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Original Communications.

ADDRESS OF SIR JAMES GRANT, M.D., F.R.C.P. (LONDON), OTTAWA, PRESIDENT TUBERCULOSIS ASSOCIATION OF CANADA.

Gentlemen:—

Let me welcome you to the capital, where I feel confident you have come from the Pacific to the Atlantic, as well as the great neighbouring Republic, to give a helping hand in the noble work of relieving suffering humanity and staying the spread of consumption, a disease so serious in its nature, and so sadly fatal, as to attract the attention of the civilized world. In all great undertakings, time is an important factor, and of such, we have ample proof, in the history of the first year, in which the society was formed under the patronage of His Excellency Lord Minto. Frequent committee meetings have been held, and through the liberal contribution of Mr. Clergue and the generosity of Hon. Mr. Fisher a considerable amount of selected literature, relative to tuberculosis, has been published, in many of the leading papers, having a wide circulation in the Dominion. Several hundred copies of Dr. Kopf's able essay on tuberculosis were circulated among the various Boards of Health of the Dominion, an evidence of our efforts to keep pace with the times.

The influence of the Church, Protestant and Catholic alike, in Canada, was sought by public addresses on the subject of tuberculosis. The University of Ottawa in 1901 ; the Presbyterian Assembly in July, '01, and the Methodist Conference, Pembroke, numbering many hundreds of the leading minds of the day, endorsed the action of this Association, and tendered their hearty co-operation in forwarding the work, in their respective spheres of duty. In February last, an address was delivered in Victoria University, Toronto, calling attention to the correlation of

the forces at work in Sanitary Science, Food Supply, Alcohol, and Education, as factors in the production of a soil, in the human system, as fit receptacle for the bacillus tuberculosis, unless otherwise guided and directed, in these lines of action, so as to preserve and retain the normal balance of power and thus guard the health of the system.

We are assembled to-day to take into consideration more active steps towards organization, as well as to invite the co-operation of the public to those lines of action so necessary at this juncture. When we consider the number of poor, helpless people, out in the cold as far as proper hospital accommodation is concerned, is it any wonder we are moved under such sad and trying circumstances. As a whole, our people are tolerably well aware of the great importance of this subject, and what we now need is spirited direction, and our efforts will undoubtedly receive merited encouragement. We have experienced some difficulties, as like undertakings in other countries, in all of which centres time was the essential factor to ensure success.

The Local Government Board for Ireland recently issued a memorandum on the subject of Tuberculosis to all Country Borough Councils, District Councils, Boards of Guardians and Dispensary Medical Officers, owing to the fact that the excessive mortality of Ireland from tuberculosis was fully half as much again as from all the zymotic diseases together. The resolutions adopted at the recent London conference as to the influence of over-crowding, defective ventilation, and general insanitation, as factors predisposing to and spreading the disease, received particular attention. This Board considers the most necessary step to commence with is to educate the people by leaflets entitled, "Information for consumptive people and those who live with them." These directions issued by the Local Government Board in Ireland carried more weight than from any private source. Such action in Canada would be a step in the right direction, considering that from 7,000 to 8,000 deaths from consumption are recorded annually in our Dominion. At a recent meeting of "The Winchester and District Branch" of The National Association for the Prevention of Consumption (England), they were advised by Lord Salisbury "that as soon as the people of this country are really moved by this question, then the Government will do what the people want." I feel confident this opinion from Britain's leading statesman will be reflected in the Colonies of the Empire, and a helping hand from the State will in time be forthcoming, to guard and protect the best interests of our people. Since our former meeting there has been considerable veering round as to views then held on Tuberculosis. In fact, nothing is more evident in the current of medical literature than the new aspects as to tuber-

culosis almost constantly presenting, and more particularly the indication of a return to ideas held prior to the discovery of the turbercle bacillus.

Recently, Koch's positive opinion, the result of most careful experiments is, that the bacillus derived from tuberculosis disease in man will not produce the lesion in cattle, and that the coincidence of human tuberculosis with exposure to Bovine Tuberculosis has not as yet been thoroughly defined, except in a few cases of no actual importance. In "*The Veterinary Record*," March 15th, 1902, Arloing has made a communication to The Academy of Medicine, Paris, giving the results of three series of experiments, in which the bacillus from different human sources has determined tuberculosis in cattle, sheep, and goats, by intravenous injection. The animal lesions appeared as tubercle, confluent or distinct in lungs, liver, spleen, glands, and kidneys, and were marked by early caseation. Having produced the disease in 23 animals, he considers he has a fair answer to Koch and Schutz. He sums up as follows :

1st. That the virulence of the bacillus is modified by its host, and in some animals the human possesses less activity than the bovine.

2nd. A pure culture of the human bacillus produces the typical animal disease in bovines, sheep and goats, etc.

3rd. And this disease is indistinguishable from that produced from animal sources.

4th. That the unity of Koch's bacillus, in man or beast, remains undisputed.

5th. That Koch and Schutz have not produced sufficient evidence to substantiate their statement, that there is a distinct difference.

6th. The precautionary measures, in regard to milk and meat, should not be relaxed.

The Journal of Comparative Pathology and Therapeutics, London (September, 1901), contains an exceedingly able article by John McFadyean, of the Royal Veterinary College, London, in which he takes the same views as Arloing of Paris, and sums up as follows :— "With regard to the view that the difference between human and bovine bacilli, in respect of virulence for cattle, is of such a fixed and constant character that it may be relied upon to distinguish the one from the other, it need only be said that that is very far from proved."

Twenty years have elapsed since the lung bacillus made its appearance, and now to-day the great problem of identity, in the human and bovine species, is a vexed question. Here is a fine point worthy of research, in the bacteriological laboratories of this continent, so liberally endowed by Rockefeller, Carnegie, Pierpont Morgan and Sir Wil-

liam Macdonald. Professor Grawitz makes two very striking statements, 1st. That primary tuberculosis of the alimentary canal is rare, and still, the chief entrance for meat and milk. 2nd. That primary tuberculosis of the upper air passages, in which bacilli, in the air and the food, would likely lodge, is a rare occurrence also. The first impression of the deadly character of the "Tubercle Bacillus" has changed considerably during a brief period. Dr. Clifford Allbutt, of Cambridge, England, states his opinion that the prolonged use of tuberculous milk is known to have produced no serious effect in old or young, and this statement endorsed by Koch "that man *was not infected* by the tuberculous milk and meat of "the Bovine species," is quite a change of opinion, and one which cannot fail to lessen the fears of an excited public on these points. Of the two articles of diet, meat and milk, there is certainly much less prospect of danger from the former than the latter, as meat is consumed in a cooked condition, and thus the vitality of any contained organisms destroyed. Tuberculosis is a disease more of the visceral organs and serous surfaces than otherwise, and not being disseminated by the vascular system, the muscular tissues are not so readily invaded. Doubtless in advanced stages of this disease there may be a possibility of danger from the use of such meat. Here should come in systematic meat inspection in abattoirs by able experts under Federal and Municipal inspectors. By the advocacy of such action, our Association may in time accomplish a good work, and lessen, in a remarkable degree, the present death rate from tuberculosis. The impression gaining ground is that a positive tuberculine reaction should not be followed by the severe and expensive method of destroying all such flesh as useless and dangerous. According to Sir Dyce Duckworth (*Lancet*, Nov. 9, 1901), one of the most important elements concerned in the question is the personal factor, or the relation of the host, towards the intruding and infecting parasite. The alarming impression abroad is, that the human system is ever subject to danger from the surrounding atmosphere containing bacilli. Providing the system has a fit soil, brought about by diversified circumstances, the bacillus may lodge and take root, but certainly not otherwise. Where such soil is absent, there is comparative freedom from this disease. Facts of a telling character cannot fail to exercise a beneficial influence on the public mind, and lessen in a great degree the apprehension which exists as to the sudden invasion of tuberculosus, inasmuch as it is a question of soil proclivity in the particular host, which receives the tuberculous microbe. It is an old saying, "nothing new under the sun," illustrated by the fact that Virchow, years ago, noted the difference between Human and Bovine Tubercu-

losis, and Hueppe also pointed out a distinct *morphological difference* in the two *micro-organisms.*

At this stage of our endeavours, it may not be unproductive to survey the groundwork of argument over, briefly to ascertain exactly where we are as far as this important subject is concerned. When the bacillus was discovered, the infectious character of the disease almost universally centered on Koch. The Grand Duke of Tuscany, in 1754, issued an edict relative to its infectious character, and in various parts of Europe, particularly Naples, Lucca, Venice, Bologna and Rome, attention was directed years ago to this particularity of the disease. It is somewhat remarkable how the infectious nature of tuberculosis, through time, was in a great measure lost sight of, and grasped subsequently, almost anew, on the discovery of Koch. A question before us, and one which will doubtless be carefully considered in the ætiology of tuberculosis, in the tubercle bacillus, the *chief factor in its production.* It is a known fact that individuals are immune to certain doses of the tubercle bacillus, and does the present state of our knowledge warrant us in requiring the absolute isolation of phthysical patients? What we do require is better accommodation for the treatment of the poor; less of the sweating manufacturing process; increased vital capacity of air in underground or overground compartments, where operatives are almost huddled together. In addition, the result of excessive strain of brain and general nerve tissue in our present system of education; the food problem and scrap diet in school or college life; the excessive use of alcohol, and defective sanitary arrangements; all of which, misdirected, have an undoubted tendency to lower the vital powers of the system, and become potent factors towards the development of tuberculosis. As to the actual life history of the veritable microbe, we owe much to a French Canadian, Dr. E. L. Trudeau, of Saranac Laboratory. In 1886 were published a series of experiments, demonstrating the infectiousness of bacillary sputum, and the harmlessness of expectoration free from bacilli, taken from a patient supposed to have consumption. He recently pointed out the possibility of infection of the hands of consumptives, and demonstrated the presence of living bacilli on the hands of patients using handkerchiefs, and their absence generally from sanitorian patients who made use of the proper cuspidors; also noted most carefully that inoculated rabbits, allowed to run wild on an island, recovered, whilst those subjected to unhealthy conditions *died* within a short time. These are practical points of great moment, and indicate the importance of the open air treatment of this disease so generally adopted at the present time, which actually required no

special climatic condition beyond our own shores. Saranac Laboratory has demonstrated two important facts, that a sanitarium may extend its usefulness not only to its inmates, but to research, in the line of scientific tuberculous problems at present absorbing much attention at home and abroad.

In conclusion, I desire to thank the Association for the honour of occupying the chair during the past year, and to wish every success, in the new lines of work, awaiting action, to guide and conserve the best interests of our people.

A CASE OF TUBERCULOSIS PRIMARILY OF INTESTINAL ORIGIN COMBINED WITH TERTIARY SYPHILIS.*

BY

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The case which I have the opportunity of recording is interesting, not only on account of its being a somewhat rare type of tubercular infection, but also because two diseases running concurrently, the clinical features were rendered more or less atypical with the result of a partial error in diagnosis.

Since Koch's recent address at the last Tuberculosis Conference in England, in which he pointed out the comparative rarity of tuberculosis of intestinal origin and maintained that human and bovine tuberculosis were essentially different diseases, much interest has arisen as to the modes of infection in tuberculosis. The statistics given by the various observers vary somewhat on this point, although I think all are prepared to assent to Koch's proposition that primary intestinal tuberculosis is relatively rare; how rare no one as yet can positively state, consequently every undoubted case arising in this way is worthy of being placed on record, and careful investigation of post mortem statistics should be made in order to clear up many obscure points.

The German figures show a very trifling proportion of cases of primary intestinal infection in tubercular cases. From the post mortem records at the Charité Hospital at Berlin during five years, Koch only saw ten instances. In 933 cases of tuberculosis in children at the Emperor and Empress Frederick Hospital, Baginsky never found tuberculosis of the intestine without simultaneous disease of the lungs and peribronchial glands. Biedert in 3,104 autopsies on tubercular children found only 16 cases of intestinal tuberculosis. Spengler (*Zeit. f. Hygiene*, xiii, 1893, p. 346), refers to 92 cases of tuberculosis in four of which the intestinal tract was alone affected. Kossel (*Zeit. f. Hygiene*, xii, p. 59), in 286 consecutive autopsies on children, of whom 22 had died of tuberculosis, in only one found the infection confined to the intestinal tract.

The French and English statistics agree on the whole fairly well and seem to show that in these countries the percentage of primary intestinal tuberculosis is considerably higher than in Germany. Accord-

* Read before the Montreal Medico-Chirurgical Society, April 4, 1902.

ing to Marfan (Traité des Maladies de l'Enfant, Tome 11, p. 636), alimentary tuberculosis is met with especially between the ages of one and five and accounts for about 8 per cent. of the cases of tubercular infection observed at this period of life. Perhaps a few of the English statistics may be referred to here.

Still (*Brit. Med. Journ.*, Aug. 19th 1899, p. 455), in 769 autopsies on children under the age of twelve at the Hospital for Sick Children, Great Ormond Street, London, tubercular lesions were found in 269 instances. When the channel of infection could be made out with some certainty the proportional involvement was as follows:—Lung, 105 times; intestines, 53; ear, 9; bones and joints, 5 times. When tuberculosis was found accidentally in children dying of other diseases, and where the lesions had not progressed beyond the initial state—a class of cases very valuable as affording almost certain evidence with regard to the mode of infection—the proportion was lung 26, intestine 16, ear 1.

Shennon (*Edinburgh Hospital Reports, 1900*), in 355 cases of tuberculosis at the Royal Hospital for Sick Children, Edinburgh, made out the primary seat of the disease at autopsy in 331 instances. In 67.7 per cent. the infection was respiratory, in 28.1 per cent. alimentary, a proportion of 1 to 2.3.

It is evident from these figures that abdominal tuberculosis is very common in Great Britain. Other evidences are forthcoming that this form of tuberculosis is occasionally met with in other parts of Europe and in America.

Our own statistics in Montreal show, like the German, a remarkably low percentage. In 635 autopsies at the Royal Victoria Hospital tubercular lesions were found 202 times and only one case, that here recorded, was an undoubted instance of a primary intestinal infection, although in one other a large calcareous mesenteric gland was found, but without intestinal ulceration, which possibly was of the same nature.

A very complete consideration of the modes of infection in tuberculosis will be found in D. E. Salmon's report on the "Relation of Bovine Tuberculosis to the Public Health," (*U.S. Dept. Agric. Bureau of Animal Industry, Bull. No. 33, 1901*, Wash.), and also in a paper by Prof. A. D. Blackader (MONT. MED. JOURN., Dec. 1901, p. 905).

It must be remarked that it is difficult to arrive at safe conclusions as to the relative frequency of the different methods of infection from the fact that in the vast majority of cases where the intestines are infected, the lungs are involved as well and it is not always easy to determine which was the primary seat of the disease. The rela-

tive degree of involvement of the associated glands is not always a safe guide and another element of error is added from the fact that the tissues or organ primarily invaded often fails to show pathological change, which only manifests itself in some deeper structure related through the lymphatic vessels, or perhaps in some distant organ. This is shown by the fact that while most cases of tuberculosis are due to the inhalation of bacilli, the mucous membrane of the naso-pharynx is but rarely primarily involved. Similarly, it is possible that in some cases where the bacilli have entered from the intestinal tract, no local lesion is produced and the disease may manifest itself in the lungs giving rise to a picture, both clinically and anatomically, of primary pulmonary tuberculosis. This possibility was also suggested to my mind by the results of some experimental work on tuberculosis in rabbits, for in one case where 1 cc. of a standardized emulsion of an attenuated growth of B. Tuberculosis was injected subcutaneously in the leg, the inguinal and retroperitoneal glands were found free and the only lesion discoverable was tuberculous caseation in the left lung and pleura. The recent researches of Baumgarten, Aufrecht and Ribbert also seem to indicate that the blood and lymphatic circulation play a much more important part in the dissemination of the tubercle bacillus than has hitherto been suspected. Consequently, if we alone consider the records of undoubted cases of primary intestinal tuberculosis, it is probable that the numbers fall considerably short of the cases of infection through this tract that actually occur.

For the clinical notes of the case here described I am indebted to to Drs. James Stewart and A. E. Garrow.

E.W., æt. 21, who died Jan. 17th, 1902, at the Royal Victoria Hospital. Complaints were ; weakness ; headache ; ulcer of the leg.

Personal History.—Born in Montreal; had done inside work nearly all his life; used tobacco freely but not alcohol. Gonorrhœa three years ago; six months later had chancre followed by rash and sore throat which lasted about a week. He was put under mercurial treatment in the form of proto-iodide pills and the secondary manifestations disappeared. He was not seen for some time and neglected treatment, returning some months later with a recurrence of his secondaries.

Family History.—Parents alive and well, no history of cancer, rheumatism, nervous disease or tuberculosis.

History of Illness.—In July, 1901, a small pimple appeared about the internal malleolus in the left leg, in a few days this opened and since that time gradually became larger. He began to feel weak and noticed that he was becoming pale; altogether in the past year he lost 24 pounds. The condition of the leg obliged him to give up work on December 1st. The urethral discharge kept up more or less during his

illness. From January 1st, 1902, was treated in the Surgical Department for ulcer of the leg which was regarded as syphilitic and his general condition was so bad that the case was regarded as syphilitic cachexia. During the first week of January he began to complain of numb sensations about the mouth, although these were only transitory, and also in the right side of the body. For some time headache had been present and this became more severe about this time. The mouth was noted to be retracted to the left and he was unable to use the muscles of the right side of the face as well as of the right arm and leg; there was some difficulty in talking and swallowing. The tongue was pushed out to the right side. The knee jerks were absent. He had a great deal of frontal headache and on one occasion vomited.

He was transferred to the medical side, under Dr. James Stewart, on the 10th of January. The patient was very thin and emaciated, dull and stupid, and complained of some headache. Appetite poor, bowels regular. Pulse, 96; Temperature, 96; Respirations, 20.

Vascular System.—Arteries showed some thickening, pulse of fair volume and tension; heart normal except that pulmonary second sound was accentuated.

Respiratory System.—Vesicular murmur somewhat harsh, otherwise normal.

Glandular and Locomotor System.—The posterior cervical and inguinal glands were enlarged to the size of pigeon's eggs; the axillary and epitrochlear glands were also noticeably enlarged although not to the same extent. The skin was lax, the muscles wasted and there was an ulcer half the size of the hand over the lower part of the left leg.

Digestive System.—The lips red and dry; the tongue coated with brownish gray fur. The abdomen was somewhat retracted with some general tenderness on deep palpation; the central part of abdomen a little tense. The liver and spleen were not palpable and no abnormal tumour mass could be felt. Bowels regular.

Nervous System.—Dull and apathetic; complained of some headache, chiefly frontal. There was marked general weakness, a little greater on the right than on the left side; the power of grasp was not so good and the nasal fold not so marked on the right as on the left; only at times did the tongue protrude to the right in middle line. Sensation to pain was decidedly impaired over the right side of face; over other parts of the body doubtful as statements were erratic. Eyes showed double optic neuritis; axes of eyes seem parallel but at times patient stated that he could see double. Organic reflexes normal; superficial increased; Babinsky's sign absent; no ankle or rectus clonus; the knee jerks absent.

The patient gradually became more dull and stupid, at times was restless; the pulse gradually became weaker and more rapid and food was taken badly. Respirations became more rapid and patient was completely unconscious.

Diagnosis was syphilis and syphilitic basal meningitis.

Autopsy.—Body of young adult male, greatly emaciated with usual signs of death. The pupils were slightly dilated, the right being somewhat larger than the left; there was no evidence of iritis. The axillary, posterior, cervical, inguinal, and femoral glands greatly enlarged, especially in the inguinal and femoral regions. Some of these were quite firm and hard, others soft. The penis was phimosed and there was an old scar on the corona. On the right of the left leg in the lower third was a shallow ulcer with slightly elevated edges which had a sodden white appearance ; the base was formed of clean granulation tissue; the skin in neighbourhood shiny and pigmented, showing evidence of some healing.

