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Original Communications.

THE SOLDIER AND THE SURGEON.*

BY SURGEON LT.-COL. G. STERLING RYERSON, D.S.O.

It was with pleasure, not unmixed with fear and trepidation —a fear born of knowledge of my own unworthiness and of the great merits of the lecturers who have preceded me, and, perhaps, of the keen and well-informed critics that I see before me—that I accepted the flattering offer of the committee to address you to-night on the subject of the medical service of the Imperial army and of the Canadian militia.

It may not be out of place to say that my mind has long been directed to military medical affairs, and that I ascribe this fact as being due in no small degree to the influence of a great painting which adorned, and still adorns, the walls of the auditorium of the Faculty of Medicine of Paris. The picture represents a sixteenth century battle-scene. In the distance are groups of men engaged in combat. In the foreground is an operating table, on which is strapped and held by the blood-stained assistants, a powerful man who has just had his leg lopped off by the old circular method. To the right of the picture is a brazier filled with glowing charcoal, in which repose several cautery irons, one of which is being handed to the king, who offers it to the surgeon, Paré. Beneath the picture in letters of gold runs the legend, "The King aids their efforts and rewards their zeal." Gazing upon this painting day after day as I followed the lectures, the idea came to me that I would like to become an army doctor. It was not my fate to enter the service of the Imperial army, but I made

* A paper read before Canadian Military Institute, March 6th, 1899.

what haste I could to enter the militia medical service of my native country, on my return to Canada, on the completion of my education abroad.

Military surgery has kept pace with the scientific advance of the century, and the field surgery of to-day differs as greatly from the septic scenes of horror of the sixteenth century as the telegraph does from pony express.

During the bloody civil war in the time of King Charles I. some attempt was made to organize the English medical service; for we read of regimental mates, hospital mates, regimental surgeon, surgeon to a general hospital and surgeon-general, as being recognized ranks in the army of that unhappy monarch. But it was during the wars of Marlborough that the British army medical service took form and increased efficiency. Previous to that time soldiers who were so seriously maimed as to be rendered ineffective were simply discharged, the State believing that it was cheaper to hire whole men than to restore the sick and the maimed to health. It declined to be held responsible for those who suffered in its service, and let them shift for themselves as best they could. The morality of the proceeding did not seem to enter into the question. There was no clear distinction between the land and sea service, though there was between physicians and surgeons, and it was no uncommon thing to hold double commissions, combatant and non-combatant, the holders serving in either capacity as suited their interests or convenience. The services were separated in 1796. In Marlborough's time it was considered effeminate to be sick, and there are lusty yokels who hold that view still, but the bloody and exhaustive battles of the time, and especially in the low countries, where malaria stalked its prey unchecked brought the strongest to a sense of their fallibility.

As in all stressful periods of British history there arises the man for the emergency, so at this trying period, Marlborough's principal medical officer, Sir John Pringle, proved himself an able administrator, a man of courage, of indomitable energy, with the service of his country and the honor of his profession ever uppermost in his mind. Under circumstances of the greatest difficulty and under every disadvantage, he rose to the needs of the occasion and organized a system of regimental, field, and general hospitals. The first general hospital was opened at Ath, May 11th, 1745, and, after the battle of Fontenoy, cared for 600 wounded. It was not, however, until many years later, during the Peninsular war, that surgeons were first assigned to regiments in the field. Sir J. McGrigor, the P. M. O. under Wellington, a man of energy and ability, devised the regimental system of medical officers which has held sway until recently in the Imperial army, and which holds

good to-day in Canada. That the medical officers were active and efficient will be admitted when it is stated that in ten months from the siege of Burgos up to the battle of Vittoria, the total number of sick and wounded admitted to hospital was 95,348; yet on the eve of the battle there were only 5,000 sick in hospital, the vast majority of the 95,000 having returned to duty.

In 1812 a corps called the Royal Waggon Corps was organized, special waggons with springs being constructed for the conveyance of sick and wounded. This corps was disbanded in 1833.

In 1854, on the outbreak of the Crimean war, the Hospital Conveyance Corps was called into existence. That it was not a success was chiefly owing to the total want of special training of the men for their duties, and because the medical officers had no authority over the men.

It was followed by the Land Transport Corps. This corps also came to grief because there was no cohesion or organization which would work, and because it fulfilled but one function required of it, viz., the conveyance of the wounded. The important duties of attending to wounded on the field and in hospital were not provided for. In consequence of all these failures the first Medical Staff Corps was organized in 1855. It consisted of nine companies of seventy-eight men each, "to be employed in any way that may be required in the performance of hospital duties." There were scarcely any military features in this corps, and it also collapsed in about three months. The chief cause of failure was the doubtful and anomalous relations of the medical officers to the combatant authorities. The medical officer had no military authority, hence no power of enforcing discipline.

On September 15th of the same year, this corps gave place to the Army Hospital Corps, which possessed full military organization. The ranks were chiefly recruited by transfer from the combatant ranks of men of good character. Each man spent three months on probation in a military hospital before being finally enrolled in the corps. It was under the command of captains and lieutenants, of orderlies and quartermasters.

In 1858 a Royal Commission, under the presidency of Right Hon. Sidney Herbert, brought in a report which remodelled the department and established the army medical school.

In 1873 Mr. Cardwell, Secretary of State for War, the author of so many army reforms, abolished the regimental system by Royal Warrant and placed all medical officers on a staff. Regimental hospitals disappeared under this warrant, and became part of station or general hospitals, as the case might be.

In 1877 medical officers were given authority over the A. H.

