the mortality was only 61.8 per cent. Of the 62 cases not requiring operation only 36 per cent. died, this, however, does not militate against the operation, inasmuch as these cases were altogether less severe than those requiring operation, indeed, the latter group included a large number of essentially hopeless cases. The mortality after tracheotomy in the first years of life was 89.4 cent., in the 12th year it was only 42.8 per cent.

Of 85 cases operated upon during the first and second year of life, eleven recovered; the youngest of these last, only 7 months of age, was brought to the clinic so much asphyxiated that it would undoubtedly have perised in a few minutes if the operation had not been done immediately.

The following table shows the duration of life after admission in all the fatal cases, both operated and unoperated; with regard to the former it will suffice to say that in the vast majority the operation was performed either immediately, or within a few hours after admission, and, therefore, the same figures will indicate, with approximate accuracy, the duration of life after the operation:

Day of death.	Operated.	Not operated.	Totals.	——
Day of admission.....	27	2	29	
1st day after admission.	94	3	97	295=78·2 p. c. of all the fatal cases of Diphtheritics.
2nd " " "	100	3	103	
3rd " " "	41	1	42	
4th " " "	22	2	24	
5th " " "	8	1	9	
6th " " "	3	—	3	
7th " " "	14	1	15	
8th " " "	7	—	7	46=12·2 p. c. " " "
9th " " "	4	—	4	
10th " " "	6	1	8	
11th " " "	4	2	6	
12th " " "	3	1	4	
13th " " "	2	—	2	
14th " " "	1	—	1	21= 6·6 p. c. " " "
15th " " "	3	—	3	
16th " " "	5	—	5	
17th—23rd " "	10	2	12	12= 3·1 p. c. " " "
Totals, ...	357	19	377	

Certain other points, chiefly of surgical interest, might be elucidated by a careful analysis of so abundant a material, unfortunately however, sufficiently accurate records were only kept of 241 cases to render them available for this purpose.

Of these 241 cases 46 were affected with simple diphtheria of the larynx and trachea without demonstrable exudations or ulceration in the nose or pharynx. In 138 there was also diphtheritis of the pharynx; in 4 of the nose, and in 43 of the pharynx and nose.

On the first 46 tracheotomy was done without delay, with a mortality 71.7 per cent.; of the remaining 195 tracheotomy was

done in 164 ; of these 73.7 per cent. died. Of 31 cases in which the larynx was not involved, and which consequently did not require operation, only 32 per cent. died. Thus it will be seen that whilst the great danger of diphtheria lies in the extension of the disease downwards, it matters little whether the larynx or trachea only are involved, or whether in addition to this the exudation or ulceration is also present in the pharynx and nose, the difference in mortality in favor of the former being only about 2 per cent.

It was seldom possible to form any opinion as to how far the diphtheritic process had extended down the trachea, or into the bronchi, but the wonderful relief afforded by the operation was generally sufficient to show that as a rule most of the obstruction to respiration was situated in the larynx. Immediately after operation the breathing becomes calm and noiseless, and the child sinks into a quiet slumber. Sometimes, although danger seems to be averted the breathing does not become quite free, there may be râles audible a distance. This is an important prognostic sign the mortality being 91 per cent. in cases where the respiration was not quite free after the operation, but only 66 per cent. when this sign did not exist ; that is to say, with perfectly free respiration the prognosis is 25 per cent better than when the contrary obtains.

It often happens that after tracheotomy bronchial casts are coughed up, and that the breathing, which till this event had remained obstructed, suddenly became quite easy, giving rise to delusive hopes of recovery, such cases, almost without exception terminate fatally, for, as a rule, the disease continues to advance and invade fresh portions of the respiratory tract despite the tracheotomy.

In 154 fatal cases out of 310 operations not less than 100 perished from asphyxia, 54 died from gradual failure of the vital powers with unimpeded respiration, or, as in a few instances, from collapse at a later date. This may happen after all danger on the part of the respiratory organs has subsided, the canula having long since been removed.