Brain.—Weight, 1425 grms.; calvarium somewhat asymmetrical; the dura slightly injected; pia was everywhere cloudy and along the vessels was a turbid milky-looking exudate; here and there both in the dura and pia-arachnoid could be seen small miliary tubercles. The base was similarly affected but there was relatively little exudate. Cerebral vessels normal; the convolutions of the brain were greatly flattened.

Neck and Thorax.—Tongue covered with dirty greyish fur; tonsils soft and pale; larynx and trachea normal. The pleural cavities were empty and the lungs were free from adhesions.

Left Lung.—540 grms,, rather bulky; the apex free from puckering; the lower lobe very œdematous and congested. Throughout the lung numerous miliary tubercles were found.

Right Lung.—290; only slight pigmentation, a few hyaline-looking miliary tubercles noted; on section the tissue was rather dry but not congested; miliary tubercles of hyaline appearance, about the size of millet seeds, were frequent in the lowest lobe. The peribronchial glands were slightly enlarged but free from tuberculosis. The bronchi contained a little reddish, frothy fluid. Careful search was made throughout the lung at the apices and hilus for evidence of old tuberculosis without result.

Heart—200 grms.; small; epicardial fat absent; muscle of fairly healthy red color.

Abdomen.—The duodenum showed slight dilatation and occupied the fissure between the right and left lobes of the liver; the veins of the abdominal viscera were everywhere greatly congested; the peritoneal cavity free from fluid; the mesenteric glands were greatly enlarged, many of them of a distinct yellowish color and when incised contained

thick, greenish-yellow pus. A film made from this showed numerous tubercle bacilli. About 105 cm. from the end of the duodenum was the first evidence of ulceration of the intestine as shown by the local contraction and kinking of the bowel wall so that the false appearance of a diverticulum was produced. The contracted portion of the bowel showed a sort of transverse linear scar. In the neighbourhood of this the venules were greatly congested, the serosa cloudy with slight fibrinous deposit and there were numerous subserous tubercles of greyish or greyish-yellow appearance arranged parallel to the scar and extending along the mesenteric lymphatics so as to resemble a string of little beads. The mesenteric glands corresponding to this region were greatly enlarged and of a yellowish color.

Five cm. below this was a varicosed lymphatic vessel containing yellowish inspissated material. On further examination there were about fourteen ulcers altogether as shown by local inflammation and subserous tubercles; four or five of these formed girdle ulcers. The large bowel did not show any external evidence of tuberculosis. Just to the right of the vertebral column, lying opposite the promontory of the sacrum and occupying the whole distance from this to the level of the duodenum, was a large elevated mass of a semi-fluctuating feel and this was found to consist of hyperplastic retroperitoneal glands, which on section showed areas of opaque condensation, but without definite caseation or suppuration. The glands in the right inguinal region were found distinctly cheesy.

Spleen.—190 grms.; organ rather dense and of dark color. On section fairly dry. It contained numerous millet-seed-like tubercles of pearly grey appearance.

Stomach.—Mucous membrane slightly injected.

Intestines.—Duodenum dilated; jejunum normal; in the ileum, corresponding to the external appearances just mentioned were four or five girdling ulcers with somewhat thickened and inflamed looking edges, slightly undermined in places and with fairly smooth bases. Minute tubercles could be seen here and there in the bases. Besides this, other ulcers were noted which had originated in the solitary follicles and again others in the Peyer's patches, many of which presented the cribriform arrangement frequently found in typhoid fever; the serosa, however, corresponding to these showed numerous minute tubercles. At the ileo-caecal valve was a very large ulcer extending the whole length of the valve having thick edges and an infiltrated base. Two or three longitudinal ulcers of somewhat similar character were present in the last four inches of the ileum. Appendix normal; large intestine free from tuberculosis.

Pancreas.—Small and thin; the glands in the neighbourhood were enlarged.

Liver.—1650 grms.; organ dark colored and of nutmeg appearance. Numerous minute pin-point dots on the surface were noted resembling miliary tubercles. On section it was of nutmeg appearance, very thickly studded with miliary tubercles of a greyish pearly appearance.

Left Kidney.—165 grms.; on section the organ was markedly congested. In two of the pyramids there were localized tubercles rather larger than grape-seeds; one or two small ones were found in the cortex which was possibly a little swollen; pelvis and ureter free from tuberculosis.

Right Kidney.—135 grms.; in all respects similar to left with the exception that no tubercles were noted.

Bladder.—Two small subserous tubercles present at the base.

Genitalia.—Normal.

Anatomical Diagnosis.—Primary Tuberculosis of the Intestines; Tuberculosis of Mesenteric, Retroperitoneal, Axillary and Inguinal Glands; Generalized Miliary Tuberculosis affecting Meninges, Liver, Spleen, Lungs, Kidneys, Bladder; Cloudy Swelling of Organs; Tertiary Syphilis; Gumma on Left Leg; General Marasmus.

MICROSCOPICAL EXAMINATION.

Brain and Meninges.—There was distinct evidence of acute meningitis, the pia-arachnoid being thickened. There were large collections of small round cells about the vessels and this infiltration extended down the various septa and affected the superficial layer of the brain substance. In addition to polymorphonuclear leucocytes numerous hyaline mononuclear cells were noted. Stained by the Ziehl-Nielsen method, very numerous tubercle bacilli, many of them presenting a characteristic beaded appearance, were observed.

Lungs.—Showed congestion with small areas of collapse; numerous miliary tubercles with slight central cascation and a few giant-cells without peripheral fibrosis.

Spleen.—Markedly congested; very numerous minute tubercles were present, some showing central caseation with large giant-cells, others again being very fibroid in character.

Liver.—A marked nutmeg condition with some pigmentation and atrophy of the liver parenchyma. Very numerous miliary tubercles were present showing central caseation with giant-cells but with little or no tendency to the formation of fibrous tissue.

Pancreas.—Normal.

Glands.—The retroperitoneal and mesenteric glands showed great inflammatory hyperplasia with slight increase of the epithelioid plates and

here and there some hyaline degeneration. The retroperitoneal glands however, showed no caseation ; this was confined to the mesenteric and inguinal.

Kidney.—Showed merely advanced cloudy swelling and congestion.

Suprarenal.—normal.

Ulcer of Leg.—Owing to the association of the two diseases, syphilis and tuberculosis, it was important to determine of what nature was the ulcer described. A number of sections were taken from different parts and stained by various methods to demonstrate the tubercle bacilli. All the sections showed substantially the same condition, namely chronic inflammation with granulation, the formation of new vessels and scar tissue. Tubercle bacilli were not discoverable and from the fact that the ulcer showed marked evidence of healing without any signs of caseation, it was finally concluded that the ulcer was not tubercular but rather syphilitic in accordance with the clinical diagnosis.

Bacteriological Examination—Agar cultures from heart-blood, spleen and liver were sterile.

From the history in this case, together with its course it was not surprising that a diagnosis of syphilitic meningitis should have been made. Considering the fact that two distinct diseases, syphilis and tuberculosis, were running concurrently, whereby the clinical course of both was somewhat masked, the diagnosis was rendered extremely difficult if not indeed impossible. It is, of course, easy to be wise after the fact, but it is possible that a more accurate opinion might have been formed had a little more weight been laid upon certain clinical appearances. With a definite history of chancre two and a half years previously, with neglected treatment during the secondary manifestations, the obvious conclusion, of course, was that all the manifestations were syphilitic. Meningitis occurred just about the time that syphilitic meningitis is liable to come on and the patient's age was also in favor of this assumption. The history of severe frontal headache for some time before localizing symptoms set in, also suggested syphilis. The only condition which was unlike syphilis was the great enlargement of the posterior cervical, axillary, inguinal and femoral glands. The condition of these was more suggestive of tuberculosis than of syphilis. Enlarged glands in the tertiary stage of the disease are certainly somewhat rare. As a rule it may be said that when the lymphatic glands are enlarged in tertiary syphilis, it is the deeper abdominal and visceral glands which are affected. When the superficial glands are involved, it is more usual for those of a certain district to be attacked than for a general involvement throughout the body to occur. Then again

syphilitic adenopathy does not produce such large masses as the tubercular form. Tubercular glands are more common in young people and children than in older persons. Consequently we see that from the condition of the glands alone, the presumption was rather in favor of a tubercular lesion.

On the other hand it must be said that the disease did not run the course of the ordinary tubercular meningitis, the temperature being, for instance, subnormal and the usual stages not being recognizable. It is possible that had the tuberculin test been used or lumbar puncture made that the correct diagnosis might have been reached. The case, was, however, one of extreme difficulty and the above considerations practically sum up all that can be said in regard to the differential diagnosis.

Apart from the complications of two diseases the case is important as it is one of undoubted primary infection with tuberculosis through the intestinal tract. The ulcers in the bowel were typical of tuberculosis, the lesions were most marked in the neighbourhood of the intestine, mesenteric and retroperitoneal glands, while those in the rest of the body were merely a terminal dissemination of the disease of a miliary type. Careful search was made in all the districts usually affected first by tuberculosis without finding any evidence of an old lesion. There being no area of tuberculous softening about the respiratory passages, infection of the intestines through sputum is obviously impossible. The localization of the ulceration in most instances to the lymphoid elements of the intestines, as in the case of typhoid or in the ordinary sputum-ingestion type of intestinal tuberculosis is practically pathognomonic of an alimentary type of infection and not a hæmatogenic one. It was somewhat striking with such extensive tuberculosis in the intestine that diarrhœa was not present, nor were there any other signs pointing to intestinal or abdominal involvement.

A CASE OF MULTIPLE MYELOMA.*

BY

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AND

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Mrs. W. K., aged 44, a tall, slightly built woman weighing 82 pounds, a farmer's wife, mother of three children, and having had one miscarriage at three months, was admitted to the Royal Victoria hospital on the 5th December, 1901, with painful enlargement of the right tibia. She gave the following history :—

About a year previous, a little swelling appeared on the front of the leg, a few inches above the ankle. It was painful, red and tender, and increased gradually in size, spreading over a large area. Other similar swellings also appeared along the tibia, until at the present time the bone is involved to within three inches of the knee. At times there have been great pain and tenderness, necessitating the use of a crutch in walking, and at other times there has been very little discomfort.

She attributes her condition to striking her chin upon the stairs a short time before the swelling appeared, but no direct connection can be traced between the injury and the swelling of the tibia. About 16 months ago, a tumor appeared on the upper and outer side of the left breast. It was hard, but neither painful nor tender. The breast was removed in August, 1901. It is described as about half the size of an egg, and a month after the removal of the breast, the axillary glands, which were palpably enlarged, were also removed.

There is no record of microscopical examinations of the removed tumour or glands. The whole of the lower three-fourths of the tibia was enlarged, and in the subcutaneous part it was irregular and nodular, the nodules being as large as a twenty-five or fifty cent piece, flat and hard. The tarsus seemed also to be distinctly enlarged, and there was some œdema of the foot and leg, especially when not kept constantly elevated. She had lost 30 pounds in weight during the year. There was no venereal history and nothing to lead to a suspicion of syphilis, either hereditary or acquired, but the clinical aspects of the case had caused her physician to prescribe iodide of potassium in large doses ; which she had been taking for a year without benefit. I continued this treatment until the 10th of February, when I made incisions over a couple of the nodules and trephined the bone, which

* Read before the Montreal Medico-Chirurgical Society, March 7, 1902.

was very soft. The examination of the bone tissues removed, led me to amputate through the knee joint on the 20th February. The limb was skiagraphed and showed an enlargement of the tibia and tarsal bones. The other organs were healthy, and she made an excellent recovery. Albumen was never discovered in the urine.

Pathological Report.

Specimen received is right leg and foot. Tissues of tibia, tarsal bones and base of first metatarsal, are affected. In the tibia the medullary cavity, compact bone and spongy bone, with the exception of a small portion in the upper third posteriorly, are replaced by new growth. This material is redder than normal tibial marrow, firmer than cancellous bone, and cuts grittily. New growth has developed under the periosteum, but has not invaded the overlying tissues. It has eroded cartilage of ankle joint, in parts, and extends along anterior ligament.

In the tarsal bones, the cancellous portion alone is affected, but here the tissue is much softer than normal.

Examination of scrapings, fresh and stained with eosin and methylene blue, Ehrlich's triacid stain, and polychrome methylene blue, shows nucleated and non-nucleated red blood cells, with a large number of round or oval cells, with round palely-staining nuclei. No specific granules could be seen.

Decalcification of tissue was necessary for tissue cutting. Microscopic sections of tissue from astragalus showed major part to consist of masses of cells. These cells vary slightly in size, 10 to 20 micromillimetres in diameter. They are usually round, but in places oblong or even flattened. Vacuoles varying in size are seen in a few cells. Nuclei of tumour cells are usually single, but occasionally two or three were in the same cell. Nucleoli are nearly always seen. Chromatin varies in amount, but generally is well marked. Mitotic figures are not seen. In some cells there is an appearance suggestive of amitotic division. Nucleus is often placed eccentrically. There is a very fine intercellular reticulum in most parts, but in some of the cell masses the cells appeared to lie directly in apposition. Cells may be found single or in solid clumps, but more often in several layers arranged around a central lumen containing blood, with which the tumour cells are in direct contact, no endothelial coat intervening. No definite blood-vessels can be seen among the tumour cells. These groups of cells are enclosed by a fine fibrous stroma. Outside this stroma there are irregular trabeculæ of osteoid tissue.

No osteoclasts, and very few osteoblasts are present. In the tibia there is a much smaller amount of fibroid tissue, but a marked in-

crease of the osteoid trabeculæ. Here there are a few osteoclasts with numerous osteoblasts. New formation of osteoid tissue is evidently taking place.

It is difficult to decide whether to place the tissue under the head of alveolar sarcoma or under the subdivision termed myeloma. The tumours classified as myelomata vary much in morphology. The course and features of the disease in patients suffering from myelomata may also be very different. Rutizky,[1] in 1873, described a condition of multiple primary tumours of bone marrow and to this he gave the name "multiple myeloma." In his case the tissue of the tumours consisted of wide blood spaces without definite walls, located in areas of round lymphoid cells rich in chromatin, and dispersed in a wide-meshed, finely fibrillated network of connective tissue. He states that in places these tumours break through the bone and infiltrate the surrounding tissues.

Previous to this, in 1867, Bence Jones[2] had shown that the urine of a patient suffering from a similar disease contained albumose. This has been confirmed lately by several observers. Klebs,[3] in 1889, stated that the anæmic bases of these tumours can always be demonstrated.

Carl Winckler,[4] under the heading "myeloma," describes a condition of multiple medullary tumours of bones of trunk. Here tumour consisted of cells with a small amount of protoplasm and with a large, finely granular nucleus. All cells contained a single nucleus only. There was a very fine fibrous stroma between the cells. There was a great diminution of bone substance and the growth occupied all the medullary cavity. Numerous osteoblasts; lying in very large Howship's lacunæ, were present. There was a development of new osteoid tissue under the periosteum.

Drs. Herrick and Hektoen,[5] in 1894, under same class, describe a tumour of sterum and ribs. In this case there was marked anæmia, poikylocytosis and neutrophile leucocytosis. There was marked emaciation and patient had recurrent attacks of fever. Here the tumour consisted of round lymphoid cells with quite large nuclei arranged in a finely fibrillated, and in parts homogenous, matrix. There were many blood spaces of irregular size and shape found in tumour, the blood being in direct relation with the tumour cells. No albumose was present in urine.

Kahler,[3] in 1899, describes a case lasting eight years. The condition was osteoporosis with development of new tissue resembling a round-celled sarcoma.

Wright,[6] in 1900, under same head, describes a case where there were medullary tumours of sterum and ribs. There was slight anæmia, weakness, and albumose in urine. Here tumour consisted

of small round cells varying somewhat in size, some cells contained two or three nuclei. Nuclei were rich in chromatin. No mitosis. There were a very few, fine fibrillæ between the cells. There were numerous, thin-walled blood vessels. In parts bone absorption, in parts new formation of bone is shown. He states that the tumour cells are allied to plasma cells.

McCallum[7], in 1901, describes a condition of multiple medullary tumours of bones of trunk and of femur. Here tumour cells vary in shape, have one to three nuclei, and contain vacuoles. Nucleoli are nearly always present. Chromatin varies in amount. There is no mitosis to be seen. Cells lie separated by a fine fibrous stroma. There are numerous thin-walled vessels. From the appearance of the nuclei he states that the tumour cells are derived from the myelocytes or proper marrow cells.

In review, one sees that in the disease termed "multiple myeloma" the course may run from two to eight years. Fever may or may not be present. Albumose in urine is not constant. There may be marked changes in the cellular constituents of the blood, or there may be only slight diminution of the hæmoglobin. The cells of the tumours may be uniform in size with a small amount of protoplasm, or may vary in size with a relatively large amount containing vacuoles. Nuclei may be single or multiple, may be vesicular or rich in chromatin. The intercellular substance may be marked and consist of fine fibrillæ, a homogenous matrix, or may be absent. Cells may be arranged directly around large blood spaces, or there may be numerous, thin-walled blood-vessels. Bone absorption is always present, but formation of osseous or osteoid tissue may or may not be seen.

The constant features are :—The simultaneous occurrence of tissue resembling that of a round-celled sarcoma in the medulla of several bones. Adjacent bones are the ones usually affected.

The complete absence of involvement of other tissue than bone, except by direct continuity of growth of bony tumour into surrounding structures, that is, metastases are not found.

The regularity of size and shape of cell and the small amount of intercellular matrix.

For these reasons the above condition is termed one of multiple myeloma, as suggested by Professor Adami from a section of a small portion of the bone, removed for diagnosis previous to operation.

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A CASE OF CARDIAC ARRHYTHMIA.*

BY

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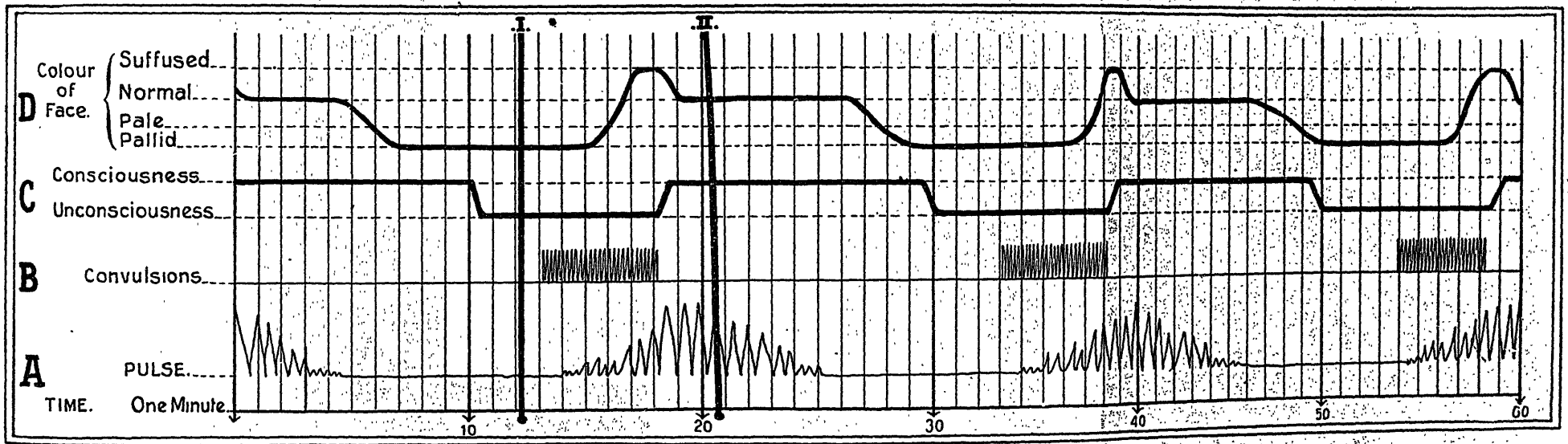
Arrhythmia is the term applied to an intermission in the cardiac rhythm when one or more of the beats of the heart are dropped. Osler, in his "Practice of Medicine," states that seven varieties of arrhythmical action may be recognized, but the phenomena observed in the following case do not correspond with any one of them. The story of the man's condition is so extraordinary, that, had not the writer's observations been fortunately confirmed by those of a consultant, he would hardly have had the temerity to relate it. Furthermore, a search through the literature of the subject has failed to discover the report of a case presenting a similar state of affairs.