Corps, non-commissioned officers and men, as well as patients in hospital and soldiers attached for duty.

In 1883 Lord Morley's committee made recommendations, which were adopted, the principal ones being the vesting of the control of hospitals in the medical officer in charge, and the assimilation of the A.H.C. and A.M. Department, both to wear the same uniform (blue with black facings).

In 1889 a committee, under Lord Camperdown, was appointed to make inquiries into the pay, status, and condition of the medical service. One of the committee's recommendations was the adoption of military titles, prefixed by the word "surgeon," as, for instance, "surgeon-lieutenant-colonel," etc. These titles carried precedence and other advantages, but a limited executive power, hence they were found unsatisfactory.

By Royal Warrant of July 1st, 1898, the medical staff corps became the Royal Army Medical Corps, and medical officers were given full military titles. The duty of supplying transport to the R.A.M.C. devolves upon the Army Service Corps, the officer commanding the detachment taking his orders from the senior officer of the R.A.M.C.

Regiments which have served in the great battles of history are justly proud of the deeds of their predecessors, and emblazon the names of the regiment's battles in golden letters on their colors, while *esprit de corps* runs high. Should we not also be proud of the medical corps of the Imperial army, which has served with distinction and fidelity in *every* battle since Marlborough's time? Soldiers have their heroes. We also have ours. The names of Ambroise Paré, Peter Lowe, Richard Wiseman, Larrey and Longmore are emblazoned on the annals of military medicine. Nor have medical officers been lacking in military courage. "Have you ever heard of Surgeon Thomson, who, during the Crimean war, when the army marched off after the terrible battle of the Alma, volunteered with his servant to remain behind on the open field with 500 wounded Russians, and passed three awful nights, these two Englishmen alone, among foreign foes, none able to raise a hand to help himself? Have you heard of Assistant Surgeon Wolseley, of the 20th regiment, who, at the battle of Inkerman, had quietly established his dressing station in that awful place, the Sandbag Battery? When the 150 men were forced to desert it, they fell back and found in their path a Russian battalion. There was not a combatant officer left, so the assistant surgeon took command. He had not even a sword, but laying hold of a musket with a fixed bayonet, he gave the word of command, 'Fix bayonets. Charge.' The soldiers answered with a British cheer and sprang forward to the attack. The next instant they were breaking their way through the

Russians. Only one-half got through alive, and among them our hero. Have you ever heard of Surgeon Landon, who was shot through the spine while attending to the wounded on Majuba Hill? His legs were paralyzed, but he caused himself to be propped up, and continued his merciful work until his strength ebbed away. You may recall the more recent case of Surgeon-Captain Whitchurch, who gained the Victoria Cross at the siege of Chitral for the most determined courage in saving the life of Major Baird.

"There died a short time ago a certain Surgeon-General Reade, C.B., V.C. During the siege of Delhi, while attending to the wounded at the end of one of the streets of the city, a party of rebels advanced from the direction of the bank, and having established themselves in the houses of the street, commenced firing from the roofs. The wounded were thus in very great danger, and would have fallen into the hands of the enemy had not Surgeon Reade drawn his sword, and calling on a few men near him to follow, succeeded, under a very heavy fire, in dislodging the rebels from their position. Surgeon Reade's party consisted of ten in all, of whom two were killed and six wounded."* Surgeon Reade was a Canadian, and one of the two sons of a colonel in the militia, both of whom greatly distinguished themselves. I might add that of 118 wearers of the Victoria Cross fourteen are surgeons, nearly 12 per cent. of the whole number, or 9½ per cent. of all the officers of the army, a record of which we may be justly proud.

Knowing the brilliant and meritorious services of army medical officers it gives one a shock to learn that it was only after many failures, many struggles and much heart-burning, after a prolonged period of unjust treatment, which, to the colonial mind is incomprehensible, that the medical service of the Imperial army has reached the present point of high efficiency and excellent organization—a state of things largely due to the tenacity with which the leaders in the struggle have stuck to the text, and the cordial and active support which they have received from the medical profession throughout the empire, chiefly through the medium of the British Medical Association. We, in Canada, have all the advantage which comes from the experience of others without the trials and anxieties which attend the gaining of experience, and I am happy to think that nothing but the best of feeling has always existed between the different branches of the service. No better proof of this can be adduced than that we have as the responsible Minister of Militia and Defence, an able, open-minded and progressive medical officer, Surgeon Lieut.-Colonel the Hon. F. W. Borden, M.P., who has the very great advantage

*Banks. "The Surgeon of Old in War."

of the assistance of one of the ablest and most tactful general officers by whom the Canadian militia has ever been commanded. Under the united guidance of the SOLDIER and the SURGEON, I look forward with confidence to the future.

Having thus sketched the historical and evolutionary side of my subject, let me ask your attention to the practical work of the medical service in so far as organized relief and transport of the wounded are concerned. In order to understand the way in which a wounded soldier is brought from the fighting line to the base hospital, it is necessary to refer to the composition of a British army corps in the field. Such an army corps would consist of about 40,000 men, about the strength of our militia, under the command of Lieutenant-General. It would be composed of 3 divisions of infantry, and each infantry division would contain about 10,000 men in 2 brigades. The medical detail for each division would be, besides the regimental bearers, 2 bearer companies, 3 field hospitals of 100 beds each, and one divisional field hospital in reserve. The corps troops have also one field hospital. The cavalry division would number about 6,500 men, and would have attached to it 2 bearer companies and 3 field hospitals of 100 beds each. The whole medical detail for the division, exclusive of regimental bearers, would be 8 bearer companies, 10 field hospitals, 2 station hospitals and 2 general hospitals, the latter being on the line of communication at any distance up to 100 miles from the front. The supreme command of the medical arrangements is vested in a surgeon-general, who is the P. M. O. of the force. In many instances he is assisted by Deputy P. M. O., who is a colonel. The duties of the P. M. O. are to advise the G. O. C. on all matters concerning the health of the troops. This would include such important matters as food and clothing, and any special precautions rendered necessary by the climate, also the oversight of his department. The importance of his functions can hardly be overestimated, for his business is to direct the measures for *keeping the men in health*, which is the main business of the army surgeon, so that at the critical time they be available.*

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* MORTUARY STATISTICS OF THE SPANISH-AMERICAN WAR.