A difficulty in swallowing without the entrance of food into

the larynx, was a very common symptom after tracheotomy, it was due, probably, to the presence of inflammatory products in the larynx, or both pharynx and larynx, and is to be distinguished by its early occurrence, from the well known secondary paralysis of the pharyngeal and laryngeal muscles. In non-fatal cases this difficulty generally lasted from two to three weeks, whereas the secondary paralysis has a duration of from four to six weeks. Diphtheritis of the wound occured in fifty cases out of the 210 operations, it varied greatly in severity from a slight diphtheritic deposit to a condition of things which could not be distinguished from the most virulent hospital gangrene. In severe cases a peculiar patchy exanthem was observed in the neighborhood of the wound, as well as more extensively over the neck and breast. Albuminuria was also not an unfrequent complication. The operation was always done under chloroform, excepting in cases of complete asphyxia.

After a fair trial as to the merits of the different modes of operating, the superior, *i. e.*, the operation in which the incision is made above the isthmus of the thyroid gland, was always adopted.

No other assistance was required than that afforded by one or several nurses. The operation was often almost bloodless. A cutaneous incision 3 c m in length generally sufficed. So small a wound is nearly concealed by the guard of the canula when it is in place. The surface of the wound around the tube was covered with a thin layer of cotton wool charged with chloride of iron, this speedily forms a firm scab, which for a few days protects the wound against diphtheritic infection. The medicinal agents employed, both after and before operation, were numerous; up to the present time, however, nothing has been discovered capable of arresting the disease after it has once attained a certain degree of development. Often some remedy vaunted as a specific would seem to work wonders for a time, and then under apparently similar circumstances would fail altogether.

The following is a list of the chemical substances most frequently used as local remedies, either singly or combined, in the form of solutions, the strength of which was made to vary in different experiments:—1. Acid boracic; 2. Acid muratic; 3. Alum; 4. Ammon. bromat; 5. Aq. calcis; 6. Aq. chlori; 7. Potass. hypermang; 8. Sod. bibor; 9. Sod. silic; 10. Sod subsulph.; 11. Sod. sulpho. carbol.; 12. Pepsin; 13. Zinc. sulpho. carbol. This does not include the numerous remedies which were tried in some cases but immediately abandoned,

such as nitrate of silver in substance or solution, chloride of zinc, iodide of potassium, Liq. ferri sesquichlor, &c., &c., applied as caustics to the pharynx.

After the month of May, 1874, Aqua chlori became the favorite local remedy, to the displacement almost of all others, because it seemed to give the best results.

Every two hours the diphtheritic pharynx was swabbed with the undiluted aqua chlor, and, at the same time, some of the diluted (aqua chlor. 1, aqua 3) was dropped into the trachea through the canula. This proceeding was continued at night, when possible. Diphtheritis of the wound was best treated with solution of chloride of zinc.

The difficulty in swallowing, which made the administration of food in some instances well nigh impossible, was sometimes overcome by the use of an æsophageal tube. Semi-solid food could often be taken better than fluids.—*Archiv Klinische Chirurgie. Band*, Bd. xxi. Hft. II, 1877.

McGILL MEDICAL SOCIETY.

At a meeting of medical students of McGill College, held April 23rd, 1877, the "McGill Medical Society" was formed, and the following officers elected:—

President, DR. OSLER; *1st Vice-President*, DR. ROSS; *2nd Vice-President*, DR. SHEPHERD; *Treasurer*, MR. VINEBERG; *Secretary*, M. LAWFORD; *Librarian*, MR. D. F. SMITH.

Weekly meetings were held throughout the summer season, at which readings and papers on Medical subjects were given by the members, until the 17th July, when the meetings were closed until the winter session should begin.