The subject of this note was a well-preserved man of 70 years, although he did not appear to be of that age. He had always enjoyed good health, living well, using alcohol but sparingly, and tobacco not at all. He was by occupation a clerk in an office, but his habits were not sedentary, for he was very fond of walking, and got over the ground at a speed quite unusual for a man of his years.

On Friday, August 16th last, I was called to see him and learned that two days before, on the way to his office, to gain time, he had run about two blocks. This indiscreet action was almost immediately followed by shortness of breath, and, what were described as "fainting attacks with more or less delirium," lasting from a few seconds to a minute or so. He had just recovered from one of these attacks when I saw him for the first time. He was sitting in an arm-chair breathing rather hurriedly, and with a somewhat anxious expression of countenance. Upon examination he was found to be a well-nourished man, with indications of but slight senile changes in his vessels. The heart was beating quite regularly, the pulse was 80, soft and compressible, the cardiac dulness was increased and the apex beat was ill-defined just outside the nipple line. The heart sounds were very faint, and a soft mitral murmur could be heard. The lungs presented no signs of disease. The digestive organs were, however, a good deal out of order, as he had been suffering from a sense of fullness and oppression in the epigastrium, with flatulency and constipation. Examination of the urine, on several subsequent occasions, proved that that fluid was free from abnormal ingredients. His mental condition was perfectly

* Read before the Montreal Medico-Chirurgical Society, Jan. 3, 1902.

A DIAGRAMATIC CHART, ILLUSTRATING THE PHENOMENA OBSERVED.



clear, and beyond the symptoms already described he was suffering no inconvenience whatever. He was sent to bed, with orders that he should receive a purge and that his diet should be restricted to liquids.

During the ensuing twenty-four hours, though remaining quietly in bed, he had several attacks of unconsciousness. On one occasion upon getting out of bed and losing consciousness, he fell and struck his head. I saw him shortly afterwards and observed the following condition:

The cardiac rhythm (chart A) presented a condition somewhat analogous to that respiratory phenomenon known as Cheyne-Stokes breathing. There would be one or two full, and what I shall call, normal cardiac beats, then the beats would become more rapid, and lesser in volume until there would be absolutely no movement of the heart to be felt on palpation and no sound audible through the stethoscope, for a period of 8 or 10 seconds. Then the beats would commence again, hardly perceptible at first, but becoming fuller and slower until a normal beat was reached, again to increase in rate and decrease in force, and so on.

At the end of the period of the stoppage of the heart's action tonic convulsions (chart B), more or less general in character, occurred, and which lasted four or five seconds, terminating just before the normal beat was reached. The attacks varied greatly in severity, at times only the muscles of the face or a single group of muscles appeared to be affected, but usually all the muscles of the body were involved. There were alternating periods of consciousness and unconsciousness (chart C), the consciousness extending from the moment that the convulsions had ceased to about the middle of the period of the stoppage of the heart beat, in all about 8 to 10 seconds, when unconsciousness would suddenly ensue. The mind was perfectly clear during consciousness, the patient would at times keep up an animated talk, would cease suddenly upon losing consciousness, to again take up the thread of the conversation upon the return of consciousness. The transition from the one state to the other was very rapid.

The colour and general appearance of the face presented marked and rapid changes (chart D). When the convulsive movements commenced there was a death-like pallor upon the face, which, as the convulsions increased in force, gave place to an intense suffusion which lasted a second or two, until the convulsions ceased, when the face assumed its normal aspect. It remained normal for a few seconds, that is, until about two seconds after the heart had ceased to beat, when it took on a constrained look and became pale, the paleness deepening into a death-like pallor lasting from 6 to 8 seconds.

The respirations seemed to be but slightly altered, the respiratory movements continued, with only a slight alteration in their force, while the heart was not beating.

Thus, every few seconds, there would be a rapid transition from a state of life, with normal colour, complete consciousness and mental activity, and regular pulse (chart II.), to a state of apparent death, with death-like pallor of the face, absolute unconsciousness, loss of superficial reflexes, and stoppage of the action of the heart (chart I). The change from apparent death to life was preceded by convulsions.

For four hours this extraordinary irregularity of the heart's action, with the associated symptoms, kept up, and terminated just as suddenly as it had commenced. The complete cycle of events occurred, at first, on the average three times a minute, but later on became less frequent. The treatment given was large doses of spr. ætheris co. by the mouth and strychnine, gr. 1-60, hypodermically every two hours. During the subsequent 36 hours the patient had only two very slight attacks, but on August 20th, the arrhythmia commenced again, and lasted with great severity for two hours and a half. His limbs then became very cold, the intervals of rest and consciousness were much shorter, the heart's action was becoming weaker, and the man was apparently dying. Doctor A. A. Browne saw the patient in consultation, and was much interested as the man's condition was unique in his experience.

The cessation of symptoms ceased, however, as suddenly as on the former occasion, and the patient rapidly regained warmth and vitality.

On the 21st there were no attacks, the pulse being full and regular. During the night, however, he was very restless, and a few convulsions occurred. He suffered from much abdominal distention and flatulency, which was greatly relieved by a mustard emetic, For the following three days he had slight attacks from time to time, on two occasions the fact of my entering the room seemed to precipitate rather severe attacks though he had been free from them for several hours before. From the 25th to the 31st he was entirely free from attacks, and gained strength gradually, his diet having been very much increased. On the latter date, he partook of rather a heavy meal, including some pastry, and during the following night had several severe attacks, but these proved to be the last ones, for with careful attention to diet and exercise he completely regained his former vigour, and returned to his office on the 14th of October.

The treatment consisted in morphia $\frac{1}{4}$-$\frac{1}{2}$ gr. hypodermically morning and evening: tr. nucis vomicæ, m xx, t.i.d.; and spr. ætheris co, whenever the attacks came on. The diet was restricted to liquids and the bowels kept loose by salines.

The cause of this disturbance of rhythm was probably, in the first place, an acute dilatation of the heart from sudden over-exertion, and later on to the blow upon the head, associated with flatulency, etc., but why the disturbance should take on such a curious form is not easily explained.

The reasons for the associated symptoms seem, however, to be clear, for the stoppage of the heart's action, even though respiration may have been going on, produced a venosity of the blood which irritated the centres of the medulla and motor areas, set up convulsions and thus stimulated the heart to act.

May 10th, 1902. The patient has been perfectly well up to this date, with the exception of a slight gastric disturbance associated with an unusually slow pulse (34 per minute) which lasted about two weeks. He walked to this office daily, and with the exception of the mental worry over the rate of the pulse, which he was frequently counting, he experienced no inconvenience.

THE CANADA MEDICAL ACT.

Passed by House of Commons, 1902, Bill No. 11.

An Act to provide for the establishment of a Medical Council in Canada.

His Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. This Act may be cited as *The Canada Medical Act*, 1902.

2. In this Act, unless the context otherwise requires :—

(*a*) The expression "medicine" shall be held to include surgery and obstetrics, and to exclude veterinary surgery, and the expression "medical" shall be held to include "surgical" and "obstetrical."

(*b*) The expression "Provincial medical council" includes "Provincial medical board" and "College of Physicians and Surgeons."

(*c*) The expression "medical school" includes any institution wherein medicine is taught.

(*d*) The expression "students" means only persons admitted to the study of medicine in virtue of Provincial laws.

3. The persons from time to time appointed or elected, or otherwise being, under the provisions of this Act, members of The Medical Council of Canada, are hereby constituted a corporation under the name of "The Medical Council of Canada," hereinafter called "the Council."

4. The purposes of the Council shall be to promote and effect—

(*a*) the establishment of a qualification in medicine, such that the holders thereof shall be acceptable and empowered to practice in all the Provinces of Canada ;

(*b*) the establishment of a register for Canada of medical practitioners and the publication and revision from time to time of such register ;

(*c*) the determination and fixing of the qualifications and conditions necessary for registration, including the courses of study to be pursued by students, the examinations to be undergone, and generally the requisites for registration ;

(*d*) the establishment and maintenance of a board of examiners for examination and for the granting of certificates of qualification ;

(*e*) the establishment of such a status of the medical profession in Canada as shall ensure recognition thereof in the United Kingdom, and enable Canadian practitioners to acquire the right to registration under the Acts of the Imperial Parliament known as the "Medical Acts;"

(*f*) the enactment, with the consent and at the instance of the medical councils of the various Provinces of Canada, of such Provincial legislation as is necessary to supplement the provisions of this Act and to effect the foregoing purposes.

5. The Council may acquire and hold such real estate and personal property as is necessary and expedient for the purposes of the Council or of providing a revenue therefor, and may sell, lease or otherwise dispose thereof; but the annual value of the real estate owned by the Council and held for the purposes of revenue only shall not at any time exceed the sum of twenty-five thousand dollars.

6. The Council shall be composed of :—

(*a*) one member from each province, who shall be appointed by the Governor in Council;

(*b*) members representing each Province, their number being fixed in such case according to the number of practitioners registered under the law of the Province, in the following proportions:—

For the first 100, or fraction thereof..... One
For the second 100, or fraction thereof over one-half One
After the first 200, for each succeeding 600, or fraction thereof over one-half..... One

the elected members representing each province shall be elected—one by the Provincial medical council, and the others by the duly registered medical practitioners having received a license or certificate of registration within the province under regulations to be made in that behalf by the Provincial medical council ; provided that it shall not be competent to any Provincial medical council, or the regular practitioners of any province, to elect any person as a member of the council who is in any wise connected with the teaching staff or governing board of any university or incorporated medical school which is under the provisions of this Act entitled to elect a member of the council, nor shall it be competent to them to so elect any person belonging to any such particular and distinct school of practice of medicine as is mentioned and intended by paragraph (*d*) of this subsection ;

(*c*) one member from each university or from any incorporated medical college or school, in Canada having an arrangement with a university for the conferring of degrees on its graduates, engaged in the active teaching of medicine, who shall be elected by the university or by such college or school under such regulations as may appertain.

(*d*) three members, who shall be elected by such practitioners in Canada as, by the law of the Province wherein they practice, are now recognized as forming a particular and distinct school of practice of medicine, and, as such, are by the said law entitled to practice in the province;

2. No one shall be a member of the Council unless he—

(*a.*) resides in the Province for which he is an appointed or elected member;

(*b.*) is a duly registered member of the medical profession according to the law of the Province which he represents;

(*c.*) is duly registered as a medical practitioner in the register established under the provisions of this Act; but this qualification shall not be required of any of the members originally composing the Council;

3. No Province shall be represented upon the Council either by appointed or elected members until the Legislature of the Province has enacted in effect that registration of the Council shall be accepted as equivalent to registration for the like purpose under the laws of the Province; and when all the Provinces of Canada have legislated in effect as foresaid, it shall be lawful to appoint and elect, in the manner aforesaid, the members of the Council.

Provided, however, that if any of said legislatures afterwards repeals its legislation contemplated by this section, no more persons shall be given the right to practice medicine within the jurisdiction of such legislature, by reason of their qualification or registration under this Act.

7. The term of office for appointed members shall be four years.

2. Members elected by Provincial medical councils shall remain in office during the term of office of the members of the medical council of the Province for which they are elected.

3. All other members shall be elected for four years.

4. Any member may at any time tender his resignation by written notice thereof to the president or to the secretary of the Council. Upon the acceptance of such resignation by the Council, the Council shall forthwith give notice in writing thereof, in case of an appointed member to the Secretary of State of Canada, and, in case of an elected member, to the secretary of the medical council for the Province, or to any university, incorporated medical school or college, or to the president or the secretary of any recognized distinct school of practice of medicine represented, which such member represents.

5. Any person who is or has been a member may, if properly qualified, be re-appointed or re-elected; but no person shall at one time serve as a member in more than one capacity.

6. In the case of members of the Council whose term of office is about to expire, successors may be appointed or elected at any time within three months before the expiration of such term; provided that where any vacancy exists in the membership of the Council, by reason of any term of office having expired or otherwise, such vacancy may be filled at any time.

7. If there has been a failure to elect a member of the Council, or to elect a properly qualified member, or to cause the name of the member elected to be certified to the secretary of the Council within a reasonable time after such election might have been made, then, after notice from the Council, requiring the Provincial medical council, or such incorporated medical school or college or university, or the recognized distinct school of practice of medicine, to cause such election to be made and to certify the result thereof to the Council within one month from the date of service of such notice, the Council may, in case the default continues, itself elect such member.

8. A member appointed or elected to fill a vacancy, caused by death or resignation shall hold office in all respects as the person in whose place he is appointed or elected would have held office, and for the remainder of the term for which that person was appointed or elected.

9. All members appointed or elected shall continue in office until their successors are appointed or elected or until the expiration of their term of office if their successors are appointed before the expiration of such term of office.

8. The Council may from time to time—

(*a.*) elect from among its members a president, a vice-president and an executive committee;

(*b.*) appoint a registrar, who may also, if deemed expedient, act as secretary and treasurer;

(*c.*) appoint or engage such other officers and employees as the Council deems necessary to carry out the objects and provisions of this Act;

(*d.*) require and take from the registrar, or from any other officer or employee, such security for the due performance of his duty as the Council deems necessary;

(*e.*) fix the allowances or remuneration to be paid to the president, vice-president, members, officers and employees of the Council.

9. The Council shall hold its first meeting at the city of Ottawa, at such time and place as is appointed by the Minister of Agriculture; and, thereafter, an annual meeting of the Council shall be held at such a time and place as is from time to time appointed by the Council.

2. Until otherwise provided by regulation of the Council, twenty-one members of the Council shall form a quorum, and all acts of the Council shall be decided by a majority of the members present.

10. The Council may make regulations not contrary to law or to the provisions of this Act, for or with reference to—

(*a.*) the purposes mentioned in paragraphs (*a*), (*b*), (*c*), (*d*) and (*e*) of section 4 and in section 8 of this Act ;

(*b.*) the direction, conduct and management of the Council, and of its property;

(*c.*) the summoning and holding of the meetings of the Council, the times and places where such meetings are to be held, the conduct of business thereat, and the number of members necessary to constitute a quorum;

(*d.*) the powers and duties of the president and vice-president, and the selection of substitutes for them if unable to act for any cause at any time;

(*e.*) the tenure of office, and the powers and duties of the registrar and other officers and employees;

(*f.*) the election and appointment of an executive committee and of other committees for general and special purposes, the definition of their powers and duties, the summoning and holding of their meetings, and the conduct of business by such committee;

(*g.*) generally, all fees to be required, paid or taken under this Act;

(*i.*) the establishment, maintenance and effective conduct of examinations for ascertaining whether the candidate possesses the qualifications required; the number, nature, times and modes of such examinations; the appointment of examiners; the terms upon which matriculation and other certificates from universities, schools and other medical institutions shall be received as evidence of qualification; the dispensation of candidates from undergoing examinations, either wholly or partially; and generally all matters incident to such examinations or necessary or expedient to effect the objects thereof;

Provided, however, that—

(i.) the requirements of any curriculum established by the Council, shall not, at any time, be lower than the requirements of the most comprehensive curriculum then established for the like purpose in any Province;

(ii.) the standard of examination, shall not, at any time, be lower than the highest standard for the like purpose then established for ascertaining the qualification for registration in any Province;

(iii.) the possession of a Canadian university degree alone, or of a certificate of Provincial registration founded on such possession, obtained subsequent to the date when this Act shall have become operative, as provided in subsection 3 of section 6, hereof, shall not entitle the possessor thereof to be registered under this Act;

(iv.) no retroactive effect shall be given to this Act, and especially as regards persons duly inscribed as students under the laws of any of the Provinces of Canada at the time it shall become operative as aforesaid."

(*j*) the recognition of licenses granted by any British, Canadian,

colonial or foreign licensing body or authority; the arranging and bringing into effect of any schemes of reciprocity as to registration with any British, colonial or foreign medical licensing body or authority; the terms and conditions upon which, and the circumstances under which, medical practitioners shall be entitled to registration under this Act in cases where such medical practitioners are duly registered or licensed under the Medical Acts of the United Kingdom, or under the laws of any British possession other than Canada, or under the laws of any foreign country, which British possession or foreign country extends reciprocal advantages to Canada;

(*k.*) the enrolment and registration of all persons entitled under this Act to appear on the register for Canada of medical practitioners;

(*l.*) generally, all matters which it is necessary or expedient to provide for or regulate in pursuance of the purposes of this Act and in furtherance of its general intention.

2. No regulation made under the authority of this section shall have effect until approved by the Governor in Council, and such approval shall be conclusive evidence that the regulation has no retroactive effect.

11. A copy of any such regulation certified by the registrar or secretary under his hand and the seal of the Council, may be received in evidence in any court of justice without proof other than the production of a copy purporting to be so certified.

12. The Council shall enact such regulations as shall secure to practitioners who, under the laws of any Province, are now recognized as forming a particular school in the practice of medicine, and to all applicants for registration who desire to be practitioners of such school, rights and privileges not less than those now possessed by them under the laws of any Province, and under the regulations of any Provincial medical council.

13. At each annual meeting of the Council, the Council shall appoint a board of examiners, to be known as "The Medical Council of Canada Examination Board," whose duty it shall be to hold the examinations prescribed by the Council, subject to the provisions of section 12 of this Act.

2. The members of the board of examiners shall be eligible for reappointment.

14. The subjects of examination shall be decided by the Council, and candidates for examination may elect to be examined in the English or French language; and the examinations shall be held only at those centres at which there is a university or college actively engaged in the teaching of medicine and having hospital facilities of not less than one hundred beds.

15. The Council shall cause to be kept by the registrar, under the direction of the Council, a book or register to be known as "The Canadian Medical Register," in which shall be entered, in such manner and with such particulars as the Council directs, the names of all persons who have complied with the requirements of this Act and with the regulations made by the Council respecting registration under this Act, and who apply to the registrar to have their names so entered.

16. Every one who passes the examination prescribed by the Council, and otherwise complies with all the conditions and regulations requisite for registration as prescribed by this Act and by the Council, shall, upon payment of the fees prescribed in that behalf, be entitled to be registered as a medical practitioner.

2. Any person who has received a license or certificate of registration previous to the date when this Act shall have become operative as aforesaid, and who has been engaged in the active practice of medicine in any one or more Provinces of Canada, shall, after six years from the date of such certificate, be entitled to be registered under the Act as a medical practitioner, without examination, upon payment of the fees and upon compliance with the other conditions and regulations for such cases prescribed by the Council.

3. Any person coming within any of the classes of registered or licensed practitioners to which paragraph (*j*) of section 10 of this Act applies shall be entitled to be registered upon complying with the orders and regulations established by the Council in that behalf.

17. Any entry in the register may be cancelled or corrected upon the ground of fraud, accident or mistake.

18. In any case of an application for registration or for correcting or amending any entry upon the register, the applicant, if aggrieved by the decision of the registrar, may appeal to the Council, and the Council shall hear and determine the matter; but all applications to cancel or strike off entries from the register made adversely to the person whose registration it is desired to affect shall be by the registrar referred to the Council, and the Council, shall, after three months' notice sent by post, prepaid and registered, to the last known address of such person, who shall have the right to appear by counsel, hear and determine all such applications.