"According to the official report of the Adjutant-General of the army, the entire number of deaths in the service since the 1st May last is divided as follows:

Killed	329
Died of wounds	125
Died of disease	5,277

In other words, for every one man who died as the result of battle, twelve perished as the result of bad food, carelessness or mismanagement of the War Department."—*Evening Bulletin*, Philadelphia, March 11th, 1899.

The losses on the Union side during the Civil War were:

Killed in action	44,238
Died of wounds	49,731
	93,969
Died of disease	186,216
Cases of disease reported during five years of war	5,424,547

The last Ashanti campaign was, you will remember, a "doctors' war." Nor would Khartoum have fallen, nor would Omdurman have been successfully fought but for the skilful foresight of the men who kept the troops in health in the trying climate of Upper Egypt. Thanks to the excellent medical arrangements, a tour of service in India is no longer a thing to be dreaded. The P. M. O. has also to arrange for the transport of the sick and wounded, no small matter in a difficult country, and to fix the sites of the field, stationary and general hospitals. Each division has also its P. M. O.

The *first line of assistance* to the wounded consists of the M. O. attached to the unit and his regimental medical staff, which is composed of one corporal, whose duties are to take charge of the panniers, which are usually carried on a mule; one orderly who carries the field companion and the surgical haversac. Four men per squadron, or two men per company, constitute the stretcher section. The medical equipment of the unit consists of one surgical haversac, one field companion, one water-bottle and a pair of panniers. The duties of the stretcher-bearers, when an action is pending, are, after placing their rifles in the regimental transport, to take the stretchers, and when occasion arises to render first aid, and carry the wounded man and his kit to the collecting station, beyond which they do not go, but at once rejoin their companies. Lord Wolseley says that when a man falls wounded there are ten men always ready to take him to the rear. I have found this to extend to dead bodies. The solicitude of men in action to get to the rear on a fair excuse is remarkable. The first aid dressing, which every man carries in the field, is done up in a waterproof cover, and is sewn up inside the man's tunic pocket. It consists (1896) of two safety pins, gauze bandage and piece of gauze, and a compress of charpie saturated with an antiseptic (bichloride of mercury). During the late Spanish-American war these first aid dressings are said to have saved many lives. At the collecting station the man is seen by the medical officer, who arrests hemorrhages and attaches a tally on which is stated the man's name, number, rank, regiment, wound, treatment, and any special instructions required, such as, 'look out for bleeding," or to place the patient in a particular position. In the Italian army tallies of different colors are used for severe or slight injuries.

I now come to the *second line of assistance*, the Bearer Companies. They are departmental, and are formed by the Royal Army Medical Corps. They are divided in action as follows: In front (that is, in rear of the fighting line), 38 of all ranks; at the collecting station, or in charge of the waggons, 12; at the dressing station, 10, including three

medical officers; and in rear, 10. The front division of the bearer company does similar work to that of the regimental stretcher-bearers, *i.e.*, they render first aid and carry wounded to the collecting station. As they arrive at this point they are placed in one of the ten ambulance waggons in waiting and taken to the dressing station. Each waggon is in charge of a non-commissioned officer of the R.A.M.C. On arrival at the dressing station the wounded are unloaded and placed in two groups—on the right the severely wounded, and on the left the slightly wounded. The site of the dressing station is always sheltered, if possible near a good road and water, and not far from the collecting station. Here it is that the wounded receive proper treatment and primary operations are performed. At the close of the action the bearer companies search the woods and ditches for wounded. In Germany this work, at night, is done with the aid of dogs, on whose backs are first aid panniers and lamps.

From the dressing station the wounded are passed on to the *third line of assistance*, the Field Hospital. A Field Hospital is attached to each brigade, and on the line of march follows the bearer companies. These hospitals are mobile, and keep in close touch with the troops. After or during an action the site of a field hospital should be out of range of artillery fire and well sheltered. Buildings may be used, but churches should be avoided, as they are apt to be damp, cold and ill-ventilated. Their only advantage is their proximity to the graveyard. Collecting and dressing stations, field hospitals and bearer companies are under the Red Cross, but regimental bearers are not, for they carry arms and are available in case of necessity as combatants. In wars on savage peoples all ranks may have to fight, as, for instance, at Rorke's Drift. Hospitals fly the Geneva Red Cross flag by day, and show two white and one red lantern at night.

As soon as possible wounded are passed out of the Field Hospital into the *fourth line of assistance*, the Stationary Hospital. They are gradually drafted out of this into the *fifth line of assistance*, the General Hospital, a large hospital containing 400 beds, and in charge of a Colonel, R.A.M.C.

The *sixth line of assistance* is the hospital ship; and the *seventh and last* is the Royal Victoria Hospital, Netley. The principal object in view, after treatment, is to "clear the front of wounded men," who impede the movement of the army.