Meeting, May 8th:—Reading, Mr. MILLS.
Paper on a case of "Acute Necrosis of the Femur complicated with Pyæmia," Mr. VINEBERG.
May 15th:—Reading, Mr. GURD.
Paper on "Acute Peritonitis,". Mr. CHISHOLM.
May 22nd:—Reading, Dr. OSLER.
Paper on a case of "Amputation of the leg, Mr. HUTCHINSON.
May 29th:—Reading, Mr. GARDNER.
Paper on "Pneumohydrothorax," Mr. STAFFORD.
June 5th:—Reading, Mr. MIGNAULT.
Paper on "Urinary Abscess, Mr. GARDNER.
June 12th:—Reading, Mr. HENDERSON.
Paper on "Spermatorrhœa, DR. OSLER.
June 26th:—Reading, Mr. G. T. ROSS.
Paper on "Trichina Spiralis, Mr. LAWFORD.
July 3rd:—Reading, Mr. McEACHRAN.
Paper on "Vesical Calculus," Mr. D. F. SMITH.
July 10th;—Reading, Mr. LAWFORD.
Paper on "Rheumatism," Mr. GUERIN.
July 17th:—Reading, Mr. McCORKILL.
Paper on "Congenital Syphilis," Dr. RICHARD McDONNELL:
The meetings will take place fortnightly throughout the winter session.

CANADA

Medical and Surgical Journal.

MONTREAL, OCTOBER, 1877.

ANNUAL REPORT, CANADA MEDICAL ASSOCIATION.

MONTREAL, 12th September, 1877.

The tenth annual meeting of the Canada Medical Association was held this day in the Windsor Hotel, Montreal, when were present Drs. Hingston, President; Robillard, Treasurer; David, General Secretary; Osler, Parker, Botsford, Fenwick, Wilkins, Zimmerman, Canniff, Workman, Playter, Reid, Fulton, Sweetland, Grant, Russel (Quebec), Worthington, Atherton, Hornibrook, Bascom, Michaud, Gibson, Coleman, Mullin, Wheeler, G, W. Campbell, F. W. Campbell, Gardner, Buller, Chevalier, Schmidt, Ross (Montreal), Bell, Larocque, Roddick, McCallum, Howard, Reddy, Reeve, and others.

The PRESIDENT opened the meeting at 10:30. The minutes of the last day's proceedings of last year's meeting at Toronto were read and confirmed.

On behalf of the Committee of Arrangements, Dr. OSLER reported the list of papers to be read, and that the credentials of Dr. Kimball, Lowell; Dr. Wing, Boston, and Dr. Brodie, Detroit, delegates from the American Medical Association; Dr. Adams, Island Pond, delegate from the Maine Medical Society; Drs. Ridley and Covernton, Hamilton Medical and Surgical Society, and Dr. Ecroyd, Union Medical Association of Wellington and Grey, were all correct.

The PRESIDENT welcomed the presence of these gentlemen at the meeting, and requested them to accept seats on the platform, as was also Dr. Workman and others.

The following gentlemen having been duly proposed and seconded, were severally elected permanent members:

Dr. Charles Covernton, Simcoe; Dr. A. W. Proudfoot, Montreal; Dr. Berthelot, Montreal; Dr. Richard MacDonnell, Montreal: Dr. O. C. Edwards, Montreal; Dr. C J. Morse, Montreal; Dr. R. Kennedy, Montreal; Dr. A. Alt, Toronto; Dr. Whiteford, Ottawa; Dr. J. B. McConnell, Montreal; Dr. George Armstrong, Montreal; Dr. F. W. Coleman, St John, N. B.; Dr. B. Levi, Inverness; Dr. J, Perrigo, Montreal, Dr. J. L. Leprohon, Montreal; Dr. A. Johnson, Yorkville, Ont.; Dr. Molson, Montreal; Dr. Wm. McDonald, Montreal; Dr. J. W. Burgess, London, Ont.

On the motion of Dr. ROBILLARD, seconded by Dr. DAVID, Dr. Pean, Surgeon-in-chief of the Paris Hospital (France), was elected an honorary member.

Letters of regret at not being able to attend the meeting were read by the General Secretary from Dr. J. T. Steeves of St. John, N.B., and Dr. Daniel Clark of Toronto.

The GENERAL SECRETARY submitted a Report from Dr. Jennings of Halifax on the climate of Nova Scotia, which was referred to the Committee on Climatology.

The PRESIDENT then delivered his address.

Dr. PARKER, seconded by Dr. G. W. CAMPBELL, moved a a vote of thanks to the President for his able and comprehensive address, hoping it would not pass away without producing the good results intended. Dr. Parker hoped it would be published, or at least such portions of it as Dr. Hingston should deem desirable. This motion was carried by acclamation.