19. If it is made to appear to the Council, after inquiry, that any person registered under this Act has been convicted, either in any part of His Majesty's possessions or elsewhere, of an offence which if committed in Canada would be an indictable offence under *The Criminal Code*, 1892, and its amendments, or that he has been guilty of infamous or disgraceful conduct in a professional respect, then, whether such offence has been committed, or such conviction has taken place, or

such infamous or disgraceful conduct has occurred, either before or after the passing of this Act, or either before or after the registration of such person, the Council shall, after three months' notice sent by post, prepaid and registered, to the last known address of such person, who shall have the right to appear by counsel, direct the registrar to erase the name of such person from the register: Provided, however, that if a person registered under this Act has likewise been registered under the laws of any Province, and such provincial registration has been cancelled for any of the causes aforesaid by the authority of the medical council for that province, the Council shall then, without further inquiry, direct the registration of such person under this Act to be cancelled.

2. The name of a person shall not be erased under this section—

(*a.*) because of his adopting or refraining to adopt the practice of any particular theory of medicine or surgery; or

(*b.*) because of his conviction out of His Majesty's possessions of a political offence against the laws of any foreign country; or

(*c.*) because of his conviction for any offence which, though coming within the provisions of this section, is, in the opinion of the Council, either from the trivial nature of the offence or from the circumstances in which it was committed, insufficient to disqualify a person from being registered under this Act.

20. Whenever it is made to appear to the Governor in Council that any of the provisions of this Act are not complied with, the Governor in Council may empower the commission of arbitration hereinafter provided for, to inquire in a summary way into and report to him whether such is the case and, if so, to prescribe what remedies are necessary, if any.

2. The Governor in Council shall require the Medical Council of Canada to adopt the said remedies within such time as he, having regard to the report of the commission, thinks fit to appoint. In default of the Council so doing, he shall by Order in Council amend the regulations, or make such provision or order as he deems necessary to give effect to the decision of the commission.

3. The commission of arbitration shall be composed of three members, one to be appointed by the Governor in Council, one by the Medical Council of Canada, and the third by the complainant.

4. The commission may compel the attendance of witnesses and examine them under oath and require the production of books and papers, and shall have such other necessary powers as are conferred upon it by the Governor in Council for the purposes of the inquiry.

21. This Act shall not be interpreted as authorizing the creation of medical schools, or otherwise giving medical tuition.

RETROSPECT

OF

CURRENT LITERATURE.

Gynaecology.

UNDER THE CHARGE OF WILLIAM GARDNER.

Hysterectomy.

BOUILLY, G. "De l'hysterectomie pour fibromes." *La Gynécologie, Oct., 1901.*

Surgeons are divided into two camps upon the question of indications for operating in cases of uterine fibroids. One school teaches that all uterine fibroids ought to be removed, while the other claims that no operation is justifiable unless the tumours are giving rise to serious symptoms. Bouilly never performs a hysterectomy upon a patient who has a fibroid of the uterus, unless the tumour has become a cause of uneasiness or pain, or else a menace to the general health. The more serious operation is also called for where either the age of the patient, or size of the growth, render any less heroic treatment of no avail.

From October, 1899, to the end of July, 1901, Bouilly has performed hysterectomy for fibroids 116 times, 94 abdominal and 22 vaginal. In the 94 patients upon whom the abdominal operation was performed, the youngest was 23 and the oldest 59 years. The size of the growth varied from 350 grammes to 14 kilogrammes. The appendages were diseased in one-sixth of the cases, pyo- or hæmato-salpinx and ovarian cystomata or hæmatomata being present. In three cases these structures were adherent to the surrounding parts.

Excessive size of the tumour militates against a good post-operative prognosis; firstly, on account of the stripping of a large extent of peritoneum, and secondly, from the disturbance in the intra-abdominal pressure caused by the removal of so large a mass of tissue.

Only four times was toal hysterectomy performed, and then for some complication:—once for coexistent epithelioma of the cervix and fibroma of the body, and three times because the tumour had effaced

the cervix by a downward prolongation. The vagina was subsequently closed over in each case. The results in the 116 cases were as follows:

Cures	110
Deaths—	
Abdominal	5
Vaginal	1
Total mortality	5.1 per cent.

Of the fatal cases, two deaths were from septicæmic infection taking place during the operation; one was in the case of a sloughing fibroid; the fourth was where the patient had a large tumour and was cachectic before operation; the fifth patient had a tumour weighing 14 kilos and died on the 18th day after operation from paralysis of the bowels; and the sixth death was from total suppression of urine.

Uterine Cough.

LEON-ARCHAMBAULT, L. "La toux uterine et son traitment." *La Gynécologie, August, 1901.*

Involuntary muscles are supposed to be more often affected by spasm than those which are under our control. This is frequently observed in women, where disease of the uterus, apart from any hysterical manifestation, causes cough. The cough which is symptomatic of uterine disease is dry, laryngeal and husky. It is not the loud cough of bronchitis nor the strident cough of whooping cough. It may or may not be frequent; with some it has exacerbations or is intermittent like its cause. For example, when it is due to an anteversion, it ceases on lying down.

The common causes are prolonged use of the voice, cold, dust, the menses, emotions and coitus. Müller noted spasm of the larynx upon ligaturing the pedicle of a uterine fibroid. This nervous cough is seen in diseases of the liver, uterus, or testicle, and also in some people on exposure to cold, or simple stimulation of the skin. Thus, when a nervous cough is so easily set up, it is not surprising that it should be found among women, and take its origin from the generative organs on account of their innervation and their importance to the individual.

It can be explained by the richness of the nerve supply of the female generative system, its connection with the solar plexus and the great sympathetic.

It is possible that it may occur among those predisposed to it, but it is certain that in many cases "one finds a cause, a pathological condition, an old or recent affection, which provokes it and explains it at the same time."

As an argument against hysteria being the only cause of nervous cough, one may cite the cough of pregnancy, this being often seen in the beginning of pregnancy when the uterus is enlarging.

Some deviation of the uterus, especially anteversion, is the most frequent cause of uterine cough, as is shown in the case of Malachi's, where the patient had an anteflexion, the relief of which by a pessary was followed by the cessation of the cough.

Prolapse of the Internal Genitalia.

MANDELSTAMM, M. "Contribution a l'étude du traitement chirurgical des prolapsus considérables du vagin et de l'uterus." *La Gynécologie, Aug., 1901.*

Descent of the vagina and uterus has three causes, *viz.*:—

(1) Relaxation of tissues.

(2) Increased pressure from above.

(3) Diminished resistance from below.

The first cause is loss of elasticity of the ligaments of the uterus, as well as in the relaxation or disappearance of the cellular tissue which lies between the uterus, vagina and the other pelvic organs, especially the bladder and rectum.

The second is produced in uncomplicated cases by efforts exerted during labour, difficult defæcation, lifting heavy objects, etc., while the tears of the peritoneum and cervix and senile atrophy cause diminution in strength of the supports from below.

Until recently all efforts have been directed towards increasing the strength of the pelvic floor by narrowing the vagina and building up the perineal body, but during the last ten years, seeing that all three factors in producing these displacements are usually present in each case, efforts have been made to strengthen all of the enfeebled pelvic tissues.

To prevent the descent of the uterus, it is necessary to place and keep that organ in the position of physiological anteflexion by shortening and strengthening its ligaments, and by its artificial fixation to a certain place. One meets, however, cases which are too aggravated for the above and in which total hysterectomy is indicated.

Instead of removing the uterus in these severe cases, Freund excoriates the anterior vaginal wall, as well as both surfaces of the cervix. He then brings the fundus down into the vagina through an incision in the pouch of Douglas. An artificial os having been made in the fundus, its posterior surface (which has now become its anterior) is sutured to the anterior vaginal wall, thus lifting it up. This procedure is supplemented by Tait's perineorrhaphy, and it is claimed by its originator to be followed by fewer recurrences than the usual plastic vaginal operations for procidentia uteri. *F. A. Lockhart.*

Canadian Medical Literature.

UNDER THE CHARGE OF KENNETH CAMERON.

[The editors will be glad to receive any reprints, monographs, etc., by Canadian writers, on medical or allied subjects (including Canadian work published in other countries) for notice in the department of the JOURNAL. Such reprints should preferably be addressed to Dr. Kenneth Cameron, 303 Dorchester street, Montreal.]

(Received up to May 10th, 1902.)

Canada Medical Record (Montreal).

February, 1902.

1. Retrospect of Laryngology. Geo. T. Ross.

March, 1902.

2. Notes from the Case-book of a General Practitioner. W. F. Campbell.
3. Three Cases of Grave Injury to the Eye-ball with Ultimate Recovery of Useful Vision. Geo. H. Mathewson.
4. Abstract of Several Papers Recently Published by William S. Gottheil, M.D., of New York.

3. MATHEWSON relates the histories of three interesting cases and concludes that the surgeon should not be too hasty in deciding to enucleate a wounded eye, even if the wound be large and vision bad. The condition should be treated for some days expectantly, always being on the lookout for "shrinking tenderness" to touch, which is the chief danger signal in these cases as it proves the existence of iridocyclitis in the injured eye. In one of his cases, filling the globe with saline solution undoubtedly saved the eye, as it made possible an exact coaptation of the lips of the wound, which could not have been had in the previous collapsed condition of the globe.

La Revue Medicale du Canada (Montreal).

5, Février.

1. Le Chloral comme Vesicant. M. T. Brennan.

12, 19, Février.

2. Syphilis Tertiare : Observation. Jehin-Prume.

26, Février.

4. De L'Emploi de L'Huile d'Olive Sterelisé dans les Operations Abdominales. M. T. Brennan.

5, 12, Mars.

4. Gymnastique sans Appareils. M. P. E. Prevost.

19, 26, Mars.

5. Les Alienes au Canada. E. P. Chagnon.

1. BRENNAN recommends chloral hydrate as a vesicant when a marked effect is rapidly required. It is better than cantharides and has none of its disadvantages. With children, next to iodine, it is the counterirritant of choice. The blister will produce whatever action is desired, erythema, vesication or ulceration.

2. JEHIN-PRUME strongly urges the free use of the cyanide of mercury, subcutaneously or intra-venously, in the treatment of the severe forms of syphilis. He cites several cases thus treated with marked success, that had shown no improvement whatever under the ordinary routine treatment with pills, ointments, etc.

3. BRENNAN believes that the free use of sterilized olive oil in abdominal operations will prevent the formation of abdominal and pelvic adhesions.

4. PREVOST describes and illustrates by drawings the various exercises that may be used without the use of apparatus for increasing muscular development.

5. CHAGNON shows by tables that there has been a constant increase from year to year in the number of persons treated in the asylums for the insane in Canada, and that it is an actual increase, and not due to the increase in the population. During the period 1871-1881, there was an increase of 5 per 10,000 of the population, during the period 1881-1891, an increase of 5 per 10,000, and during 1891-1901, and increase of 3 per 10,000.

Le Bulletin Medicale de Quebec (Quebec).

Mars, 1902.

1. De L'Anévrysm Aortique, Type Récurrent Laryngé. D. Brochu.

1. BROCHU contributes an exhaustive study on aortic aneurism.

The Canadian Practitioner and Review (Toronto).

March, 1902.

1. A Case of Intussusception in a Child, Operation, Recovery. A Primrose.
2. A Case of Perforation of the Bowel in Typhoid: Operation: Recovery. Followed by Subphrenic Abscess: Operation: Recovery. Herbert A. Bruce.
3. Gastro-Enterostomy in Pyloric Obstruction: A Case. Alex. McPhedran.
4. Report of a Case in Practice. Charles F. Neu.

April, 1902.

5. Smallpox and Vaccination. John Cavan.

6. Vaginal Section,—Exploratory and Operative. T. Shaw Webster.

1. PRIMROSE points out that in cases of intussusception early operation holds out the greatest prospect of recovery for the patient, and that it should take the form of laparotomy rather than any such measures of doubtful utility as inflation per rectum with air or fluid. He cites a case of operation followed by recovery. The intussusceptum proved to be the transverse colon which had become invaginated into the splenic flexure of the colon.

2. BRUCE related the history of a case of typhoid in which perforation occurred on the fourteenth day of the disease. Laparotomy was done and a small perforation found about ten inches from the cæcum. There was marked general peritonitis, and about a pint of sero-purulent fluid in the peritoneal cavity. The ulcer was turned in by means of a double row of Lembert's sutures, and the peritoneum was flushed out by hot salt solution. The cavity was drained by iodoform gauze. Some time after the operation a large subphrenic abscess formed, but was opened and drained. The patient was perfectly well three months after the first operation.

3. MCPHEDRAN reports a case of pyloric obstruction for which gastro-enterostomy was performed.

5. CAVAN, in the course of a paper on smallpox and vaccination, describes the methods employed by a number of manufacturing establishments to gather and prepare the lymph. He points out, from the experience of its use and from the bacteriological examination, that the glycerinated lymph is very greatly superior to the dry points.

6. WEBSTER discussed two quite different operations for the relief of pelvic diseases exterior to the uterus. First, the opening of the abdomen through the cul-de-sac of Douglas, and second, an extra peritoneal method, dissection from the vagina upwards between the folds of the broad ligament to the seat of the disease.

The Canada Lancet (Toronto).

March, 1902.

1. A Case of Fusiform Dilatation of the Œsophagus without Intrinsic Stenosis. A Case of Œsophagotomy for Foreign Body, Recovery. George A. Peters.

2. A Case of Graves' Disease Treated by Thyroidectomy. J. T. Fotheringham and Geo. A. Bingham.

3. A Case of Perforation of the Bowel in Typhoid: Operation: Recovery, Followed by Subphrenic Abscess: Operation: Recovery. Herbert A. Bruce.
4. The Value of General Reading to the Young Practitioner. H. S. Hutchison.
5. Recurrent Gastritis—Gastro-Enterostomy. Ernest Hall.
6. A Case of Otalgia. B. F. Butler.

April, 1902.

7. How to Live to Prolong Life. Sir James Grant.
8. Diagnostic and Therapeutic Uses of the Roentgen Rays. Jas. Third.
9. Infection and Contagion. E. B. Shuttleworth.
10. Multiple Uterine Fibroids Complicated by Fœtus. John M. Macdonald.
11. A Case of Jacksonian Epilepsy. Frank W. Hall.
12. Notes on Beri Beri. Colin A. Campbell.
13. Cardiac Complications of Gonorrhœa. H. B. Anderson.

1. PETERS relates the history of a man suffering from dilatation of the œsophagus, which was due to constriction of the œsophagus produced by the hypertrophied condition of the pillars of the diaphragm, with or without a degree of spasm in that muscle. Section of the œsophagus at the point of constriction showed that there was no malignant or cicatricial tissue whatever, and that the circular muscular fibres seemed to be mechanically accumulated but not hypertrophied. The pillars of the diaphragm were exceedingly strongly developed. The left crus, supplemented by that portion of the right which crosses between the œsophageal and aortic openings was particularly strongly developed, and was not less than five-eighths of an inch in thickness at a point opposite the œsophageal opening.

Peters also relates the history of a case in which he performed œsophagotomy for the removal of a small vulcanite plate bearing one tooth that had been swallowed. Its position was detected by means of an X-ray photograph, which showed the plate lying at a short distance above the sternal notch.

2. FOTHERINGHAM and BINGHAM relate the history of a case of Graves' disease cured by operation. The thyroid gland was enlarged bi-laterally, both lobes and especially the isthmus being involved. The whole mass was removed except a small apparently healthy lobule situated at the upper part of the right lobe. Two interesting features occurred in the progress of the case after operation. First, an accession of a severe attack of acute Graves' disease on the following day, when the pulse ran 140 to 170, and the temperature 103°. There

was much shock, but these symptoms soon disappeared. The other feature was aphonia, with occasional lapses into phonation particularly during the night. The cords lay in a typically cadaveric position, so that the recurrent laryngeal nerve, though not divided at the operation, must have been roughly handled. The girl was practically well seven weeks after operation.

5. HALL relates the history of a case of recurrent gastritis and pyloric obstruction relieved by gastro-enterostomy.

6. BUTLER gives notes of a case of otalgia of dental origin.

8. THIRD discusses the diagnostic and therapeutic value of the Roentgen rays when properly applied.

13. ANDERSON gives the history of a man, 24 years of age, whose illness with cardiac symptoms and signs of septicæmia, followed a typical attack of what was recognized clinically as gonorrhœa, and that innumerable organisms corresponding in morphology, distribution, and staining reactions to the gonococcus were found in smears from the vegetations and blood of the left ventricle. The patient's death was undoubtedly the result of a systemic infection, with ulcerative endocarditis and pericarditis, of urethral origin and due to gonococcus.

The Canadian Journal of Medicine and Surgery (Toronto.)

April, 1902.

1. Transplantation of Ureters into the Rectum for Exstrophy of the Bladder—by the Author's Extra-Peritoneal Method.—Three Additional Cases. George A. Peters.
2. Sewage Purification. P. H. Bryce.
3. Pus in the Kidneys: Its Pathological Basis and Its Treatment. Thomas H. Manley.
4. An Appreciation of Pryor's Method of Removing the Fibroid Uterus by the Abdomen. Lapthorn Smith.

May, 1902.

5. Experiments in Climatology—The Canadian Summer. Ezra H. Stafford.
6. Vaginal Section—Exploratory and Operative. T. Shaw Webster.
7. On Some Medical Facts and Usages Among the Indians and French Canadians. W. L. T. Addison.

1. PETERS gives the notes of three cases of exstrophy of the bladder which had been submitted in the operation described by him in the *British Medical Journal*, June 22nd, 1901. The results have been very satisfactory in two of the cases, but operation in the third was followed by death on the fifth day, from acute ascending infection.

Dominion Medical Monthly (Toronto).

March, 1902.

1. Duties of a Nurse in Abdominal Surgery. Herbert A. Bruce.
2. Vomiting in Infancy and Childhood. B. E. Hawke.
3. The Anatomical Factor in the Production of Baldness. G. Elliott.

April, 1902.

4. Differential Diagnosis of Smallpox. James Patterson.
5. The Ethics of the Medical Profession. H. P. Elliott.

3. ELLIOTT points out that baldness occurs on the top of the head, and rarely if ever extends below the temporal ridges laterally, or even down to the superior curved lines of the occipital bones, posteriorly. Baldness extends lower in the middle line behind than it does an inch or so on either side of the middle line, posteriorly. This corresponds to the fact that there are no muscular fibres in the middle line of the occipito-frontalis muscle at its attachment to the external occipital protuberance, and the adjacent parts of the superior curved lines. The skin of the scalp, therefore, overlying the epicranial aponeurosis, has no underlying muscle to exercise it, and has only to depend upon the action of the occipito-frontalis muscle, to which it is closely adherent, and only moves when that muscle is put into action. In no other region of the body is there such an extensive area of skin which does not receive adequate exercise either through underlying or adjacent muscles. Although the scalp is very vascular, the function of the hair papillæ may be stunted by the slow return flow through the veins and lymphatics. There is no active muscular exercise in the part whatever, to hurry along the waste products and deoxygenized blood in the vessels. These structures being superficial and easily compressible, their compression by the rim of the hat will further retard their flow.

Baldness does not occur in the female sex to anything like the extent that it does in the male, and this may be due to the scalp being well exercised by the combing, plaiting, and the throwing from side to side. Women suffer from dandruff equally with men. Massage, therefore, the writer thinks is the essential treatment for baldness, and that it should be begun in early life. If the scalps of men received as much exercise as the scalps of women, there would be on the vaults of their craniums a luxuriant tonsure.

Society Proceedings.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, January 17, 1902.

G. E. Armstrong, M.D., President, in the Chair.

Drs. G. K. Grimmer and H. R. D. Gray, of Montreal, were elected Resident Members.

Subdiphragmatic (?) Abscess.