Having said so much on the historical and other aspects of the Imperial Medical Service, permit me to add a little about the past and future of our own militia medical arrangements. It is strictly within the facts that our medical service is in a lamentable and unorganized condition. If we were suddenly plunged into war, we would suffer as serious disasters as befell

the Army of the United States during the late Spanish-American war. This war has clearly demonstrated that trained army surgeons and trained ambulance men and transports cannot be improvised with success. The result of such a course is untold suffering to the troops, great loss of life, which might have been avoided, and discredit upon a department which did its best, but had a numerically insufficient staff to work with. Let us take the lesson of this war to heart and profit by the painful and costly experience of others, rather than wait to learn the lesson for ourselves at a great price of blood and treasure.

Up to 1862 the supplies to camps of instruction left much to be desired, to put it mildly. The surroundings of the sick in many camps of instruction could hardly have been worse. I am not claiming too much for the Association of Medical Officers when I state that to that association belongs the credit of drawing professional and public attention to much-needed reforms. Let us hope that the reforms and improvements which have already been made merely precede a complete reorganization of the Medical Department, under our able Director-General.

I would respectfully submit that the following are among the changes which might properly be made to place the department on an efficient basis:

1. Abolition of the regimental system of medical officers, and the formation of a Royal Canadian Militia Medical Corps, to which all medical officers would belong; those not serving with units or on the reserve would be attached to bearer companies. I believe more efficient work would be done by officers whose *interests were identified with departmental rather than regimental affairs.* I would not advocate a sudden and violent change in this regard, but rather would suggest that all present medical officers be permitted to continue to wear the uniform of the corps to which they are attached, but I think that all new appointees might be required to adopt medical staff uniform. Medical officers attached to battalions would command the regimental medical staff. The departmental establishment would include at least five bearer companies—one each at Halifax, Montreal, Toronto, London and Winnipeg. From the bearer companies field hospitals could be developed in time of war.

The grades in the medical service, in my humble opinion, should be: Surgeon-Colonel, Surgeon Lieutenant-Colonel, Surgeon-Major, Surgeon-Captain, and Surgeon-Lieutenant. Honorary rank should be abolished. It is as unsatisfactory as relative rank.

These bearer companies would be educational, because at the centres named a certain proportion of the strength could be

recruited from medical students, who might be trained for the medical service. I might add that all Canadian militia is "royal" since 1814; therefore, the proposed title of the corps is in accordance with fact.

2. I think it is essential to good work, by the medical officers, that they shall receive instruction in their special duties, and that they shall be proficient in company and ambulance drill. The same remark applies to the non-commissioned officers and men of the regimental medical staff. For this purpose I would advocate the establishment of ambulance schools of instruction on the plan of those in operation in London and in New South Wales.

3. Medical officers, like combatant officers, should pass a qualifying examination within twelve months of their appointment, which should be provisional, and not to a higher rank than that of a lieutenant, and upon promotion to field rank.

4. Each military district should have a principal medical officer, in most cases a permanent officer, but not necessarily in all.

5. Medical officers should be given control of transport and supplies for hospital purposes, food and medicines, and authority over all connected with the hospitals in camps of instruction or during other service in the field.

6. On all field days the medical department should be exercised in their special duties, a certain proportion of men being supplied with tallies describing the nature of their supposed injuries, and ordered to fall out from their companies to be properly dealt with by the medical officers and bearers. Collecting and dressing stations should be formed in the proper manner and instruction given by the p.m.o. of contending forces.

7. A reserve of medical officers might be formed, to include those who have served, but who for various reasons have been obliged to drop out of active connection with the force, and of medical men of established reputation, who would be willing to serve in time of war. This arrangement would give them seniority and would assure the department of the best surgical skill.

8. The Red Cross Society proposes to keep a register of nurses who would be willing to serve in time of war. Their names might be noted by the Militia Department.

9. A knowledge of the first aid to the sick and injured might be diffused by the medical officers, by means of lectures, under the auspices of the St. John Ambulance Association among the officers and men of the force.

These are some of the suggestions I desire to make. Some will meet with approval and some with dissent. They are offered with my most earnest wish for the welfare of the soldiers and surgeons of my beloved native land.

Clinical Notes.

A CASE OF ACUTE STREPTOCOCCUS INFECTION.

REPORTED BY DR. W. C. WHITE,
Of the Resident Staff, Toronto General Hospital.

E. D., aged 18, admitted to the Toronto General Hospital under Dr. W. H. B. Aikins on the 23rd of January. Three days previous to this, while walking across the floor, she stepped into a stovepipe hole and scraped the front of her leg. She went on with her work, however, and noticed nothing until the night before her entrance to the hospital, when her leg began to swell and become red and painful. On admission her right leg was much swollen, very painful on pressure, and showed a small abrasion on the front of the tibia just a little below the centre of the leg, which was very painful, and the patient could not bear it to be touched. A probe could be passed into this opening to the bone, and the flesh here was dark, soft and very unhealthy in appearance. The glands in the groin were swollen and very painful. Her temperature was 104 on admission at 9 p.m.; pulse, 108, full and tense; respirations, 24; tongue furred. There was a marked septic odor about the patient. She was given 3 grains of calomel, to be followed by mag. sulph., ℥ ss, in the morning. The opening in the leg was enlarged to about one and one-half inches. The leg was done up in a 1-20 carbolic acid poultice, which was changed every two hours; also three 5-grain powders of phenacetin were given at intervals of two hours, and stimulants freely administered.