Dr. GEORGE ROSS, Chairman of the Committee on Medicine, read the report:—See transactions.

DR. R. P. HOWARD, Chairman of the Committee on Medical Education and Literature, made report:—*See transactions.*

No reports were received from the Committees on Surgery and Obstetrics.

It was then moved by Dr. R. P. HOWARD, seconded by Dr. GRANT: That the Association resolve itself into two sections, one of Medicine and one of Surgery, and these sections meet at two o'clock on each day for the reading and discussion of the different papers, which motion was carried, and Dr. Parker was named Chairman of that of Medicine, with Dr. George Ross as Secretary; and Dr. Canniff, Chairman of that of Surgery, with Dr. McConnell as Secretary.

Dr. GRANT moved, seconded by Dr. GIBSON, that the following members compose the Nominating Committee:—Drs.

Workman, Canniff, Fulton, Sweetland, Fenwick, Worthington, Osler, F. W. Campbell, Rottot, Parker and Botsford, which was carried, and the meeting adjourned for an hour—lunch being served in the hotel.

After adjournment, Dr. WILKINS exhibited his beautiful and extensive apparatus on Practical Physiology and Histology.

Dr. RODDICK exhibited and explained a full and complete set of Lister's antiseptic apparatus.

A. H. DAVID, M.D.,
General Secretary.

The Sections opened at 2:15 P.M.

In the Medical Section Dr. R. P. HOWARD read a paper on "Tricuspid Stenosis," which was discussed by Dr. Hornibrooke and others,—and a vote of thanks, on the motion of Dr. WORTHINGTON, seconded by Dr. MICHAUD, was unanimously passed to Dr. Howard for his very learned and able paper.

Dr. FULTON read an interesting paper on the "Treatment of Empyema," by tapping and the introduction of the drainage tube and the injection of tincture of iodine and carbolic acid.

An animated discussion followed, in which Drs. Parker, Howard, Fuller, Hornibrook and Ross took part. The thanks of the Section were cordially voted Dr. Fulton.

Dr. HORNIBROOK read a paper entitled "Plea of Insanity." Drs. Botsford, Workman and Mullin discussed Dr. Hornibrook's paper, and the result was that the subject was considered a matter for the Dominion Government.

A vote of thanks to Dr. Hornibrook was moved by Dr. BOTSFORD, seconded by Dr. WORKMAN, and unanimously carried.

On motion, it was resolved that all the papers read in this Section this afternoon be referred to the Publication Committee as worthy of being published in the transactions of the Association.

The Section then adjourned.

(Signed) GEO. ROSS, M.D.,
Secretary.

In the Surgical Section,

Dr. ALT read a paper on "Epithelioma of the Eye," which was discussed by Drs. Buller, Coleman and Proudfoot,—and, after a vote of thanks to Dr. Alt, the paper was recommended for publication by the Committee.

Dr. ROBILLARD next read a paper on "Gastrotomy and

Ovariotomy," exhibiting and explaining a complete set of instruments used in these operations which he had brought out with him from Paris, and also a thermo-cauterre of Dr. Paquélon. A cordial vote of thanks was tendered to Dr. Robillard.

Dr. KIMBALL, of Lowell, Mass., made several observations on ovariotomy, and complimented Dr. Robillard on his lucid explanations of every step of the operation.

Drs. Hingston, Thayer and Trenholme also spoke on the operation of ovariotomy.

Dr. REEVE read a paper on "Nasal Polypus," which was ably discussed, and a vote of thanks passed to Dr. Reeve.

On motion, the Section then adjourned.

(Signed) J. B. McCONNELL, M.D.,
Secretary.

SECOND DAY.

September 13th, 1877.

The following members being present: Dr. Hingston, Workman, Hornibrook, Sweetland, Canniff, Osler, Bessy, Thayer, Bascom, C. Covernton, T. S. Covernton, Reddy, Larocque, Leprohon, Gardner, Parker, Fulton, Robillard, Fenwick, Proudfoot, Molson, Mullin, Gibson, Atherton, Worthington, Fuller, Zimmerman, F. W. Campbell, Howard, G. W. Campbell, Schmidt, David, Cline, W. McDonald, and others.