Dr. H. A. Lafleur gave the following account of a case of difficult diagnosis:—

A young man aged 24 years, came to me complaining that he had been spitting mucus for some years and that on December 27th, he had noticed that there was a considerable amount of blood in the expectoration. The next day he again spat up blood, and again on January 4th. He came to see me on the 8th and I obtained the following history:—

He had been spitting up mucus for a very long time, and occasionally tinged with blood, but never quite as much as on these last occasions. Careful questioning failed to elicit any history of fever, chills or sweating; he had not lost flesh, but weighed then 125½ pounds, his normal weight being 126 pounds. There was no history of pain, pleurisy or any gastro-intestinal disturbance.

I made a very careful examination of him but was unable to detect anything whatever in his lungs. He brought a specimen of sputum which was mucopurulent, but contained a very large admixture of blood. The first specimen looked like what one might expect to find in pulmonary hæmorrhage. I was not satisfied with my examination, although it seemed conclusive, and through the kindness of Mr. Watson of the Montreal General Hospital I made a fluoroscopic examination. No shadows were made out only a lessened excursion of the diaphragm on the right side on deep inspiration. It moved only the width of one intercostal space, instead of two or three. There appeared also to be an irregularity in its shadow, which instead of being horizontal and gradually tapering down, showed a little elevation at about the middle part of the curve. I searched two or three specimens of sputum, and made several preparations, but failed

to find any tubercle bacilli or elastic tissue fibres. The urine was negative and contained no casts, pus, albumin, sugar or blood, although of somewhat high specific gravity. The blood showed a full hæmoglobin value, red cells 4,500,000, and only 3,400 leucocytes to the ccm.

Being still in doubt and expecting deep seated abscess I again examined him on the 12th, and then I thought I detected in the right lower axillia, between the anterior and posterior axillary lines an area of impaired resonance, of a crescentic shape. This appeared to be more obvious when he was lying down, than when sitting or standing. Perhaps there was a little impairment of the breath sounds, and now and then one heard a crepitant râle on deep inspiration, and following cough.

I labelled this case provisionally a subdiaphragmatic abscess discharging through a bronchus, the pus which he coughs up being very homogenous and viscid. A specimen of the pus was shown.

Dr. Lapthorn Smith stated that if this was a subdiaphragmatic abscess, he would like to know where it started from, and whether it would be tuberculous in origin. Also how it was walled off, and why it was not a collection of pus in the lung, and how one is to know whether a small quantity of pus is above or below the diaphragm.

Dr. Macdonald would like to ask Dr. Lafleur what was the character of the expectoration as far as he had seen, as he had himself seen the patient about three weeks previously, and at that time, so far as could be made out from his narrative, he was spitting up pure blood.

Dr. W. F. Hamilton was very much interested in Dr. Lafleur's case, and would like to confirm the statements which he made, that there was an area of dulness which was very appreciable, but that varied with deep inspiratory movement. This corresponded to what Dr. Lafleur had observed with the fluoroscope.

Dr. Lafleur in reply to Dr. Smith, said that he had already stated in his report of the case, that he had enquired into all possible causes of subdiaphragmatic abscess, and had been unable to find a single one, and also that there were no tubercle bacilli in the sputum. As to where and how the abscess arose he did not know. The sputum when he first saw it contained a larger admixture of blood than the specimen shown. It was distinctly purulent at the same time, and did not look at all like the sputum one ordinarily saw in a tuberculous hæmoptysis. There remained only one thing to do, so far as he could see, and that was, if the condition continued and the sputum remained blood stained, to do an exploratory puncture. He was not in a hurry however to do anything, but would wait.

Demonstration of Animals Operated on. with a consideration of their Significance for Medicine.

Dr. Wesley Mills showed two pigeons, in the first of which the semi-circular canals on one side had been destroyed on September 4th. It had been highly incoördinate but had recovered marvellously within a few weeks. All that remained of the incoördination was the carriage of the head to one side. Thinking it would be interesting to observe what would happen if the canals on the other side were also destroyed, this was done, and the condition was almost as bad as in a second pigeon (also shown), in which the canals of both sides were destroyed at the same time on January 4th. Yet, even in the last bird, there had been some improvement. The bird in which both canals had been destroyed at once was the worse of the two.

Dr. Mills also showed some cats and a rabbit in which he had divided the cervical sympathetic nerve. The effects produced by division of the sympathetic are contraction of the pupil, dilatation of the blood vessels, rise of temperature in the affected ear, more permanent in the ear than in the rabbit, lessening in the size of the palpebral fissure, enophthalmos, diminished ocular tension and loss of hair. The loss of hair is the least important and is purely a trophic effect. The contraction of the pupil is due to paralysis of the radiating fibres which are supplied by the sympathetic, the circular fibres which are supplied by the third nerve continuing to act. This may pass off in a few days in the rabbit, but in the cat, dog and man, it is permanent. The narrowing of the palpebral fissure is probably due to loss of tone in the unstriped fibres of the lids. The enophthalmos is explained by loss of tone in muscle fibres not usually recognized in works on anatomy, namely, unstriped muscle in the lining membrane of the orbits of the eye. When the sympathetic is stimulated, the lids open up and the globe comes forward. This effect, exophthalmos, goes far to prove that exophthalmic goitre has to do with an affection of the sympathetic nerve. It has been proposed (and carried out) to divide the sympathetic for exophthalmic goitre, and from the results obtained in these cats, the operation seems to be one worth trying.

Dr. Byers said that the diminution of tension which was commonly said to occur after division of the sympathetic had been made use of in practice in cases of glaucoma in which iridectomies and sclerotomies had failed to reduce the tension. In a large number of these cases in which this procedure had been adopted in Germany and France, the division of the sympathetic had produced the required effect.

Dr. Deeks thought that these interesting demonstrations of Dr. Mills went a long way to explain and exemplify certain cases met with

in practice. He had seen, while abroad, a man in whom there was narrowing of the palpebral fissure and change in the pupils. Dr. Mills had stated this narrowing was not always permanent, and Dr. Decks thought this could be explained by subsequent contracture, as in all parallel conditions paralysis was followed by subsequent contracture. The connection between exophthalmos and lesions of the sympathetic had been already pointed out, and hence the theory which the Germans held that exophthalmic goitre was due to a changed condition in the thyroid secretion causing irritation of the sympathetic ganglia.

Dr. Shepherd thought that the points with regard to excision of the sympathetic had been pointed out very often. The late Dr. R. L. Macdonnell had reported a case of aneurism causing pressure upon the sympathetic and showed the resulting conditions produced. Excision of the sympathetic in exophthalmic goitre was a very old operation, but it had never gained the confidence of the profession, perhaps for the reason that the causes of exophthalmic goitre were so very various. Exophthalmos was only a symptom of the disease and one often saw enlarged thyroids without any other symptoms of the disease or again exophthalmos secondary to enlarged thyroid and disappearing after excision of the thyroid.

Dr. Mills, in reply, thought Dr. Shepherd's remarks with regard to the real nature of exophthalmic goitre were most important, his demonstration only gave a possible explanation of one of the symptoms. With regard to Dr. Martin's case, it was necessary to remember that unstriped muscle tissue was a sort of primitive one in some animals and seemed to have a tonus of its own, so that plainly there was a power in the higher animals of falling back upon its latent resources, derived from its invertebrate ancestors.

Epilepsy. Apparently of Nasal Origin.

Dr. R. H. Craig read the report of this case. See page 284 of the April number.

Notes on the Bacteriological Examination of Milk.

Drs. Wyatt Johnston and F. B. Jones presented a paper with the above title. See page 124 of the February number.

Dr. Lapthorn Smith asked whether the microbes found in milk were of such a nature that there was any real cause for alarm in using the milk.

Dr. Robertson asked where the tubes for the bacteriological examination of milk could be obtained.

Dr. Johnston in reply to Dr. Smith said that the majority of bacteria

in milk were harmless as regards pathogenic effects, some of them produce fermentation which rendered the milk undigestible, and this was well-known to be the main cause of summer diarrhœa in children, and there was a lamentably large mortality in the city in this respect.

The outfits for the examination would be kept at the Provincial Board of Health, and they could be returned there or to the Laboraotry of Hygiene at McGill University.

General Gonorrhœal Infection with Illustrative Cases.

Dr. W. F. Hamilton read a paper on this subject. See page 96 of the February number.

Dr. F. W. Gilday would like to hear an expression of opinion regarding the rest treatment. In a case referred to him, the knee was fixed at nearly a right angle, and the man was run down to about 100 pounds weight. He could not bear pressure, and could not stand anyone coming near him. He had been treated for four years. Fixation of the joint with plaster of Paris had resulted in the knee returning to its normal condition and the man's gaining 40 pounds in weight.

Dr. Lauterman thought it was most important that we should be familiar with the remote effects of gonorrhœa in the internal organs. He related a case in which a young man of 23 years, several months after he had had a urethritis, had come under his notice suffering from an endocarditis of the aortic valves. This was followed by an arthritis affecting one knee, and shortly after this suppuration of the ear, pure cultures of gonococci being derived from the pus. This again had been followed by an abscess in the temporo sphenoidal lobe and death. Unfortunately he was unable to procure an autopsy.

He also referred to a patient, in whom three attacks of erythema nodosum came on about the third day of a urethral discharge, and lasted until its termination.

Dr. Irving would like to hear something concerning the local treatment of these cases.

Dr. Robertson in females had noticed profuse sweating among the symptoms.

Dr. Hamilton, in reply, said that injections of a solution of protargol 1 in 4, and in severe cases of silver nitrate 1 in 4 were given. In the female plain water injections were used, sometimes medicated. Profuse sweating was not noticed in this case, although he had never seen a more severe one ; she had not had either hot air baths, which in some instances might account for the sweating.

Stated Meeting, February 7th, 1902.

G. E. ARMSTRONG, M.D., PRESIDENT, IN THE CHAIR.

Daily Medical School Inspection.

DR. RUTTAN read a paper on the advisability of introducing daily medical examination in schools.

DR. C. H. CHURCH read a paper entitled "Some observations on Conditions present in Schools of Montreal." (See page 182 of the March number.)

DR. R. TAIT MCKENZIE read a paper on the Influence of School Life on Curvature of the Spine." (See page 118 of the February number.

DR. J. A. HUTCHINSON referred to instances that had come under his observation as public health officer of Westmount, where infectious disease had been spread through the schools, and believed that many of them could have been prevented by an early diagnosis.

DR. A. D. BLACKADER expressed himself as strongly in favour of the daily medical inspection of schools, both on account of the lessening in the spread of infectious disease, and the detection of chronic diseases and those which had to do with fatigue and debility. Having an inspector making daily rounds and referring those in need of treatment to their parents, would educate the public to have their children brought under medical care. He hoped the Society would take some action, if even only to express an opinion on the matter.

DR. WYATT JOHNSTON was strongly in favour of the Society making an attempt to have medical inspection of some of our schools instituted.

DR. PERRIGO thought that even if the Society only succeeded in calling attention to the need of medical inspection of schools it was a step in advance. The parents needed to be educated. Often children were sent to school when not well and when presumably sickening from some infectious disease. Dr. Perrigo also referred to the need for modern school buildings; if the buildings were up to date it would be incumbent on the school commissioners to see that they were kept in proper order.

DR. WESLEY MILLS thought that if the discussion did no other good it would show the profession and the public to what extent Montreal was behind in some matters of education.

DR. GIRDWOOD pointed out that as attendance of children at school was made compulsory by the Provincial Government, the citizen was only within his rights in demanding that the schools should be in

perfect hygienic order. With a proper daily medical inspection such a condition as Dr. Church had described could not exist.

THE PRESIDENT felt he was expressing the views of all members present when he said that they were grateful to Professor Ruttan for putting the whole question before them, and to Drs. Church and McKenzie for establishing the fact that these conditions obtain here in our midst in such an extreme degree as to require the remedies suggested by Dr. Ruttan. The question was clearly one in which the medical profession should interest itself, and he would suggest that medical men be asked to volunteer to do the work for a year or two to establish the value of their services to such an extent that the public would demand that their services be continued.

DR. RUTTAN stated that the plan proposed by the President had been followed in Philadelphia, with the result that the public soon came to see the value of the system and insisted on its being carried on permanently.

Stated Meeting, February 21, 1902.

G. E. ARMSTRONG, M.D., PRESIDENT, IN THE CHAIR.

Drs. J. T. Halsey and A. S. Morrison, of Montreal, were elected Resident Members.

Quartan Malaria.

DR. CAMPBELL HOWARD read the report of a case of Quartan Malaria which had been in the Montreal General Hospital under Dr. Molson. (See page 179 of the March number.)

DR. FINLEY pointed out that this was the first case of quartan malaria in the records of the General Hospital, this form of the disease being very rare in Canada. The type of the parasite was quite distinctive from the larger size of the granules and their sluggish movements.

Calculus Pyonephritis.

DRS. ELDER and MCCRAE reported this case, the latter showing the pathological specimens. It will be published later.

DR. FINLEY congratulated Dr. Elder on having made the diagnosis, and asked regarding the prognosis after operation.

THE PRESIDENT, referring to the question of operation, said that when it was possible to determine the efficiency of the kidneys, after a little more experience had been gained, the operation of removing the capsule of the kidney after Reginald Harrison's plan, possibly under local anæsthesia, might be successful, though, of course, not in cases as severe as the one at present under discussion.

DR. ELDER, in reply, stated that Morris, in his latest work, gave it as

his opinion that, even in cases of double pyonephrosis, it was the surgeon's duty to drain the abscess cavity, and he furnished a list of a good number of recoveries. He agreed with the President that local anæsthesia would simplify matters.

An Anomalous Case of Leukæmia.

DRS. GRANT STEWART and G. GORDON CAMPBELL reported this case. (See page 272 of the April number.)

Cholecystectomy.

DR. MCCRAE reported a case of Dr. Armstrong's with the following history. The patient was a women of about 70 years, who at the age of 20 had had a severe attack of pain in the right side with vomiting. These attacks recurred at intervals of about two years, the pain being sharp and sudden and sometimes accompanied with jaundice.

The present attack occurred on February 3rd with severe pain in the right side, vomiting, feverishness without chills; and on February 6th she entered the hospital, having then a temperature of 101 2-5° and pulse 120. There was distension in the right hypochondrium and umbilical region, and on palpation the abdomen, elsewhere soft, was here rigid, acutely tender, and contained a hard mass. Her bowels had been constipated for four days.

An incision, three inches in length, was made over the mass, and after separating numerous adhesions, the tumour was found to be the gall-bladder, which was aspirated. The fluid obtained was first serous, then sero-sanguineous, and, finally, thick pus, which showed a pure culture of B. Coli communis. The gall-bladder was then incised and three large gall stones removed. Several gangrenous areas were seen in its walls. The whole gall-bladder was removed and the cystic duct tied off. The patient's recovery was uninterrupted.

The gall bladder (shown) was found to be much enlarged, the walls being from three to six times its normal thickness.

Aortic Aneurism.

The second case was that of a man 58 years of age, who suffered from extreme dyspnœa and pain in the chest, and had a small tumour appearing in the lower part of the sternum. The patient, a man of good intelligence, had been a cook most of his life, was addicted to alcohol, drinking heavily and fairly steadily, and had a very doubtful history of syphilis. The pain in the chest began in October, 1899, and along with it there was a dry cough. In February, 1901, the dyspnœa became troublesome and his voice husky and low pitched. He was unable to lie down, and then first noticed a small projection in front of the sternum. The case became more and more evidently one of aneurism, and the tumour

in the sternum enlarged. The only classical sign of aneurism which was absent was tracheal tugging. The patient was transferred from the medical to the surgical side of the hospital, but no operation was attempted. Treatment by subcutaneous gelatine injections was undertaken, three to four ounces being injected every second or third day. The gelatine was rendered aseptic, the supposition being that it would be absorbed into the system and assist coagulation in the sac.

At the autopsy it was seen that coagulation had occurred in the sac, and that the patient had died, not of the aneurism, but of an extremely severe recurrent urethritis, pyelitis and cystitis. The only evidence of pressure effects from the aneurism was œdema of the lower lobe of the right lung. The localization of the aneurism had been rendered doubtful during life by the low pointing of the tumour mass. The heart was pushed down until its base was opposite the 7th right costal cartilage.

The Value of Blood Examination as a Means of Diagnosis.

DR. C. F. MARTIN read a paper with the above title. (See page 161 of the March number.)

DR. LAFLEUR was glad that Dr. Martin had called attention to the value of examining unstained blood, as there was a general impression that it was always needful to stain to get good results.

DR. FOLEY asked if it were possible to diagnose syphilis by the condition of the blood.

DR. G. G. CAMPBELL thought it was not possible to place any reliance upon the presence or absence of eosinophilia in skin diseases as a matter of diagnosis. He thought that many of the discrepancies referred to in Dr. Martin's paper were due to faulty technique in the examination. The small amount of blood used in making a leucocyte count, for instance, made a very large error possible, as the blood instruments at present in use were far from perfect.

DR. ARMSTRONG referred to the importance that this subject of blood examination was assuming in surgery.

Stated Meeting, March 21, 1902.

SIR WILLIAM HINGSTON, M.D., IN THE CHAIR.

Pseudo-Progressive Muscular Dystrophy.

DR. J. B. MCCONNELL gave the following report of his case which was shown to the Society.

A boy, ten years of age, had good health up to the age of five, when his parents first noticed weakness in walking and evidences of ill health. This condition of weakness and loss of power gradually progressed from that time up to the present. Up to within two

years ago he was able to rise from his chair and reach to the ground, but since then he had been unable to get up himself. There was no history of any cause for his trouble, although he had had several falls (probably the result of his disease), and on one occasion had drunk a bottle of liniment in mistake for medicine. The family history was negative as regards any nervous troubles.

The physical examination showed a normal condition of all the internal organs, the muscular system alone being affected. There was hypertrophy of the calf muscles, marked lordosis, and atrophy of almost all the muscles of the upper part of the thorax. The deltoid was somewhat enlarged in its lower part but weakened in strength. He was unable to lift the left arm, but could, with a good deal of effort, raise the right one. The abdominal muscles were unaffected. The biceps and triceps were both atrophied, while the muscles of the forearm were not involved. The electrical reaction for degeneration was not present. A peculiar feature of the case was that the reflexes were lost in the right leg and very much weakened in the left.

Lupus Treated by X-Rays.

DR. G. P. GIRDWOOD showed a young woman whom he had treated by X-rays for lupus of the face. She was a native of England, and, after trying a variety of treatments, had come to Canada in the hope of gaining relief from the change of climate. During last summer he had begun the treatment by giving her eight sittings on alternate days, lasting eight minutes each. Then he had left the city, but resumed the treatment again in the autumn, increasing the length of treatments to ten minutes every day. As his treatment had been again interrupted by his absence from the city, he had latterly been using high currency instead of the X-rays, and had continued this for 27 days. The improvement was most marked, the only drawback being the presence of a brown discolouration of the scar; which, however, he believed would ultimately disappear.

The case was brought before the Society to show that this method of treatment was worthy of being given a trial. As to the relative efficiency of X-rays or high currency, Dr. Girdwood did not care to express an opinion.

DR. WILSON asked if there had been any deep ulceration present in the case, with discharge or odour, and if any rise of temperature had been noticed during the treatment, and also regarding the strength of current used.

DR. BAZIN had seen this patient in September, when the small patch on the right cheek was healed, but those on the nose and left

cheek both showed a good deal of erythema and lupus tubercles around the margins.

DR. GARROW asked regarding the length of time the disease had been present, and whether healing had ever taken place before.

DR. DEEKS had seen a number of cases in London treated by the Finsen light method and the result here was very like what one got from it, although the treatment by Finsen rays was more painful and slower. A feature about Dr. Girdwood's case was the absence of cicatricial tissue, and this contrasted strongly with the results from the light treatment.