24th.—Temperature fell to 98; pulse, 104; patient feels easier, but is slightly nauseated. Had a free movement of bowels.

Later.—Vomiting set in, which increased in severity and frequency. Every means was tried to allay this, but all to no avail.

Evening.—Bowels have moved several times, but nausea and vomiting still persist; three further incisions made in leg, and poultices continued.

25th.—Temperature, 97⅘; pulse, 90; respirations, 26. Vomiting continued; could not be stopped. Digitalis and strychnia given hypodermically and nutrient enemata tried, but these were expelled. Patient grew rapidly worse and died at 10.15 p.m. Just before death respirations were 40, and pulse 132, small and tense.

Post-Mortem, partial.—Incisions in leg enlarged, and tissues

found very soft and dark-colored. Kidneys removed, and showed microscopically cloudy swelling.

Cultures from leg and blood taken with antiseptic precaution showed pure cultures of streptococcus pyogenes in great number.

The case illustrates how rapidly a patient may be carried off by septic infection through a very small abrasion, the time from the accident to death being only five and one-half days. The patient was a very strong girl, and apparently healthy in every other respect. She remained perfectly conscious until within a few minutes of her death.

TWO CASES OF POLIOMYELITIS ANTERIOR CHRONICA.

BY ALEXANDER McCAIG, SAULT STE. MARIE, ONT.

CASE 1.—Notes, December 6th and 7th, 1898. Mrs. B., widow, aged 48. Family history, negative. Personal history: Up to present illness, patient engaged in grocery business, from which she turned out a competency of $60,000. Always a strong, healthy woman, weighing when well 225 pounds. Of strong mental capacity and good business instincts. Could give from memory the minutest details of her business affairs. No children; menopause at forty-seven, at onset of present illness. Present illness began thirteen months ago. Onset with pains and weakness in ankles, knees and elbows, so that she was treated at Mount Clemens for rheumatism. The muscles of the thumbs then began to atrophy, and the weakness in the arms and legs gradually became worse. Patient did not lose much flesh, but muscles became very soft and flabby. Eight months after onset of trouble difficulty in walking was marked, patient could not walk alone; could not raise foot from the ground, and toes dragged. Bulbar symptoms developed during past two months. Present condition, thirteen months after onset: Patient unable to move about alone; muscles of hand and forearm atrophied; muscles of the calf atrophied, soft and flabby; rigidity and flexion of elbow; atrophy of deltoids, so that patient cannot raise the arms; toes drag; knee-jerk greatly exaggerated; sensation good; sphincters intact; mind clear and active. Bulbar phenomena were observed about two months ago—began with hesitation and thickness of speech. At present, tongue, larynx and lips affected; voice feeble, cannot speak above a whisper; speech slow and hesitating; articulation difficult and hard to understand; deglutition not impaired. This case is interesting because of the

successive stages in the progress of the disease, also by the rapidity with which they have followed one another. The disease began with the usual weakness and pains, followed shortly by the muscular atrophy due to destruction of the multipolar cells of the anterior cornua. This was followed by a typical condition of amyotrophic lateral sclerosis, due to sclerosis of the cerebral segment of the fibres of the anterolateral descending tracts of the cord, and latterly the development of bulbar phenomena indicates the involvement of the cells of the medulla. This patient has not been under observation now for some two months, having gone to California for the winter.

CASE 2.—Notes, February 24th, 1899. Mr. McL., farmer, aged 55. Family history: Nothing of importance in this. Personal history: Pioneer farmer; hard worker; always temperate. No history of specific trouble of any kind. Present illness began about six months ago. Complains only of weakness; no pains; fatigued by least exertion, and much by walking; weakness felt most in knees and muscles of the thighs; coldness of hands, and feet very troublesome; cannot perform delicate manipulations with hands; first noticed this on lacing his shoes, in being unable to tie his shoe-lacings. Present condition: Atrophy of muscles of upper and lower extremities, most marked on the thumbs of the upper extremity and in the muscles below the knees on the lower extremities; knee-jerk slightly exaggerated; slight hesitation in speech; patient has noticed that it has been hard for him to get started to speak for some time; "tongue feels thick;" sensation good; no inco-ordination; sphincters intact; appetite good; bowels regular; no headache; dizziness; pupils active. In this case the destruction of the multipolar cells has taken place to a great extent, and sclerosis of the nerve fibre has begun. Treatment: strychnia and massage.

TWINS, EACH WITH SYRINGO-MYELOCELE.

BY H. A. WRIGHT, M.D., OAK LAKE, MAN.

The following case may prove of interest, mainly on account of its rarity. L. Emmett Holt states that "I once saw two successive children in the same family with spina-bifida."

On the 18th June, 1898, I was called to attend Mrs. B., a very healthy woman, in her sixth confinement. Her four children all healthy, one child stillborn at term, all labors easy. Labor in this case was rapid and easy. The twins both breech presentations and having separate membranes and placenta. Both male and each spina-bifida in almost identically same

position, viz., lower dorsal region, each being also hydrocephalic. Children weighed five and five and one-half pounds respectively. The first-born and weaker child lived ten days, the *other three months and nineteen days. The one showed no* gain, the other made marked advance. In each case the hydrocephalus and tumors increased with considerable rapidity, death in each case being due to rupture of the tumor sac.

Each case was accompanied by convulsive movements. Bowels and bladder acted naturally in each case, but lower extremities were paralyzed. Tumors first dressed with acetanilid, boracic acid, collodion, absorbent cotton and carbolized gauze, later with iodoform, collodion, absorbent cotton and iodoform gauze well padded around margin of tumor, and fairly firm compression.