The PRESIDENT took the chair at 10:30.

The minutes of yesterday's meeting were read and confirmed.

Drs. Parker, Grant, Botsford and Brodie of Detroit, Adams of Island Pond, and Workman were requested to take seats on the platform.

The following gentlemen having been proposed and seconded were elected permanent members: Dr. Lamarche, Montreal; Dr. Bullen, Hamilton; Dr. A. B. Ward, Montreal.

On motion of Dr. FENWICK, seconded by Dr. ROBILLARD, Sir J. R. Cormack of Paris, France, was elected an honorary member, and Dr. Botenturst, editor of the *France Medical*, elected as corresponding member of the Association.

Letters of regret at not being able to be present at this meeting were read from Hon. Dr. Ross, Quebec; Drs. Hannington, St. John, N.B., and Rosebrugh, Hamilton; the latter informing the Association that he would have the paper he had

intended reading published, and a copy sent to each member of the Association.

The SECRETARY then read a letter from the Hamilton Medica and Surgical Society, kindly inviting the Association to hold its next year's session in Hamilton.

Dr. WORKMAN called attention to accounts for the yearly subscription not being sent to members, as he knew some who paid for six years at last year's meeting, and would recommend that accounts be sent to every member yearly. This was considered right, and the Treasurer and General Secretary were requested to attend to it.

Dr. CANNIFF, seconded by Dr. LEPROHON, moved that this Association reiterates the opinion expressed at last year's meeting in Toronto, "that a committee be appointed to prepare a memorial to present to the Dominion Government, relating to the subjects of Vital Statistics and Public Hygiene," and that the following gentlemen compose this committee: Drs. Hodder, Hingston, Workman, D. Clarke, Playter and the mover and seconder, which motion was agreed to.

Dr. FULTON as Chairman of the Committee on Therapeutics and New Medicines, then read the report.

Dr. THAYER, seconded by Dr. LAROCQUE, gave notice that he would move, at the next meeting of the Association, "That application be made to the Local Governments to keep three or four heifers in a convenient place, for the purpose of supplying medical men with vaccine virus derived directly from the cow."

Dr. OSLER, as Chairman, laid the report of the Committee on Necrology on the table.

On motion, the report of the Nominating Committee was deferred until 4:30 P.M.

Dr. BOTSFORD reported verbally for the Committee on Climatology.

The Right Hon. Lyon Playfair, C,B., &c., &c., M. P. for the University of Edinburgh, having entered the room, was introduced to the meeting by the President, and requested to take a seat on the platform, and on the motion of Dr. Hingston, Dr. Playfair was by acclamation elected an honorary member of the Association. Dr. Playfair made a graceful acknowledgment of the honor paid him.

Dr. TAYLOR, of Edinburgh, was also requested to take a seat on the platform.

Drs. PARKER, WORKMAN, BESSEY and GRANT spoke on the subject of Dr. Botsford's remarks about Vital Statistics, the

latter stating he thought the Dominion Government would do all in its power.

Dr. WORKMAN read a paper on "Crime and Insanity," which was to have been read in the Medical Section yesterday, but by request was read in General Session.

Dr. MULLIN made a few observations, when it was moved by Dr. HORNIBROOK, seconded by Dr. PARKER, "That in the opinion of this Association it is desirable in all criminal trials, when medical opinion suggests the possibility of mental unsoundness, the accused should be placed under the supervision of experts for a sufficient time to enable them to determine whether he was insane or not at the time the crime was committed."

Dr. PARKER earnestly supported this motion.

Dr. BRODIE, of Detroit, also addressed the meeting on the subject, and concluded by saying that in his State (Michigan) capital punishment had been superseded by imprisonment for life.

Dr. F. W. CAMPBELL also spoke on the matter, when Dr. Hornibrook's motion was put to the meeting and carried unanimously.

Dr. R. P. HOWARD made a few observations on the question, and gave notice that he would move the following at the next meeting: "That it is in the interest of justice that when post-mortem examinations are to be made, experts familiar with such scientific work should be employed by the Crown when procurable."