DR. GIRDWOOD, in reply, stated that when first the patient came under his notice the smaller spot of the three was healed, the patch under the right eye was fully the size of the area of brown pigmentation now present, and the larger patch was also active. No rise of pulse rate or temperature had been noted. The strength of current used to put into the coils varied from 5 to 6 amperes and from 100 to 110 volts. He did not know of any way of estimating the strength of a current brought through the air to an object. The distance of the tube had been 12 inches at first and the time of treatment five minutes; later on the distance was lessened to 6 inches and the time increased to ten minutes. There had been no pain at any time and treatment had never required to be stopped for any untoward effect produced. The sound skin was protected by screens made of tea lead. At all times there was a strong odour of ozone present from the effect of the current on the oxygen of the atmosphere, but whether this had anything to do with the result could not be decided. The patient had suffered from the disease for ten years.

Dr. Girdwood also referred to the Finsen light method and explained by a diagram the construction of the instruments used in various forms of treatment by high frequency currents.

SIR WILLIAM HINGSTON congratulated Dr. Girdwood on the success of his treatment. Its great advantage was its painlessness. He mentioned the three different varieties of lupus and the treatment required for each. In lupus erythematosus he had had the best results from the continued application of water, and of red wash largely diluted with water. In all cases of lupus attention to the chylopoietic viscera was of the first importance. Sir William also mentioned the curious fact that most cases get tolerably well in the spring and worse in the autumn.

Fœtus Amorphous Anidous.

DR. RIDLEY MACKENZIE reported this case, DR. MCCRAE showing the specimen.

DR. CHIPMAN had seen the case reported by Ballantyne and had an opportunity of examining this case. The specimen was very rare, only nineteen cases having been previously described. As Dr. Mackenzie had said, it was a case of twins where one twin had become atrophied and ill nourished. The term generally used was Fœtus allantoido angiopagus, from the existence of the allantois together with "angio" a vascular mass, and "pagus," peritoneum. According to the time that the second twin perished, one found the limbs attached to it or not. As in this case no limbs appeared, this was the form, anideus allanto angiopagus. It would be remembered that in this condition twins arose from one ovum, there had been two germinal areas, or one which had split, the result being that there were two chorions, but in this case there was only one amniotic sac, which made the case rarer still. It would be noticed that the smaller cord was placed eccentrically and had the same twist as the larger one, and that the circulation of the two anastomosed in the centre.

The etiology of the condition was that two embryos, starting life together, for some reason or other one got the start, became stronger, and the embryo with the strong circulation overpowered the embryo with the weak circulation, the result being that the blood was driven by the strong embryo through the umbilical and hypogastric arteries. The heart of the weaker became atrophied, so that its head and upper portions atrophied, while the lower portion was nourished by the blood that was sent backwards through the umbilical arteries, owing to the contraction of the heart of the stronger embryo; in other words, the heart of the stronger nourished both. The first case described dated back as far as 1533, and the records to the present embraced only 19 cases.

Fractured Patella with Unusual History.

DR. GARROW reported a case of which the clinical history resembled more that of a sprain than of a fractured patella but a skiagraph had showed the mistake.

Electro and Radio Therapy.

DR. S. F. WILSON read a paper with the above title.

Correspondence.

To the Editor of the Montreal Medical Journal.

DEAR SIR,—I am sure that I express the feelings of all my colleagues in Nova Scotia when I thank Dr. Drummond for his sympathetic and appreciative obituary of our dear friend, Dr. W. S. Muir.

There is, however, one sentence which may convey a wrong impression, and I trust Dr. Drummond will pardon me for drawing attention to it. It is stated that I was called in and "at once recognized the presence of appendicitis. . . . ."

I fear this may be read as reflecting on those friends and colleagues, who had the privilege with me of attending Dr. Muir.

It was considered by all of us that the symptoms pointed to appendicitis, but these symptoms had improved so markedly, that on Saturday morning, when I saw him first, we all hoped the attack was subsiding. I feel bound to add that there were some new features of the case which suggested other lesions than appendicitis. All the alarming symptoms returned on Saturday morning, and the operation was performed as soon after as possible.

I am, Yours faithfully,

JOHN STEWART.

Halifax, N.S., Thursday, May 22, 1902.

THE

Montreal Medical Journal.

A Monthly Record of the Progress of Medical and Surgical Science.

EDITED BY

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FRANK BULLER, F. G. FINLEY,
H. A. LAFLEUR,

WITH THE COLLABORATION OF

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J. M. ELDER, F. A. L. LOCKHART, C. W. WILSON.
D. J. EVANS, W. F. HAMILTON, A. G. NICHOLLS,
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THE ESTABLISHMENT OF A MEDICAL COUNCIL FOR CANADA.

At last, after long years, during which without success one project after another has been suggested and ventilated for removing the disadvantages under which our profession labours here in Canada, the first active step forward has been achieved, and legal sanction has been given to the bill setting forth the constitution and powers of a Medical Council for the Dominion. We do not pretend that the measure as passed is all that we should desire, yet we cannot but recognize that its passage is a notable achievement; as again that the profession in every province from one end of Canada to the other owes a debt of gratitude to Dr. Roddick for his long-continued and strenuous endeavours, directed with a single mind and with absolute disregard to personal convenience, to improve the status of medicine in this country. For this is a beginning of better things: a beginning of such a nature that now it is given to us ourselves, unhampered by legislative interference (so long as our action lies within the limits and intent of the Bill), to develop a higher and more satisfactory state of affairs. And though assuredly the terms of the Bill, as passed, do not make advance too easy a matter—though some people rage and others imagine a vain thing, in fact many vain things—we cannot but believe that the sterling common sense of the medical

men of Canada as a body, and the obvious benefits to be derived from the operation of the Bill, will eventually overcome all the opposition, and provide us with a portal through which all who so desire may enter into the unrestricted exercise of their profession in any part of the Dominion.

For this, after all, is the main disability to be relieved. As matters are at present, though we are all Canadians and of a common nationality, it is forbidden to us under pains and penalties to cross the provincial boundaries and minister to other Canadians seeking our help, unless we have fulfilled every exaction of the licensing board of the province we seek to enter,—in other words, unless during our undergraduate days we happened to have followed the exact course demanded by that province. The British Columbian whose interests call him east is absolutely debarred from settling in Ontario and there practicing his profession unless he has in the past completed the course and taken the examinations demanded by the Ontario Board, or unless he is willing to spend years repeating his undergraduate work, in the process of taking the exact courses required. Our French-speaking compatriots settling in Ontario, Manitoba, or New Brunswick, cannot obtain the services of a fellow-countryman as a village doctor because of these same embargos, save in the rare case of a bilingual French physician who has ventured to enter, and has succeeded in passing, examinations in a language not his own, and upon subjects taught in a manner different to that in vogue at Laval. For undoubtedly the French tradition in medicine differs from the English.

That this should be the case is preposterous, and the only way to overcome the difficulty is that proposed in the measure before us. The rights of individual provinces have to be fully protected; each province must retain the right to determine the curriculum and the minimum standard of knowledge to be exacted from all who seek to practice within its borders; but if a central Dominion Council, composed of representatives from all the provinces, establish a curriculum and a standard of examination fuller and more severe than that demanded by any individual province, then the interests of each individual province are safe-guarded. What the province demands regarding qualifications to practice is fulfilled and more than fulfilled, and the Provincial Board may safely license holders of the qualification of the Dominion Council, on condition that the licensee on his part promises to abide by those regulations of that Board which bear upon matters other than the curriculum of study.

Also there can be, and there is, no compulsion brought to bear on the individual provinces to agree to subscribe to the measure. Any such compulsion would be invasion of provincial autonomy; the measure

only determines the method to be followed in securing the interprovincial pact. By its terms there can be no interference with the regulations of the Medical Board of any province concerning the course and the examinations to be taken by those who elect to practice purely within that province. Should political influence ever show itself, and the Dominion qualification ever become lower, or its restrictions more elastic, or should these be thought to have become lower than that of any province, it is in the power of that province to withdraw from the pact. At most the establishment of the Dominion qualification may indirectly lead to the gradual raising of provincial qualifications throughout the country, though equally well it might lead to the reverse, and the development of a higher and a lower order of practitioner, though we admit that this is most unlikely.

Here we would note what appears to us a wholly unnecessary paragraph and one constituting a serious weakness in the Bill. We are unacquainted with the reasons which led to its admission. We refer to the paragraph to the effect that the Council shall only begin its existence when *all* the provinces have legislated to the desired end. We can see no satisfactory reason why the Bill should not have been so drawn as to afford a means by which, say, a majority of the provinces could enter into an agreement to accept the diploma of the Council as adequate for admission to practice within those provinces. It is true that according to the British Medical Acts, Canadian practitioners cannot obtain imperial registration until common action is taken by all the provinces. But however much we may desire to see our Canadian graduates recognized, as they ought to be, outside Canada, this is of secondary import compared with the need for the establishment of what we may term "fair trade" within Canada itself at the earliest possible moment.

We would also have preferred a less cumbersome Council. Its very size may from pecuniary reasons alone, render it difficult to call it together. Considering that, throughout, each provincial medical board would have the means of directly influencing the Council, i.e., that it could under the present constitution break up the Council by withdrawing from the pact, if the Council did not fulfil its demands regarding attendance upon courses in and examinations upon all the subjects required for its own particular license—it strikes us strongly that at most two representatives from each medical board to represent the Provincial interests, and with that, the general practitioners of each province, and a single representative from each medical college, to represent the more purely educational interests, would have afforded a perfectly adequate corporation. For as we say, according to the

constitution set down, the council is practically controlled by the provinces. Were it to legislate for medical education and qualifications in general the matter would be quite different, but this it cannot do ; it can only arrange to see that the terms of the interprovincial agreement be carried out.

We know, however, that in this matter Dr. Roddick had to steer his barque according to the currents, and not irrespective of them. The representatives appointed by the Federal authorities must clearly be regarded as a "sop to Cerberus" and as giving the Government a continued interest in the Council. The regulation that the representatives of the medical boards are to be unconnected with any teaching body, is evidently intended to gain the good will of the general practitioners throughout the country. The regulation concerning the number of representatives according to the number of practitioners in a given province, is obviously a concession of the demand from Quebec and Ontario for greater representation than, for example, that given to Prince Edward Island. All the same we regret that political considerations have thus hampered the efficiency of the proposed council.

This subject of due representation has undoubtedly been a grave difficulty. Our French colleagues in Montreal have realized what is here stated, and have given a loyal support to the measure during its passage through Parliament ; they have comprehended that the College of Physicians and Surgeons of this Province of Quebec can always exercise an effective control in the interests of French-speaking graduates and undergraduates. Unfortunately other influences have been at work in Quebec city and neighbourhood, where a violent agitation has been conducted against the Bill, notably by our young colleague, *Le Bulletin Médical*. With an inflation and imaginative powers that are truly Tarasconnais, alas ! but in a spirit that is the reverse of Tartarinesque, the profession is informed that this is an insidious attack upon the French-Canadian people ; that it is an imperialistic measure ; that it is an attempt to force upon the French of this Province the professional education favored by English-speaking people ; that it is a covert attempt on the part of Dr. Roddick to establish McGill as the eventual Dominion school of medicine, to which all who require the higher degree will be bound to come ; and, in short, that the measure is a subtle but shameful attempt to trespass upon, if not eventually to do away with, provincial autonomy, and to coerce and nullify the French medical schools. The very excess of this hysterical attack has defeated itself, and we hope sincerely that the cold water treatment administered at Ottawa by the leaders of the French-speaking people of this country, has had a most salutary

effect. The pity of it is in the after effect. The expression of sentiments so uncalled for, so unjustified, as those to which the *Bulletin Médical* has given utterance, is certainly not calculated to make us in this province dwell together in unity and brotherly love.

Tempora mutantur. It was in Quebec, and in the Quebec Medical Society, that the movement in favour of Dominion Medical legislation had its birth and this in 1867, even before confederation was an accomplished fact!

As regards McGill, we would point out to the *Bulletin Médical* and to others, what must be evident to any one who thinks for a moment, namely, that Dr. Roddick in his anxiety to conciliate other interests has converted his Bill into a self-denying ordinance, so far as regards the Faculty of which he is now head. The leaders in our profession in all the larger centres are associated with the teaching staffs of the various medical schools, and the Federal Government therefore, in appointing its representatives and seeking out leading men, is likely to choose a majority of those who hold university and teaching appointments. In this province it is almost inevitable that the Government appointee will be selected from the French majority. The consequence is that whereas Laval, the University of Toronto and the schools in other provinces, may frequently have two representatives on the council, McGill University can never expect to have more than one. "Is this ambition"?

ON A RETIREMENT FROM THE EDITORIAL STAFF.

It is with keen regret that the Editorial Board of this Journal has complied with the request of its Senior Member that his resignation be accepted. For now twenty years Dr. Roddick's name has appeared upon the cover of this Journal and we his colleagues have consistently received his loyal support and time and again have profited from his wise advice. But over and above his services to the Journal as such, we as a Board experience a sense of personal loss in his absence from our meetings. If it be permitted to strike this personal note we would say that to each and all of the Editorial Staff the monthly meetings of our body have been a most valued institution, bringing us together in a way which no other occasion has shown itself capable of doing, so that the departure of one of our band from among us on these occasions is a rude interruption of old associations. Not but that we have become gradually prepared for this loss. Now that the Act for the establishment of a Medical Council has been passed we may let our readers know that, from the very beginning of the public crusade which has had this successful ending, Dr. Roddick has constantly urged us to accept his resignation, in order that we might feel

ourselves perfectly free to criticise the proposed bill, and that our readers might not regard the Journal as his official organ. But as we found ourselves at one with him as regards the need for the measure, and as a body had time and again discussed the need for such legislation and the form that it should take, knowing that our views coincided with his and that, whether his name appeared on our title page or no, our remarks would still be regarded as inspired by him, we refused to see the force of his argument, refused to accept his resignation. We are at liberty to state, however, that as a matter of fact only that in our pages has been inspired by him which has had his signature appended to it.

That he now leaves our Board is from similar motives. With his succession to the Deanship of the Medical Faculty of McGill, his continuance as Senior Editor might seem to imply that this Journal is the official organ of that Faculty. Such it is not. This Journal all these years has been, as it continues to be, a private enterprise unassociated with any corporate body, even though all the Editors happen to be members of the Teaching Staff of one university. Unwillingly we are compelled to recognize the force of this objection on his part, and to see further that, were he to continue a member of our staff, we could not in our leading articles support one or other proposed modification of the medical curriculum without making it appear that he as Dean was already committed to the scheme.

Admitting the force of these arguments we have therefore to submit to the severance of our old associate from us. We do this most regretfully.

AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION.

Owing to the illness of Dr. Wyatt Johnston, the Annual Address of the American Medico-Psychological Association, which holds its 58th Annual Meeting at the Windsor Hotel, June 17th to 20th, will be delivered by Professor T. Wesley Mills, of McGill University, on the evening of the 18th *proximo*.

The following are the titles of some of the many interesting papers to be read at the approaching meeting here of this body ; Folklore of Insanity, Dr. Henry M. Hurd, Baltimore, M.D. ; Boarding Out for the Chronic Insane, Dr. J. H. McBride, Pasadena, Cal. ; The Possible Influence of Rational Conversation on the Insane, Jas M. Buckley, D.D., L.L.D., Morristown, N.J. ; Women Nurses in Hospitals for the Insane, Dr. A. B. Richardson, Washington, D.C. ; the Psychology of Anarchism, Dr. Jas. Russell, Hamilton, Ont. ; Dementia Præcox, Dr. Wm. Rush Dunton, Towson, M.D. ; The Early Diagnosis of General Paresis and the Possible Curability of the Disease in its Initial Stage,

Dr. E. D. Bondurant, Mobile, Ala. ; The Psychical Symptoms of Focal Disease of the Brain, Dr. Chas. K. Mills, Philadelphia, Pa. ; An Analysis of Two Homicides, Dr. E. C. Runge, St. Louis, Mo. ; Hydriatics as an Adjunct in the Treatment of Insanity, Dr. E. C. Dent, New York ; The Criteria of Insanity and the Problems of Psychiatry, Dr. E. Stanley Abbot, Boston, Mass. ; How near akin are Insanity, Crime and Degeneracy ? Dr. J. Elvin Courtney, Denver, Col. ; Care of the Insane in Brazil, Dr. W. H. Kidder, Ogdensburg, N.Y. ; The Study of Psychiatry To-day ; What Should it be ? Dr. Louis G. Robinovitch, New York ; On a Few Important Terminal Diseases of the Insane, Dr. Adolf Meyer, Ward's Island, N.Y. ; Litigious Insanity, Dr. Edward B. Lane, Boston, Mass. ; The Organic Sensations in Mental Pathology, Dr. Edward Cowles, Waverley, Mass. ; Some Results and Possibilities in Family Care of the Insane in Massachusetts, Dr. Owen Copp, Boston, Mass. ; Observations on the Insane Negro, Dr. W. F. Drewry, Petersburg, Va. ; Night Nurses in State Hospitals for the Insane, Dr. C. R. Woodson, St. Joseph, Mo. ; The Development of Self-Control, Dr. W. H. Hattie, Halifax, N.S. ; A Case of Adrenal Tumors of the Left Mid-Frontal and Ascending Frontal Convolutions of the Brain, Drs. Walter Channing and Wallace M. Knowlton, Brookline, Mass.

Dr. James Stewart, Professor of Medicine of McGill University was elected President of the Association of American Physicians for the coming year, at the annual meeting held at Washington during the present month. This is the first occasion on which a Canadian has been so honoured.

The Medical Profession of Montreal entertained at dinner in the Place Viger Hotel on May 7th, Dr. Rottot, Dean of the Medical Faculty of Laval University, Dr. D. C. MacCallum, Emeritus Professor of Obstetrics of McGill University, and Sir William Hingston, Professor of Surgery of Laval University, all of whom have completed fifty years of the practice of medicine.

The dinner was a most successful and representative one. Dr. F. W. Campbell, Dean of the Medical Faculty of Bishop's College and University, presided and 150 of the leading members of the profession of both nationalities had assembled to do honour to the veteran members of their profession. The chairman, in his speech proposing the health of the guests, stated that such a gathering as the present had met only twice in fifty years, when similar honours had been paid to the late Dr. George W. Campbell, Dean of McGill University and Dr. d'Orsennens, late Dean of the Victoria College. Dr. Rottot graduated in 1847, Dr. MacCallum in 1850, and Sir William in 1851. Each of the three veterans made an appropriate reply.

Proceedings of the McGill Medical Society of Undergraduates.

CHARLATANISM PAST AND PRESENT.

CLOSING ADDRESS BY PROF. C. F. MARTIN, HON. PRESIDENT.

With this evening's meeting your Medical Society closes one more season, a season such as deserves the heartiest of congratulations to all those who have interested themselves in the society. Your committee has excelled in providing a programme which, to the best of my recollection, has not been equalled in any previous year of the Association, and the large attendance which has greeted the contributors on each and every occasion warrants me, I think, in speaking as I do. That you have been willing to attend these meetings so regularly and in such large numbers indicates, too, an eagerness to learn something more than what mere text-books and lectures teach, and to broaden out into the more collateral interests of the profession. That this is a matter of no small importance will I think be easy for everyone of you to realize inasmuch as by the improvement of one's general culture one is better able to carry on with honor and dignity a profession that has well been called learned. In answer to the question, "How am I to acquire culture, refinement and a proper style in writing and speaking, some one has said: 'not by imitating or mimicking anyone.' It is with writing as with good manners and breeding: Keep good company and do your best and you will write and speak and act like a gentleman. You think and feel and live with gentlemen. Our medical man nowadays, with few exceptions, writes ill. They are slovenly diffuse, obscure and curiously involved, and this for several reasons: first, he must master so much knowledge before he writes and so much time is thus taken up that general literature is neglected."