Any operative procedure was considered hopeless, therefore not undertaken. No autopsy held.

Selected Article.

STORY OF MEDICAL LIFE—A NEEDFUL LESSON.

BY PHILIP LAFARGUE.

"Tchah!" cried Bredon, suddenly, from his seat at the window, whither he had betaken himself to catch the last of the daylight for some small print he was reading.

Startled by the unusual explosion of disgust—for Bredon, as befits one whose province it is to deal with the delicate organ of voice, is a man of placid and nicely controlled temper—Dr. Parradine and I interrupted our chat by the fire and looked across at him. We were taking tea at the club in the cosy smaller card-room, while we waited, with no great impatience on my part so long as the old man would talk, for a fourth to make up our rubber.

"What's that language you're swearing in?" asked Parradine.

"I'm blest if ever I prophesy evil again," Bredon cried, still with unaccustomed asperity.

"It *is* wise to avoid it, when you can," said the old doctor; "no one loves you the better for it."

"I felt convinced the poor little beggar must die, and never gave the case another thought," Bredon went on. "And it seems he got well after all. Gar! what a fool it makes one look!"

"One don't look it the less for minding it," Dr. Parradine observed.

"Luckily for me, Orme saw the child the same night, and told them, as I had done, that antitoxin was his only chance."

The old doctor was lying back in his chair, with all his limbs relaxed and his eyes fixed dreamily on me. I saw them change suddenly, as one sees a terrier prick its ears, and he straightened his spine almost imperceptibly.

"What's that paper you've got hold of, Bredon?" he asked.

"Only some antivivisectionist rag they've sent me. Trust them to rub it in when they get the chance. Listen to this, Parradine:

"'The resolution was seconded by Sir Rupert Uffington, Bart., who, in the course of a brief but vigorous speech observed that the more unanimous the doctors were the less disposed was he to trust them. Only the other day, when his own child was attacked by malignant diphtheria, he was solemnly warned by

three of the most celebrated physicians in London—he would not be so ungenerous as to name them—that without the use of this new-fangled serum the case must inevitably prove fatal.' (I said, "almost inevitably," Bredon corrected.) 'He was thankful, however, to say that he had found courage, after a painful struggle against his own weakness—(No, no)—and the pleadings of his friends, to resist all dealings with the accursed thing, and the result, under Providence, was that with good old-fashioned nursing and treatment the child had made a splendid recovery—(Hear, hear)—whilst he had been spared the ignominy of accepting a benefit—as it turned out, a quite superfluous benefit—at the cost of some poor helpless, tortured animal. If ever they were tempted to profit by the cruelty of the scientists, and to put themselves blindly in their hands, he begged they would bear his case in mind.'"

With the first sentence of the recital the alertness faded from Dr. Parradine's face, and he listened to the remainder with a sphinx-like smile. The moment it was over he jumped up and planted himself on the hearthrug with his back to the fire.

"That's a pretty bad score off one, isn't it?" said Bredon.

"Well, it does sound as if you had been rather precipitate," observed the old man, with, as I thought, less than his usual good nature. "But come and sit down and tell us all about it. You are not the man to give yourself away for nothing. We are all ears—eh?" and he turned to me with a look of intelligence, as if to bespeak my close attention.

"What do you want to hear?" asked Bredon, throwing himself rather wearily into a chair.

"Why, everything, man," cried Parradine. "What they all said and did, and how they looked. Give us the facts—all the facts. Let's have the scene as it would work out on the stage, for instance."

"Why, it was only a case of a poor little curly-haired beggar, going choking to his death, as I thought, because his father was an inflated ass."

Dr. Parradine threw up his hands despairingly.

"There! Oh, you consultants! You come dashing up to your case, turn upon it the cold, dry light of your experience—you do it to admiration, I grant—then give your verdict, pocket your fee, and drive away. To you it's a mere bald, isolated crisis—a bit of a play heard through the phonograph. Why, as often as not, you miss the whole vital interest of the thing—the human interest, that is to say. I have seen you do it, time and again. You've no dramatic instinct. You are too much wrapped up in your 'ologies Here's a case in point—eh? Distracted parents, wringing of hearts, conflict, the very soul of drama, and you see nothing but a poor little

misery gasping for breath. What's the suffering of that half-unconscious youngster in his nursery compared with the agony in the drawing-room—eh? Here's Sir Rupert Uffington, by all accounts an earnest-minded, estimable man, if ever there was one, an honor to his class—"

"A stilted jackass!" cried Bredon.

Dr. Parradine threw an appealing look at me.

"Here's poor Lady Uffington," he went on—"a charming, simple, beautiful young creature, a pattern wife, devoted mother—"

"A pretty nonentity!"

The old doctor shrugged his shoulders.

"Aren't you unusually sweeping in your judgments to-day, my dear Bredon?"

"Oh, these swells are all alike—turned out of the same old mould."

"Yes; the old, old mould of fathers and mothers, God bless it! I used to know Uffington when he was a little chap himself. I knew his father before him, though he was a homeopath and a teetotaler and everything that begins with an 'anti.' I've come across most of these people at one time or another, you see. They go the round of us to taste our quality, and if it happens to tally with theirs—why, they stay by us. That's the pull of practising in London, where there is scope for natural selection, and doctor and patient can divorce each other for incompatibility of temper—eh? It's pleasant to have known people, however, whether they cotton to you or not. The public drama is so much more vital when you have the private measure of the actors in it. Of course—" He broke off, and swept his plump white hand across his forehead. "But why on earth do you fellows let me ramble? Yes, as I was saying, I knew Sir Rupert when he lived in a velvet dress and broad lace collar. Quite a picturesque child, with a quaint charm of his own that was not exactly that of childhood—a sedate, old-fashioned dignity, self-possession and sense of personal merit, which any other parents but his would have incontinently smacked out of him. Well, he grew up—more's the pity, perhaps. He was too good for Eton, of course; but he did creditably at Balliol, has earned a certain respectful toleration in the House, and his name on a charitable committee means guineas, I hear. No: he's not quite an ass, Bredon. Men in his position don't set themselves to swim against the general current unless there is something in them out of the general."