The meeting then adjourned.

A. H. DAVID, M.D.,
General Secretary.

The Sections met at 2 P.M., and at 4:30 P.M. the General Session resumed business, the PRESIDENT being in the chair.

The minutes of the morning's meeting were read and confirmed.

Dr. LaChapelle, of Montreal, was elected a permanent member.

Dr. PARKER, as Chairman of the Medical Section, reported that a paper on "Addison's Disease" had been read by Dr. Geo. Ross, which was discussed by Drs. Parker, Zimmerman, Howard and Hornibrook.

A paper on the use of large doses of acetate of lead in post partum and other hemorrhages was then read by Dr. WORKMAN, which was followed by an interesting discussion, in which Drs. Mullin, Howard, David, Reddy and others took part.

Also case of Progressive Pernicious Anemia, by Drs. Bell and Osler. Dr. Larocque began his paper on "Vital Statistics," but was obliged to stop, owing to a message from the President asking the Sections to join the general meeting. It was consequently resolved that the following papers be considered as read and handed to the Committee on Publication:—Dr. Larocque, Vital Statistics; Dr. Playter, Economical Aspects of Public Sanitation; Dr. Proudfoot, Case of Supposed Gummy Tumor of Brain.

In the absence of Dr. Canniff, Chairman, Dr. McConnell read the report of the Surgical Section.

Dr. Trenholme read a paper on "Vesico-Vaginal Fistula," which was discussed by Drs. Hingston, Fenwick, Godfrey and Grant, and a vote of thanks was proposed and carried to Dr. Trenholme for his paper.

Dr. Fenwick next read a paper on "Excision of the Knee," which was discussed by Drs. Grant, Atherton and Canniff, and a vote of thanks was cordially passed to Dr. Fenwick for his instructive paper.

Dr. Buller then read a paper on "Embolism of the Central Artery of the Retina," which, on motion, was referred to the Committe on Publication, with a vote of thanks to Dr. Buller for his very able paper.

As the time of the Section was up, Dr. Reeves asked to lay his paper on "Optical Defects" on the table, and, on motion, it was referred to the Committee on Publication.

Dr. Canniff's paper on "Various Wounds and their Treatment," was also referred to the same Committee.

Dr. Reeves placed before the Section a specimen of epithelioma of the eye, with explanatory notes.

A vote of thanks was then passed to Dr. Canniff for the able manner in which he had conducted the business of the Section.

Dr. Parker called the attention of the meeting to the number of valuable papers that had been offered thereat, for which there was not time to have read, and moved, seconded by Dr. Workman, "That it be suggested to the Committee of Arrangements that for the future the session be of three days, if necessary," which motion was carried unanimously.

Dr. Osler, on behalf of the Nominating Committee, reported the following gentlemen as the officers for the ensuing year:—Dr. Joseph Workman, of Toronto, as President; Dr. David, of Montreal, as General Secretary; Dr. Robillard, of Montreal, as Treasurer; Dr. McDonald, of Hamilton, as Vice-President

for Ontario; Dr. Worthington, of Sherbrooke, as Vice-President for Quebec; Dr. Cowie, of Halifax, as Vice-President for Nova Scotia; Dr. McLaren, of St. John, as Vice-President for New Brunswick; Dr. Sweetland, of Ottawa, as Local Secretary for Ontario; Dr. F. W. Campbell, of Montreal, as Local Secretary for Quebec; Dr. John Black, of Halifax, as Local Secretary for Nova Scotia; Dr. Atherton, of Fredericton, as Local Secretary for New Brunswick.

COMMITTEES.

On Publication.—Drs. David, Robillard, F. W. Campbell, Howard and Osler.

On Medicine.—Drs. Mullin (Hamilton), Ross and Lamarche (Montreal).

On Surgery.—Drs. Malloch (Hamilton), Grassett (Toronto) and Farrell (Halifax).

On Obstetrics.—Drs. Rosebrugh (Hamilton), U. Ogden (Toronto) and Trenholme (Montreal).