In considering along what lines I might most suitably address you, I was brought to believe that the relations of the physician to the public in general and to each other, was one which might possibly be of some interest, and perhaps well timed, more particularly for those who are about to sever their connection with their Alma Mater. Judging

from the vast number of physicians who fail utterly to realize that intellectual honesty and a devotion to the dictates of a noble profession are features without which no self-respecting member can decently exist, I thought that a few words on the subject of charlatans, empiricism and medical ethics, might properly occupy our attention for a short while, and that I might deal with certain subjects concerning which a previous lecturer in his masterly treatment of the subject of medical ethics, found it impossible in the short time at his disposal to consider. I have taken the liberty of entitling my address, Charlatanism Past and Present, for which reason it will be well that we realize the exact meaning of the term and the relationship it bears to the practice of the regular physician.

As you all know, a charlatan is one who is a boastful pretender to an art he does not understand, in other words a quack. Some have used the term 'empiric' in much the same sense, though it should be remembered that the empiric is one who relies upon experience as the sole guide to his methods and disregards scientific facts. There may thus be two kinds of empirics, the one ignorant, possibly innocent, and certainly honest, the second, equally ignorant, probably not so innocent and certainly dishonest. To the first class belong the physicians of the Dark Ages, some to the time of the Renaissance, and alas! many physicians to-day who are ignorant, but innocent and honest. While an empiric may be wrong in his methods and ideas, so long as his intentions be honest we would not care to class him with the charlatans; where the intentions are dishonest he can belong to no other category but that. Some indeed, while practicing what they must know to be dishonest, have yet a certain amount of faith in the superstitions which they advocate. Such for example was Dr. Teasdill, of Buffalo, who claimed to remove from the alimentary canal of his patients, frogs, lizards and serpents which he regarded as the common cause of disease. His certificates were of the best, his clients numbered among them many men of prominence, though his power to do away with disease depended upon, he thought, the possession of certain amulets, which indeed were found upon his person when he died—on his neck a horse-shoe, a nut and a shilling and on his arms some curious bracelets. All of this, however, merely goes to show that his honesty was greater than some, inasmuch as the mere wearing of his charms indicated that he himself believed in their mysterious and potent influence. Charlatan as he was in his methods and ideas, he is no worse than the more intelligent man, who, without amulets or nostrums or the street stage, impose upon the credulous public and who are almost equally entitled to the brand which I trust none here will ever be called upon to receive.

It is doubtless known to many of you that charlatanism dates back as far as does history and that Hippocrates, 400 B.C., was loud in his exclamation against quackery,—against those who sought to cure epilepsy with amulets and charms, against those in whom superstition was uttermost in the treatment of disease. To his way of thinking the physician should possess a mind of such tranquility and dignity as to be superior to superstition, for it is impossible to be superstitious, he said, and at the same time see the truth. It is a far cry from Hippocrates to modern times, from the ancient Greeks, cultured and uncultured, to the highly intellectual modern, but charlatanism, in those early days a profitable undertaking, has taken more, not less, hold upon the public. The same principles exactly which induced the old Romans to endeavour to ward off the plague by driving nails into the wall of Jupiter's temple, causes even the educated man of to-day to wear a leather ring for his rheumatism, an electric belt for his dyspepsia, 13 chestnuts in his pocket (and the number is important) for his gout and to send his children to the homœopathist. It was the same superstitions which made thousands in the 17th century seek for a cure against scrofula by a touch of the king's hand; but it was intellectual dishonesty and a mistaken idea of loyalty which made Dr. Wiseman, the authority on surgery at that time, to state that there really was efficacy in the king's touch to heal that disease.

As the famous Dr. Jno. Brown has said in his delightful book, Horae Subsecivæ, which every medical man should read and know well, Paracelsus was a renowned and ill-understood medley of evil and good, darkness and light, quackery and skill. His autobiography concluded his work as follows:—In a word, he boasted of more than he could do; did more cures seemingly than really, more cures really than lawfully; of more parts than learning; of more fame than parts; a better physician than a man; a better surgeon than physician.

There are times, however, when quackery really appears in the guise of a benefit, and we owe much to Paracelsus for exposing and doing away with the false pathology of earlier times. Not that his own was any better, for among his many remedies was one to render man immortal, and it was only with his death at 48 years that its inefficacy was made definitely manifest.

It is doubtless a wonder to most medical men who have been trained to a logical way of thinking, that the public, intelligent or otherwise, should acquiesce so readily in the suggestions of the well advertised but otherwise unknown healer. It however, merely proves the sound sense of Pliny's assertion, that any one with a sufficient stock of impudence may reasonably well pass for a physician. With what sur-

prise and amusement, for example, do we read that a certain Michael Schuppach in Switzerland became famous throughout Southern Europe through, as it is stated, "his wonderful and uncommon knowledge of the urine." Without seeing his patients often and by a mere inspection of the urine he presumed to diagnose and treat disease, and with what success may be judged from the fact that his clients came from far and wide, from Italy, France, and the surrounding Swiss Cantons. He received them wearing a nightcap and a waist-coat without sleeves, and it was only after a long series of successes that his downfall arrived. A prominent individual, who had expressed his wonder at the cures, was induced by his own regular physician to send the charlatan, instead of urine, a bottle containing tincture of saffron and chalk for diagnosis and suggestions for the treatment of his malady. The bottle was duly received accompanied by the fee and in reply the nature of the disease was described with the suggestions for its cure. His speedy ruin was, of course, the consequence. Previous to this a reputable physician had endeavoured by publications to protect his fellow citizens and to expose the unreasonableness and dishonesty of the individual, but these were disregarded and his efforts were set down to jealousy rather than to philanthropy.

Nor is it easy to understand how Christopher Ozanne, an illiterate peasant in 1698 became so famous for his skill that three coaches a week travelled from Paris to Chandray, 40 leagues, filled with patients anxious to consult him. Among his patients, too, there were dukes and princes, but to this far-famed consultant the sequence of admission to his consulting room was always adhered to, and neither rank, wealth nor any other distinction was permitted to interfere with it.

Where persons of great prominence, either politically, educationally or otherwise, are willing and even eager to indulge in the fads and impostures of the charlatan, it is scarcely to be wondered at that the populace, ignorant, less distinguished, and still more easily swayed, should follow their lead. We hear, for example, that Queen Anne and George I, gave the charge of their eyes to a man named Read, originally a tailor or a cobbler. He is said to have practiced by the light of nature and was unable even to read. So far did his influence succeed his impudence that a knighthood followed, and even though it was only from Queen Anne, it serves to point a moral and adorn a tale.

What applies to the early part of the 18th century applies with almost equal force to the early days of this our present 20th century and the following, from a man whose school of clairvoyance was such as to give him a handsome income, may exemplify the gullability of our unfortunate untrained public.

"Dr. ——, Clairvoyant and Botanic Physician. Terms of Treatment $5 per month, payable in advance. All medicines found."

"S——— Maine, Jan. 25th, 1886.

Mr. H.....,

Dear Sir,—

Yours received. The trouble in this case is caused by chronic disease of the liver and kidneys which causes the blood to be sluggish in circulation, leaving the blood impoverished and impure, debilitating the mucous tissues of the kidneys, stomach and lungs and debilitating the gastric juice of the stomach, also the nervous and muscular system. Consider the case can be helped. Notice head of letter for terms of treatment.

Yours respectfully,

W. W. F."

For graphic presentation and explicitness of diagnosis, this, I think, has rarely been excelled.

The relation of the physician to his colleague, the harmony of which makes so much to enhance the pleasure of one's practice is a feature which I firmly believe is altogether underestimated by a large majority of physicians. I say this, too, advisedly, for after some years' association with men in different parts of the country, recent graduates and very much older men, I have been struck how frequently, more especially in the smaller towns, this relation has been crystallized into one of envy or distrust. One realizes how difficult it is to overcome at times, though the spirit with which a medical man enters on his profession should be such as not to preclude his greatest rival from being socially his most intimate friend and associate. Petty jealousies and hard feelings are very much out of place in a profession which has for its object the physical betterment of mankind and the relief of all bodily ills. It is a good principle and one worthy the learning, that in our criticisms of people in general it is far better to emphasize their good qualities and to overlook where possible those features which are unworthy, and this more particularly among the colleagues of our own profession. It is usually the lot of many recent graduates as soon as they settle in the home they have adopted for their career, to be called in as consultants, and this also at the request of the physician almost as much as the patient, the impression being that with the newer teaching of the more modern medical schools it may be possible for this novice, no matter how young he be, to afford further light in the diagnosis or treatment of the case. Under these conditions the newly arrived is carefully watched by both patient and physician and

it remains for him to select one of two courses, (provided that is that there has been no gross blunder in the treatment or diagnosis of the case which will menace the welfare of the patient)—in the first place to suggest an entirely new line of treatment and proclaim that under trial as quite unsatisfactory, thereby gaining for yourself perhaps more rapidly a name among the community and the eternal animosity of the physician. Or else, in the second place, to respect the opinion of your colleague and support him wherever possible in his methods and in his treatment, remembering the while that Nature is kind and that with very different modes of treatment one may arrive at a very successful end and cure. Under these circumstances one is intellectually honest, a gentleman, a friend to his colleague, and has in no sense lost the regard of those patients who have done him the honor to consult him. Even regarding the matter from the point of self-interest one may say that he has cast his bread upon the waters, for some day he may sorely need the kind sympathy of that colleague and his support, for it is only human to err, and when that time comes he may remember with satisfaction and relief the friend whom he on a previous occasion saw through a similar trial.

I would not, of course, imply for a moment that any patient should suffer at the expense of the feelings of any physician, but even where according to your own ideas grave errors are being made in the management of any case, it is possible always for you to so arrange the matter, that those concerned need not realize either the gravity of the mistake, the great need of changes that are suggested, nor even the faulty diagnosis which was made. The temptation at times to show up a colleague may be great, for the temporary enhancement of your reputation, but the satisfaction in protecting *his* reputation should be, I think, always is, of infinitely greater magnitude. Where an alternative exists, which is really of no importance and is yet insisted on in the treatment, and that, too, with great *éclat*, it is nothing short of charlatanism to thus take advantage of a colleague. Medicine is not sufficiently an exact science that there may not be a great selection in the methods of treating many diseases ; the means of handling various diseases change enormously from year to year, and very often the law of one decade is an absurdity in the next.

The more one regards the members of our profession the more one has to learn the extent to which commercialism has become rampant. The more one has to regret, too, how charlatanism in a small way predominates with the regular physician who has had the advantages of a first-class university education. It is not necessary that a charlatan be ignorant as well as dishonest, he may take the form of a consulting

physician or of a mere associate in the same locality, and we see him, when in contact with a patient who has been treated by another physician, convey his disapproval, not merely by direct condemnation, not necessarily by ordering that the medicines hitherto prescribed be thrown out of the back window, but by a much more quiet though none the less unkind means of insinuation—a smile of disdain, a shrug of the shoulders, a raising of the eyebrows, each is sufficient to indicate to the patient's friends one's opinion of the previous treatment, or what is still worse, a sympathetic condolence with the patient that he has been so badly treated. A physician from the West whose experience with the modern charlatan enabled him to judge, refers to the class of physicians who should belong to such a category. Incidentally he remarked: Should it be your misfortune ever to live in a town where a charlatan of this type dwells, you will find perchance that after you have called him in to consultation, he has incidentally and of his own accord dropped in to see your patient—just in a friendly way of course, or as a friend—and possibly while there he has taken the liberty to prescribe just for the time being and because the unfortunate patient seemed to be suffering so very much. Incidentally, too, while in the same house he may sympathize with *your* patient, *his* friend, that the attending physician is so inefficient. Or should it be your misfortune to have been unable to prevent a fatal termination of the disease, your charlatan colleague will lament with the friends or neighbours that he was called in when it was too late; that had he been enabled to see the case earlier so much might have been done, and his conspicuous presence at the funeral will add to your disgust and make you wonder how the graduates of recognized medical schools can be so badly trained in the ordinary laws of decency.

One is, I think, well justitfied in placing men like this in the category of charlatan, for in the large majority of cases they are verily imposters, inasmuch as their treatment, let us say of a case of pneumonia, is not likely to vary so much in its results from your own. That they are in some respects worse than the sellers of nostrums and charms is palpable from the fact that their deception is being carried on under the guise of an honorable and noble profession. That medical men should encounter friends in the streets and should declare, unsolicited, that they know of one or other form of treatment superior to that being tried by their own physician, must seem to most of you an outrage, and yet you will be surprised to learn that this is sometimes practiced at no great distance from the Canadian metropolis. So easily is the public imposed upon, so well is the medical profession suited to quackery.

That the ordinary means of advertising in the daily papers are the best means of communicating facts to the public, is something which the quack has long since realized; that this is unethical for a regular physician so to do need not be told to any of you, and yet with what regret do those men interested in their Alma Mater receive from time to time copies of newspapers, chiefly, I am glad to say, in the West, with this or that advertisement concerning our graduate doctors. Little do they realize, I imagine, particularly those of recent graduation, that the clippings were being passed around the classes to the disgust of every member who had known their senior student, to the disgust, too, of every teacher of the faculty. One reads somewhat like this:

"Dr. ....., Graduate of McGill of the class of 189—, McGill University, Professor of Medicine in the University of ..... Specialist on Diseases of the Lungs and Heart, Eye, Ear and Nose; Obstetrician and Gynæcologist; Major Surgery receiving all attention. Consulting Hours 9—12 and 2—4. 126 ..... Street."

The same gentleman appeared in Montreal a short time ago, and seemed to be quite ignorant of some of the most important recent changes which had taken place in the medical scientific world. Although the professor of medicine in the university of the town, he did not know the method by which the Widal test was done, although it had then been used for some three years.

These are a few of the topics which I thought might be worth our consideration this evening, for to my mind there are some things of far greater importance than diagnostic acumen and surgical skill.—intellectual honesty, a right relation with our colleagues and their proper respect is of greater importance than even the love of the laity and the accumulation of a large fortune. Let it be said of every member of the profession who leaves the halls of old McGill that "he bore, without abuse, the grand old name of gentleman, defamed by every charlatan and soiled by all ignoble use."

NOTES OF A REGIMENTAL DOCTOR IN A MOUNTED INFANTRY CORPS.

BY

C. B. KEENAN, M.D., Surgeon-Captain, Strathcona Horse.

I feel some hesitation in bringing this paper before the members of a medical society, because it does not deal wholly with medical subjects. It contains the notes, some medical, some not, that I made from time to time while filling the position of a regimental doctor. As any one of you might in the future fill a similar position, a brief outline of the work to be done might be of interest and advantage.

Selecting, or rather overlooking men already selected, was the first duty. As the men were already enlisted, and brought over 1000 miles, this was an easy task. Rejections were few. The first case was that of a men with a glass eye. Rejection was necessary although he had a splendid physique and was a very good marksman. There is a popular opinion that a man who has only one eye, that being healthy, is usually a very good shot. Whether there is any ground for this the honor men in ophthalmology can decide. When rejected and told the cause, he did not see the justice and remarked that one good eye was better than two bad ones. The other case rejected was that of a man with old injury to elbow joint causing limitation of movement and ulnar paralysis. The infirmity would not have interfered with his shooting ability but would have prevented him from doing the heavy work of camp routine.

On looking over the work performed by the individual men, I must confess that if the selection was made again it would be of a slightly different character. The best men are those of medium size, 5 ft. 7 in. to 5 ft. 10 in.; weight, 150 to 170 lbs. Better of a rather nervous type. Avoid big men if possible, and especially if loosely put together. These men, although willing and eager to do the work, lack stamina, and if they contract disease usually have it in a severe form. Gross physical defects, as hernia or hæmorrhoids or marked varicose veins, render a man unfit. A slight degree of varicosity in veins of legs does not, especially in mounted infantry, prevent usefulness. The same holds true for slight degrees of pes planus. Be very careful about enlisting men who have been subject to severe cold or wet, or have undergone severe manual labour for a number of years. These men are very subject to the aches that are usually included under the head of chronic rheumatism and that greatly interfere with a man's usefulness.

Teeth should be good or at least put in good repair at time of enlist-

ment. Poor teeth were a frequent cause of digestive disturbances. Avoid alcoholics. A regiment of teetotallers is not possible nor even desirable, but when a man bears visible marks of overindulgence in alcohol, his usefulness as a soldier is gone.

On your second day of duty you will have a sick parade. This is the one parade where you should not require the men to stand at attention. This position, especially in men not accustomed to it is very tiresome, and where the man is in the early stage of a severe disease is an unnecessary hardship. Treat the men as patients, not as privates. At the sick parade, you will divide the men into three classes. Men to be sent to hospital; men to be given medicine and put off duty; and men to have medicine and continue on duty. The regulations provide for anothers class, *viz.*, medicine and light duty, but on active service this class is hardly feasible. About the first class there is seldom any doubt, but whether to put a man on or off duty is often very difficult. Always remember that putting one man off duty causes an additional burden on the next. If undertaking a sea voyage, have a thorough inspection of the men before embarking. Take no sick men, as even on the best equipped ships the hospital facilities are rather poor. If possible have your hospital located near the centre of the ship as the motion is least felt there, and this is a great boon to patients suffering from *mal de mer*. Sea-sickness is usually only a temporary indisposition, but at times it is very severe and of prolonged duration. The most marked case developed in a man of exceptionally powerful physique. I might mention in support of this that he was one of the best inside wings of a champion Rugby football team of last season.

On the second day of the voyage, this man commenced to suffer from severe nausea and vomiting with weakness. Ease was obtained only on lying down. Pulse ran 88 to 100, weak; temp. 97 to 98°, no organic disease could be made out. In spite of all the usual treatment, such as purgation, stimulants, bromides and compression of abdomen, this condition persisted to the end of the voyage (that is about 30 days) and disappeared after landing. One case of pneumonia, one case of traumatic hernia, and one case of carbolic acid poisoning were all the serious cases that occurred during the voyage. There were no deaths. The men were vaccinated but not inoculated with typhoid serum.

On disembarking, my sick were handed over to the disembarking medical officer, and I was free to land on solid earth with the thankfulness that can only be felt by one predisposed to *mal de mer*. On proceeding to the camping ground we thought they had picked out a specially sandy spot, but later found that all camping grounds were alike.

My first days in Cape Town were spent in becoming acquainted with the British Royal Army Medical Corps. This corps consists of medical officers, hospital attendants, stores and transports. The individual medical officers are under command of the commanding officer of the corps, who details them to this regiment or that hospital as he sees fit. The medical officers wear the uniform of the R.A.M.C. and not of the regiment to which they are attached, thus differing from the Colonial medical officers, nearly all of whom were attached to some particular regiment and wore its distinguishing dress.

The usual duty of a regimental doctor was treating minor ailments, sending men to hospital, giving first aid to wounds and seeing that none were left on the field. At times a regiment would be a long distance away from a field hospital and then the doctor must be prepared to treat fully all cases of wounds and disease. This renders his equipment more extensive than it otherwise would be. For mounted troops an ambulance is necessary, as this force often does its work 3 to 5 miles from the transport, where the hospital ambulances are. The regiment moves over large areas. Men may be wounded at any time. If a man is left where wounded, he may either fall into enemies' hands, or, if night is near, be lost in the darkness. No matter how kind the enemy are known to be, a wounded man dislikes falling into their hands.

I have not yet seen a perfect army ambulance. It should be strong, yet light, as little wood as possible in construction, as this is affected by change in climate. It should have capacity for four recumbent patients, carry six extra blankets, a convenient reservoir of two to four gallons of water, and a means of heating water. Stretchers should be light; some light laths for splints: a very small operating set; large supply of dressings and very few medicines. As all treatment is supposed to be done in hospital, all medical equipment is so arranged; thus a regimental doctor's equipment is really part of an hospital equipment and is, therefore, too cumbersome. There were some smaller cases sent out by private firms, but in every case the vials or cases containing the medicines were much larger than the medicine contained, and so constituted unnecessary bulk. Medicines should be in form of hypodermic tablets or tabloids, in small, thin, water-tight boxes. Chloroform is the only bulky substance. Sterile bandages, and a very small amount of antiseptic absorbent cotton should complete the outfit. The total amount should not be over 25 lbs., at which amount a very complete outfit could be made; five lbs. at least should be chloroform if in a warm climate, and ether if in cold.