"Oh, I daresay I was too hard upon him," Bredon admitted: "but he put me out of patience. He seemed to think more of his own reputation than of the life of his child."

"Yes, that would be in his character, no doubt," said Parra-

dine. "He's a survival, you see, of the days when men prized their honor—that is to say, what people thought of them—more than their own life, to say nothing of their children's, eh? Most of us have come on since then, or gone back, whichever it may be. What is he like now, Bredon? He promised to be handsome."

"Oh! he's good-looking enough in his way," cried Bredon; and then, after a moment's reflection, proceeded to deal us out his portrait: "Tall, spare, erect; somewhat mincing in speech and movement; in manner coldly courteous—you never seem to get within a couple of yards of him; fine, but close-set eyes, which look past you and make you feel of indifferent account; a long, thin face, with good features; and an odd-shaped head, that sets you itching to press the brain bodily back from the forehead into the occiput; not much hair, and what there is too straight and fine, and, for his years, too grey. One would say he had lived all his life in stock and cravat, metaphorically, as if his dignity required artificial support—a man who takes obstinacy for strength and prejudice for independence."

"I wronged you, Bredon," said Dr. Parradine. "I was not aware that you ever observed anyone but your patients so keenly."

"How could I help it?" cried his friend. "I was pounding at him for a quarter of an hour, though, as I said, I never seemed to get within two yards of either his mind or his heart. He's fenced in by prejudice and conceit. He allowed me politely to understand that he did not believe a word I said. But it was what I overheard in the next room that finally disgusted me with him. His wife sent to ask him to speak to her in the boudoir. I heard the poor woman pleading with him, and, pon' my soul I pitied her to be bound to that egregious iceberg. 'Impossible, Viola; impossible!' we heard him mincing, as he strode up and down. 'How can I face the world again if I have not the courage of my solemn convictions? It would be to stultify myself completely. I am looked to, you must remember, for guidance and example. You would make of me a broken reed. No, no, you must leave it in my hands, Viola. This is a question for a man to settle with his own conscience.' Bah! as if it had been his child only; as if it were *he* who had brought it into the world with groans and travail! I could not hear what she said; I only heard the tears in her voice. Anyone who wasn't a brute must have yielded to them."

"Poor girl! poor girl!" cried Parradine.

"And I believe he would have yielded if she had stood up to him. But I suppose she had always given in before. At last I think she lost temper with him, for I heard her cry warmly,

almost threateningly, 'Believe me, Rupert, you will regret it.' After that, of course, the game was over. It put his back up for good and all. He returned to us and said, with the nearest approach to feeling he had yet shown, that no helpless animal should suffer a pin-prick to save a dozen of his children. And so we took our leave of him. Well, he's got us on toast this time. Don't think I'm not glad the little beggar lived. But it's no thanks to his parents."

The old doctor smiled at him mysteriously—I could see it even in the dusk—dropped his cigarette end into the fire, and came and sat down leisurely between us.

"I remember a very similar case, if it won't bore you, eh?" he began. "One evening an old patient of mine, a beautiful creature whom I had watched grow up from the nursery, until I lost sight of her on her marriage, came to me in an agony of distress. Her child, too, seemed likely to die of diphtheria, and her husband stubbornly refused to let the doctors make use of the new treatment; but she was determined, if she could, to administer it herself without his knowledge. It would be difficult, she admitted, for the child was jealously isolated, and she was scarcely allowed in the room. But that night she thought she could contrive to have it for an hour to herself. Wouldn't I help her, as an old, old friend? Of course I demurred and raised a heap of difficulties. I showed her the syringe, fully expecting to scare her from her project. She blenched when she saw the needle, and felt its point at her skin, as I demonstrated its use on the back of her hand. But yet she insisted. I had forgotten what a brave little heart she had always shown even as a child behind her nervous, uncertain manner. Well, to cut a long story short, in the end she went off with syringe and serum, a supply of which I luckily happened to have by me, and I learnt afterwards that that poor, shrinking, inexperienced girl had dug the needle twice into her own flesh before she would trust her skill to use it."

"What a ripper!" I cried. "And she saved her child?"

"Her child recovered," said Dr. Parradine, with scientific caution. "I suppose it was all very wrong and unprofessional on my part, but I am a soft-hearted old buffer, and if the case recurred, hang me if I wouldn't do it again."

"Ah!" sighed Bredon, "if Lady Uffington had shown but half her pluck!"

"My good Bredon," said the old doctor, very deliberately, smacking his lips, as it were, over the effect, which he had all along been preparing, "it—it *was* Lady Uffington."

"Great Heavens!" cried Bredon after a moment of dumbfounded silence. "You don't say so? Lady Uffington! Hurrah! Why, then, Sir Richard and I were not so wrong after all."

"Orme seldom is wrong," observed Dr. Parradine: "and as I once heard him say, 'When doctors agree (he being one of them, *bien entendu*) who shall differ?' Always excepting Sir Rupert Uffington, Bart."