On Therapeutics, New Remedies, and Medical Jurisprudence.—Drs. J. G. Kennedy (Toronto), A. H. Kollmyer (Montreal) and Woodhill (Halifax).

On Necrology.—Drs. Riddel (Toronto), LaChapelle (Montreal) and Burgess (London).

On Medical Education and Literature,—Drs. Ridley (Hamilton), Michaud (Kamouraska) and Howard (Montreal).

On Climatology.—Drs. Playter (Toronto), Larocque (Montreal), Jennings (Halifax) and LaChapelle (Montreal).

The following gentlemen having been proposed and seconded, were duly elected permanent members: Dr. Cowie, of Halifax; Dr. Kollmyer, of Montreal.

The following gentlemen were appointed delegates to the American Medical Association:—

Drs. Botsford, Trenholme and Hornibrook; it being understood that if any other members wished to attend, the President could add them to the list.

Dr. BELL gave notice that he would move at the next meeting to change or amend the by-laws, so that officers of the Association might be elected for each of the Provinces of the Dominion, existing or then existing, such as Manitoba, British Columbia, &c., &c.

The election of the officers for the current year was then

proceeded with, and those recommended by the Nominating Committee were all unanimously elected.

Dr. OSLER called the attention of the meeting to the necessity of having the proceedings of the annual meetings published, and kindly offered to raise a subscription among the members for that purpose, as the funds of the Association were so small that it could not be done in any other way than by subscription.

Drs. Dugdale and Lamarche were named to examine the Treasurer's books and papers.

On motion, the same sum as last year was voted to the General Secretary for his services.

Dr. Wright not being present at the meeting, his notice of motion to alter the by-laws was laid over.

The GENERAL SECRETARY then read a letter from the Hamilton Medical and Surgical Society inviting the Association to hold its next annual meeting in the city of Hamilton, which invitation was cordially received, and on motion it was unanimously resolved, "That the meeting be held next year in the city of Hamilton."

Dr. PARKER moved, seconded by Dr. DAVID, "That the by-law on the time of meeting be suspended so that the meeting at Hamilton be held on the second Wednesday of September, 1878," which motion was unanimously carried.

Dr. MULLIN thanked the Association for having accepted the invitation of the Hamilton Medical Association, and assured the members they would receive a hearty and cordial welcome.

The following gentlemen were named as the Committee of Arrangements, with power to add to their number: Drs. McDonald, Mullin, Malloch, Ridley, and G. L. Mackelcan.

It was moved by Dr. PARKER, seconded by Dr. F. W. CAMPBELL, That the thanks of the Association be given to the Syndicate of the Windsor Hotel for the admirable facilities afforded the Association for its place of meeting, and for the readiness with which its co-operation was afforded," which motion was cordially agreed to.

On motion a vote of thanks was also passed to the Grand Trunk Railway Co., the Intercolonial and the Great Western R. R Co.'s, and to the Richelieu & Ontario Navigation Co. for their kindness in granting reduced rates of fares to members.

Drs. DUGDALE and LAMARCHE reported having carefully examined the Treasurer's books and papers, and found all correct. The amount received for the past year being $221.33; amount expended, $195.68, leaving a balance in hand of $25.65.

Dr. REEVE, seconded by Dr. ZIMMERMAN, then moved a vote of thanks to the members of the profession in Montreal for their courtesy and hospitality to the members from other places, which motion was carried by acclamation.

Dr. BELL moved a vote of thanks to the Committee of Arrangements for their great labors and the perfect success of them, which was also carried by acclamation.

On the motion of Dr. ZIMMERMAN, seconded by Dr. MULLIN, the President vacated the chair, and Dr. WORKMAN was requested to take it, when Dr. ZIMMERMAN moved, seconded by Dr. MULLIN, "That the sincere feelings of the Association be tendered Dr. Hingston for his affable and courteous bearing while presiding, which calls for our most sincere thanks."

A cordial vote of thanks was passed to Drs. Brodie, Kimball, Wing and Adams, for the honour they had done the Association in being present throughout the Session. Dr. Brodie of Detroit, returned thanks in a few well chosen words.

A cordial vote of thanks was also passed to Drs. Wilkins, and Roddick for having displayed their valuable and interesting apparatus.