Passing on to the next unit in the R.A.M.C., *viz.*, a Field Hospital. There is one field hospital to a brigade. A field hospital as its name implies is mobile and travels with a brigade. It gives first treatment.

but its main aim is to get rid of its patients as fast as possible. It has no beds; the patient lies on stretchers or blankets. It has transport of its own. As soon as possible the patients are sent to stationary hospitals. These are hospitals that are kept far enough behind the fighting line to be out of danger. Here patients have beds and cases are treated to a finish. However, these stationary hospitals are supposed to be gradually advanced from time to time as the line of fighting advances. The total number of beds is 100.

Next is the Base Hospital, 500 beds, where the most serious and chronic cases are dealt with, and attached to which is a convalescent camp. Several base hospitals were stationed in ships. A hospital or ambulance train was the means of communication and did splendid work. Supplies for a regiment are obtained by requisition on base supply stores or hospitals. I always found supplies abundant and easily obtainable.

In this connection I might refer to diseases I met with in South Africa. Enteric or typhoid fever, as you are aware, was the most serious disease affecting the army. It was prevalent among troops stationed near the towns. The water supply was usually blamed. Nearly all the water supply in South Africa comes from surface water. In Africa the sand consists of fine dust, not coarse grains as we see it in Canada. A high wind carries dense clouds of this dust over large areas, and thus pollutes all standing water even in reservoirs. This is one reason for the wide spread of disease. Typhoid or enteric in South Africa is exactly similar to the disease met with in Canada. Cases were severe where the men had undergone great fatigue and in the ambulatory type. There seemed to be a tendency to a rather severe bronchitis. Delirium was usually absent. In patients that had been subject to fatigue, a sleepy condition changing into coma, with gradual weakening of pulse and, later, death was often seen. Hæmorrhages were also numerous and severe. Perforation was also a frequent cause of death. So far as I know, there was no case of suturing of intestines for typhoid perforation. The treatment was mainly tepid sponging; trional was used extensively for restlessness.

The total number of cases of typhoid in my regiment was 49 out of 500 men, 9.9 per cent., and of those 10 died, 20.9 per cent. In this connection I might mention that none of the men of my regiment were inoculated with typhoid serum, as were the majority of the later drafts sent out from England. Statistics bearing on the result of typhoid serum have not yet been published, but the general opinion among the doctors in South Africa was favourable. While it did not render immune it apparently caused the disease to run a milder course. In the base hospitals, the mortality from typhoid, considering the condition

of the patient on entrance, was not heavy. On looking over a report of No. 5 General Hospital, kindly placed at my disposal by Dr. Peters, who was civil surgeon attached, I find out of 320 cases of enteric, a total death of 55, 18 per cent. A double or treble ration of tea or coffee, giving men cold tea to drink, while marching, instead of water, would be the best prophylactic.

Here I will mention a disease peculiar to South Africa and closely resembling the lighter forms of typhoid, *viz.* : Velt, Camp, or, as it is termed in Army Reports, Simple Continued Fever. This is a definite disease; onset usually sudden, with pains in back and long bones, severe headache, often nausea, occasionally vomiting, followed later by diarrhœa. Very rarely chilly sensations. Temperature at onset, 100° to 102°, pulse, 80 to 100. The feeling of malaise was extreme; local physicians laid great stress on the existence of a pain at umbilicus during onset, as a characteristic sign. However, this was not constant, and it, as you know, is common in any disease affecting the abdomen. English physicians remarked on the similarity between simple continued fever and that form of la grippe termed gastric influenza in England. I never found enlarged spleen, never an eruption, never any involvement of lung or kidneys. One attack usually rendered the person immune. Almost every man had an attack; 53 cases were severe enough to be sent to hospital. There was only one case where a man had two attacks. It is never fatal. Every physician in South Africa had a specific. A combination of phenacetin and salicin was the favourite. Rest, low diet and purgation was invariably followed by recovery inside of 7 days. The chief danger lay in mistaking a case of typhoid for simple continued fever. It is not contagious.

Dysentery was also prevalent in South Africa. It was not prevalent there previous to the entry of troops. It was found chiefly around Ladysmith and De Aar. Clinically it resembled amœbic dysentery, but amœbæ were not discovered in stools, and I do not know of a case of liver abscess following. There were 53 cases of dysentery in my regiment, as per hospital reports, but the majority were simply severe diarrhœa. There was no death. There were two methods of treatment of dysentery. The modern method as taught by London schools, and the old Indian Army method. The method liked by the Indian Army surgeons was that of a castor oil purge over night, 20 to 30 minims of tincture of opinion in morning, followed in 30 minutes by 30 grains of pulverized ipecac, with mustard blister to epigastric region. All fluid was witheld for 6 to 12 hours. This certainly seemed to abort some cases. If not successful, bismuth and opium was the later treatment. The other method was the giving of drachm doses of a saturated solution of magnesium sulphate every hour for

six doses. This also was of value. Of course if this failed, the after-treatment was the same as above.

The other special disease was the veldt sores. These are ulcers found on exposed parts, mainly on backs of hands, but sometimes on legs, never on face. It commenced usually as a small red papule, changing in a few hours to a vesicle about one quarter inch in diameter, filled with a watery or blood-stained serum. This broke and an ulcer was present which also extended till one-half to one inch in diameter. The ulcer was deep with overhanging edges and involved the true skin. I never saw it involve deeper structures. It had a slightly reddened margin, was slightly painful, and healed leaving a definite scar, slightly pigmented. A streptococcus was stated to be always present, when the fluid of bleb was examined, but since cellulitis or even adenitis was rare, its virulence was slight. The ulcers healed readily under cleanliness with aseptic dressing and rest of part.

I might also mention that an occurrence of an epidemic of jaundice closely simulating Weil's disease was noted as several spots in South Africa, one of the chief being at Kroonstadt. Malaria was absent in the parts of the country we traversed, although in a warm climate with standing water. The absence of mosquitoes may have some bearing on this.

I had a total of 24 cases of wounds in my regiment; three cases of bullets passing through lungs, all on left side, in second interspace. No sign of involvement of lung tissue. No hæmoptysis. No shock. Uninterrupted recovery. My first case was unfortunately given an excessive amount of alcohol so that he was almost uncontrollable about one hour after being wounded. In spite of this the man was walking on the second day after being shot, and was discharged from hospital in nine days. However, I would not advocate alcohol as a routine treatment for penetrating wounds of the lungs. I had no penetrating wound of the abdomen. Two cases of neck wound, one from side to side just posterior to angle of jaw, and one in front of left sterno-mastoid about centre and emerging just to left of median line. In neither case did any symptoms occur. Whether bullets went through blood-vessels or around them I do not know, but I never saw a case of severe hæmorrhage following a Mauser bullet wound. It was found in case of penetrating Mauser bullet wounds of abdomen, that it was better not to operate immediately. Rest, abstinence from food for 24 hours and no operative procedure, unless plain evidence of peritonitis or severe hæmorrhage occurred, gave the best results; of course no opium.

Venereal disease caused an absolutely appalling number of invalids.

Even if apparently cured for one month, the exposure caused a return. There was an order that no man with venereal disease was to be sent up to the front, but it was usually disregarded.

I have now exhausted the strictly medical portion, and will turn to the active work. There were several Army Hospitals in Cape Town, all of which were well equipped and doing good work. Parts of the town are very pretty, but, as seen here, there is in that city two races that can hardly be said to live in harmony, and so the evil effects were manifest.

There are no medical colleges in South Africa, but the best work in medicine is done at Grahamstown, the centre of a thriving English settlement.

After six weeks stay in Cape Town, we went on a supposed secret expedition along the East Coast : secrecy was the weak point. Its destination was known, so the expedition came to naught. We then went back to Durban, and here found two large hospital ships. They were well suited for purpose and had good accommodation. Then a trip through Zululand, a pretty country but very rough. Around the capital, Eshoewa, is one of the nicest spots in South Africa ; rolling country, well watered, with clear running streams, fringed with a thick belt of trees and a very fertile soil, makes it a place much to be desired. A short stay there, then a ride of 120 miles back to Durban, past sugar plantations, and orchards where oranges, bananas, pineapples, etc., grew in abundance. Hindoo shrines and Hindoo laborers caused one to think of India. These Hindoos have been imported for the sake of cheap labor with the result of becoming a serious drawback to the welfare of the country. Then by train, past Ladysmith and Dundee to Newcastle, where we disentrained, and for want of better accommodation slept in a church with no blankets. We then marched through Laing's Neck and reached Buller at Ingogo, and were assigned to No: 3 mounted brigade under Lord Dundonald, and the serious work began.

The next day we started on an advance towards Standerton. No Boers were seen, and at night the men were fully convinced that they never would see any, and that the war was practically over. The next day we heard the blowing up of the railway bridge at Standerton by the Boers. We entered Standerton, and found it a small town built mainly of stone or plaster houses. It had as all South African towns have, a general air of untidiness. There were several stores, but little in them. Every person in this town was intensely loyal to England. However, this was the rule and it always disappeared with the departure of the British troops. We made a short stay in Standerton and then went westward to clear the railway towards Pretoria. On July

1st, when the men came under fire, one man was killed, a bullet struck his cartridge belt over the liver, causing flattening of bullet and a large entrance wound with immediate death.

We now found that a large Boer column was moving parallel with us. We halted at Greyling Staldt where we had several little engagements and two men severely wounded. Here we began to tire of army beef and biscuits, and tried Boer bread, but found that the cooking was very poor. The bread was what one would term almost dough here. Almost all the Boers suffer from dyspepsia, for which they take large quantities of glycerine, and the cooking is undoubtedly the cause. The vindictiveness and unforgiving qualities, the dourness, as the Scotch would say, displayed by the Boers, is undoubtedly caused by the dyspepsia brought on by the badly cooked food. If any of you purpose going to South Africa to practice I should advise you to pick your house-keeper in Canada. In this connection I might mention that to a Boer the beauty of his lady is measured by her adipose tissue, so anti-fat methods find no favor there. We then had our first experience of pompom shelling, and it disorganized the ambulance service as the negro drivers wheeled the ambulance and started for rear. However, I must state that on several future occasions these men displayed great coolness and bravery. They were Zulus. Thence up to Vlakfontein and Heidelberg with the usual daily skirmishing. I had several opportunities to visit Boer farms and treat the sick Boer women, as their own doctors had all left. I found them invariably kind and courteous, and although a considerable distance outside British lines, was never molested.

This work of railroad guarding not being very interesting, we were glad when word came to return, refit, and start north to attack the Boers at their last stronghold at Belfast. Word was sent to medical officers to lay in supplies for three weeks; all immediately laid in supply for two months. I got the ambulance in good repair and traded mules till I secured a good team. I got a Scotch cart also loaded with supplies, and got rid of all weak and sickly men. A man liable to take sick should never be taken on a hard campaign. On the first day's march we had a severe engagement at Paardekop. That night the transport was stuck, so we all went supperless to bed with no blankets. As hunger and cold kept most of the men of the different regiments awake, they investigated the contents of a store. As it was dark the majority invested in small jars that they supposed would contain food, but were disappointed when morning showed them to be the possessors of a variegated assortment of paints.

Ermelo was next taken during a blinding sand storm. It is a neat and well built town, as South African towns go, and contained a few

fairly well supplied stores. The hospitals contained several sick Boer soldiers. When these were informed that President Kruger had left for Europe, they would not believe it, and stated that they knew him to be a brave old man who would die in, and for, his beloved Transvaal. Next past Carolina, which three of our men held on their own account during the night in spite of a large Boer commando outside. We then touched the south edge of the Boer position at Van Wycks Vley, and while working along the Boer lines to get in position to attack their centre there was severe fighting. At this spot I had the honor of having my ambulance shelled. However, at the distance the shells came from, the Boers could not distinguish an ambulance from an ammunition waggon.

The key to the Boer position was a small rocky hill beside the railroad. It was towards this the main force of the attack was directed. From early morning till late in the afternoon a continuous shell fire was directed at this spot. Throughout this time one could see large bodies of men in extended order marching steadily forward to be in a position for the final charge. When they got to within a short distance of the Boer line, one saw a large body of horsemen disappear over the hill, followed by a rush of British infantry, and the day was won. Some of the Boer guns were worked till the British infantry were within a few hundred yards. Some of the Boers, chiefly those of the Staats Artillery and Johannesberg Police, remained in the trenches to the last and were killed by the charging British infantry.

This was the first place where I saw the effects of lyddite. In open space it has an effect extending only a short distance around. It causes a severe concussion, and if close, it may render a person unconscious, and at the same time cause a general swelling of exposed parts with hæmorrhages from nose or ears. Such cases nearly always recover completely. If further away, it only causes severe headache and nausea or vomiting. Dilute acids are almost a specific for the evil effects. In confined spaces or on rocks it is a very destructive agent, but on soft ground is not effective.

The next day we entered Machadodorp and secured some of the stores of the Boer army. This rendered active service rather pleasanter. Our next march was to release the last of the English persons at Noitchedodorp, but, the guards having fled, they released themselves a few hours before our arrival.

Next towards Lydenburg. Our way lay through a very fine valley called Radfontein. This was an uncomfortable position, valley was narrow, with steep high hills on either side, mostly held by Boers. Owing to a misunderstanding, four of our men were sent to take positions as outpost on a small hill already occupied by the enemy. When near,

they were ordered to surrender, but refused, and died fighting, but took three of the Boers to bear them company. Two men who went to search for these met a similar fate. While in this valley the column was subjected to rather severe shell fire by the Boers. During one day there were 250 shells, weighing on an average about 50 pounds fired at the British force, which was well within range. The total casualties were two men slightly wounded. When you calculate that over six tons of metal were required to wound two men out of a force well within range and having no artificial protection, merely that of slight unevenness of ground, you will obtain an idea of the uneffectiveness of modern artillery fire. The outlet to this valley, a position of great natural strength, was vacated by the Boers on the eve of the attack and an undisputed way left to Lydenburg. Following the rule laid down in Wolseley's Soldiers' Pocket Book, we marched through Lydenburg and camped on the side next the Boers. This was in full view and within range of the enemies' artillery. After a field hospital had its tents nicely pitched, the artillery opened fire. After a few attempts to carry patients to a place of safety the Indian attendants left. The position of patients lying on stretchers with shells passing overhead was not pleasant, but no one was hurt. In the morning our camp was shelled again but, as usual, no wounds. Later in the day a company passing over the same ground did not extend and the one well-aimed Boer shrapnel shell, I have seen, burst almost over them, killing five and wounding 13 more.

Our advance now lay over very rough country. A mountain called the Moutchberg succeeded by hills termed the "Devil's Knuckles." It was a road that could be traversed only one way. The Boers never attempted to stop the advance, merely delayed it. We were now in the region where the reserve stores of the Boer army were, so our fare became more plentiful and varied. The men occupied their spare time in washing for gold in the streams. Some of them secured quite an amount. They commenced working a gold mine when stopped by the commanding officer. Next past Spitzkop, about the highest spot in the Transvaal. Through Pilgrim's Rest, a thriving mining town and the present seat of the Boer government. Up to Kruger's post where we were shelled during the night as an adieu by the Boers.

We then turned southward again rather disappointed, and reaching Machadodorp, were ordered to turn in our horses, being now fully convinced that the war was over, so I turned in my ambulance and stores. Then by rail to Pretoria, a sleepy spot surrounded by hills, on which are situated very strong forts. I stayed here for two days. The water supply is poor, so enteric and dysentery commenced to develop again. We had been almost completely free from this since leaving Cape Town.

To our astonishment we found the war not over and were refitted and sent to the Western Transvaal. We were given English horses, and these were responsible for a number of fractures and sprains as, unused to prairie, they never looked where they were putting their feet, and if a hole was there they invariably put their foot in it with disaster to their rider. I was equally unfortunate in my ambulance mules, two of which died half an hour after starting and the remainder came into camp two hours later. There was a severe fight at Frederickstadt, where the Boers had a British general surrounded and cut off from his water supply. I saw several examples of bayonet wounds of abdomen. These were always fatal. The Boers were around the British hospital and one of the doctor's had his horse there. When the Boers were running away one of them took the doctor's horse with profuse apologies for so doing and promises of early return. However, that horse has not come back yet. During this battle, three Boers who were overtaken by the charging infantry threw down their arms and surrendered. After the line had passed they picked up their arms and shot a sergeant and man. They were tried by court martial and shot. It is necessary that a soldier's word should be trusted when he states he surrenders, otherwise there would be a large unnecessary slaughter.

After a couple of weeks' experience of night marches, we entered Polchesfstrom. I saw a case here where a man was shot about four feet distant from the mouth of a gun, the bullet entering the upper lip and leaving through the occipital bone, completely shattering the base of the skull. This shattering is a usual result of steel mantled bullets at short ranges. The children of the town were very eager for our army biscuits and obtained quite an amount, as we supposed they were hungry. But later we found they were collecting the biscuits to send to men on commando. Just before we entered Polchesfstrom, several of the townsmen returned home telling their wives and daughters that it was for their protection. However, they were told that their wives and daughters were well able to take care of themselves and back on commando they had to go. Our time in Polchesfstrom was pleasant; football, baseball, tennis and dancing, relieved the monotony of active service. Then a march into Klerksdorp, another turn at railroad guarding and then we went to the South of the Orange River Colony to join in the popular pastime of chasing De Wet. During the railway journey they halted us one night alongside an unguarded supply train containing unlimited supplies of rum, jam and biscuits. No army rations were required for quite a period afterwards.

We disentrained at midnight and started out for a supposed 36 hours march, taking neither blankets nor supplies. We were out six weeks. We had no field hospital, only two ambulances to a column of 1500

men. Facilities for transportation and treatment of sick were therefore limited. This was the most unpleasant period, but luckily we escaped any deaths. We saw De Wet's army, and could have taken his transport, but orders were to chase him towards a strongly guarded line; we chased him there and he galloped through.

There were so many columns operating in this vicinity that it was difficult to tell British from Boers. The Irish Yeomanry had twice been fired on by mistake for Boers, and gave warning that the next time they would return the fire. The next day they were again fired into by a body of regular cavalry. They retaliated and were not molested afterwards.

On going to attend the wounded of another column that had suffered severely, I saw several examples of wounds made by the soft-nosed, steel-mantled bullets. They cause a small entrance wound. Then the bullet mushrooms and shatters everything in front of it. A wound, other than in arms or legs by one of these bullets is nearly always fatal. They were sporting ammunition used by Boers when the Mauser ammunition ran short.

After a few more skirmishes, back to railroad, entrained for Cape Town, and embarked for home voyage. We had six cases of enteric on home voyage, and two cases of pneumonia; no deaths.

Now turning to a subject that many of you will be interested in, the future of South Africa as a site for medical practice. There will certainly be a large increase in the English speaking population of the Transvaal in the near future. The Transvaal and eastern portion of Orange River Colony possess a fertile soil. The climate in spite of sand storms is very fine. It is dry and clear, much resembling that of Texas. In spite of dust storms it is a suitable climate for cases of chronic pharyngitis or consumptives. In the Transvaal there are vast quantities of gold fields, many of which have never been worked. There is coal in plenty. Johannesburg will undoubtedly be the principal town, but Barbeton, Lydenburg, Klerksdorp and Pilgrim's Rest will be thriving mining centres. Under Dutch rule, the degree of a recognized medical school permitted one to practice, and the same holds good at present. In a short time a British License will be necessary.