The Session then adjourned.

A. H. DAVID, M.D.,

General Secretary Canada Medical Association.

Kenneth Campbell & Co. exhibited Cod Liver Oil selected in Norway, and imported expressly by them for their Canadian trade; Elixirs, Fluid Extracts, and Wafer Capsules. They also exhibited an assortment of 300 varieties of Gelatine-coated Pills, made by the old-established house of McKesson & Roberts, New York, of which house they are agents.

John Wyeth & Brother, of Philadelphia, had an excellent exhibition of their new Dyalised Iron, which is coming largely into use. They also exhibited a variety of Elixirs, and some beautiful Compressed Tablets of Chlorate of Potash. The latter is an elegant method of prescribing this Salt.

W. H. Schieffelin & Co., of New York, exhibited some beautiful specimens of Soluble Pills and Granules, which were greatly admired by the members of the Associatiou. This firm has made arrangements with Messrs. Lymans, Clare & Co. to keep a supply of their specialties on hand.

Obituary.

THE LATE DR. CLINE.

It is with a feeling of the most profound regret that we have to announce the death of Dr. John D. Cline, the well known and much respected House Surgeon of the Montreal General Hospital. This melancholy event took place in the early morning of Saturday, Sept. 29th, after an illness of only five days. Diphtheria—that formidable and so frequently fatal disease—has for some time past been rather prevalent in this city, and consequently many cases had been under treatment in the hospital wards. It was whilst performing his duties connected with the medical care of these patients that Dr. Cline contracted his fatal malady. He died, therefore, like a good soldier of the army of medical science, fighting against disease. He died in harness, in the brave and fearless performance of his duty.

Dr. Cline was admittedly one of the best educated, most thorough, and at the same time most enthusiastic of any of the young medical men of this city, and was universally looked upon by his confreres as a rising man, who, had he been spared, would certainly have taken a prominent place in his profession.

He was born in Cornwall, Ont., and was 25 years of age. After preliminary education at the grammar school of that town he came to Montreal, and having passed through a full curriculum at McGill University, took his B.A. with honors in 1871, and carried off the Chapman gold medal. He subsequently attended the medical classes at McGill, where he was always marked as a most diligent and appreciative student, and finally graduated as M.D. in 1874, taking the Holmes gold medal, which is the highest honor the faculty can bestow. The same year he was appointed House Apothecary to the General Hospital, whence he was promoted in 1875 to Assistant House Surgeon, in which capacity he served until this spring, when the gained his final step and became House Surgeon.

It is, of course, in connection with this great public institution that Dr. Cline is best known. The positions he has held are posts of great trust and great responsibility, and it requires no mean abilities to fill them satsfactorily and as they should be filled. The Governors of the Hospital and the medical staff speak of their late officer in the highest possible terms of praise. His constant and unwearied attention to his patients, his skill and dexterity in giving them assistance, his good, cool judgment, combined with promptitude and readiness to act in emergencies, all rendered him admirably suited for the performance of these highly important duties.

The kindness and sympathy invariably shown by this lamented gentleman to the poor sufferers committed to his charge will be borne witness to by thousands. Many, indeed, owe much of their grateful recollections of the Hospital to the kindly words, the genial, cheerful, manly tones of our late House Surgeon; and expressions of the most heartfelt regret are everywhere to be heard from those who have experienced and have deeply felt his kindness and his watchful care of them.

Dr. Cline had been for the past year Secretary of the Medico-Chirurgical Society of Montreal, and had contributed several papers of much more than ordinary interest and value at the meetings of that Association, the last of which appears in the original department of this number.

In losing Dr. Cline, the medical profession has lost one of its most promising members, the Hospital a valued and trusted officer whom it will be hard to replace, and the poor of this city a kind friend on whose assistance they could always count in time of trouble.

We may scarcely allude to the deep and sacred grief of parents and relatives thus suddenly deprived of a loved and noble son and brother. We are sure, however, that we but speak the sentiments of the profession when we venture to offer the most sincere and heartfelt sympathy in this great and sudden calamity—asking them to believe with us for their comfort, that such good work as his has not been in vain.