"Yes; but we have to lie under the harrow all the same," said Bredon, gloomily.

"Well, you are not the first doctor," cried Parradine, "who has had to choose between his own reputation and the peace of a household. Luckily, we are not all 'survivals.' I remember a doctor in the country—"

"Of course, Sir Rupert must never know," exclaimed Bredon, too preoccupied to study courtesy.

"He knows," said Parradine.

"Knows?"

The old doctor nodded assent.

"Why, then, what a blackguard the man must be," cried Bredon, hotly, "to go and make capital out of the case!"

"What was the date of that meeting?" Dr. Parradine asked quietly, and Bredon had to confess that the report itself was a month old.

"Exactly. No; Sir Rupert is not a blackguard, whatever else he may be. I shouldn't wonder if he made you a handsome apology. He was brought up, you see, on a diet of *noblesse oblige*."

"But how did he come to know?" I asked.

"Through me," cried Dr. Parradine, with a humorously grandiose gesture. "If you are not weary—eh? Well, Lady Uffington came to see me again only a few days since—a wreck, all her pretty color gone. She had evidently some great trouble on her mind, but it was half an hour and more before I could wheedle even an inkling of it out of her. She was suffering, I concluded at last, from the effects of an acute disillusionment. She had suddenly discovered that the golden idol her young heart worshipped stood upon feet of clay. The conversation you overheard, Bredon, represented the sudden opening of a domestic tragedy. In that moment an adoring wife saw her husband's soul, till then jealously veiled from her, in all its nakedness; she saw his pitiful egoism standing out blackly like a skeleton through the dissolving flesh. Wasn't I right in saying that the body-agony of the child went for nothing compared with the soul-agony of the parent? No wonder that a brave, unselfish, trustful woman like Lady Uffington felt the shock to the centre of her being! No wonder she sickened and pined! And then the constant fret of her secret—the memory of that desperate, clandestine act! And Sir Rupert's daily air of triumphant wisdom! You may bet, he didn't spare her. I expect he made himself intolerable, till

she realized her smallness more and more every day. It was as if she had lost her husband irreparably to save her child. Her prize had turned out a blank. You can imagine the effect, the mere physical effect, of such a situation upon a modern, high-strung, self-torturing nature."

"Well?" we prompted him.

"You want to know what I said—eh?" Parradine continued. "Well, I told her to drive straight home and make a clean breast of it all. Of course, she shrank from it, and I had to use the devil's own eloquence to persuade her. But clearly it was the only thing to do. She could not hope for peace until she had confessed; and as for Sir Rupert—why, it was the very lesson he had been wanting all his life. He had to be shown that hers was the stronger and more single nature, that she was a woman who could think and act and love for herself—that, in short, where the children are concerned, the husband's conscience has no claim to override the wife's. Happiness in married life is only possible when each knows, and knows that each knows the other—strong points and weak. The pretty delusions of courtship make but a rickety foundation for it. So I bade her take her courage in her hands as she had done before, stand up to her husband, and let him feel which was the better man."

"And she did it?" I asked.

"I presume that she did,' said the old doctor, "At any rate, I have very good reason to believe that in a certain eligible mansion which you know, Bredon, the breeches have recently changed wearers. Dear me, how the afternoon has slipped by! What shall we do? Play dummy—eh?"

"I think," said I, "we might leave that to Sir Rupert."

—*The Practitioner*, February, 1899.

Society Reports.

TORONTO PATHOLOGICAL SOCIETY.

The regular meeting of this society was held January 28th, 1899, Dr. Primrose in the chair. Present: Drs. Peters, Rudolf, Bingham, Goldie, Mackenzie, H. H. Oldright, Wm. Oldright, Parsons, McPhedran. Meeting called to order 9.30 p.m. Minutes of last meeting taken as read and adopted.

The Secretary read a letter received from Dr. C. R. Dickson, of the Canadian Medical Association, asking that five members of the Pathological Society be appointed to act on the committee of arrangements for the meeting of the Association to be held in Toronto in the summer of 1899. The following were appointed: The President, Recording Secretary, Drs. J. E. Graham, McPhedran and Bingham.

Dr. Bingham showed a skiagraph of old dislocation of right hip in child aged 11.

History.—Family history: Mother had tuberculosis, otherwise history was negative. Previous history: At five years of age congestion of the lungs; at three years fell and hurt right hip, was kept in bed with extension applied for three months. Since that time slight pain. Considerable limp.

Present Condition.—Examination: Lateral spinal curvature in lower dorsal and lumbar regions with convexity to right Compensatory curve in upper dorsal region. Right leg: Knee. bent, rotation outward, heel one inch from the ground in standing. Measurements at hip all accord with diagnosis of dislocation. Operation, November 17th, a.m., by anterior incision. Acetabulum found filled up; neck of femur shortened; ridge about head of bone; adhesions cut away; acetabulum cleared out, and head of bone replaced; extension of eight pounds applied, also plaster cast. After operation temperature rose to 105.5. Pulse, very weak; delirium; no dyspnea. Patient died 10.40 p.m., November 18th. Question as to cause of death.

Discussion by Drs. Peters, Wm. Oldright and J. J. Mackenzie.

Dr. Wm. Oldright showed patient with rodent ulcer of orbit. History, of fourteen years, beginning as small nodule, now 2½ inches in diameter. Potassa fusa was being applied.

Discussed by Dr. Peters.

Dr. Oldright also showed a most interesting heart with one ventricle, two auricles and patent foramen ovale. There was also pulmonary stenosis. This case was fully discussed.

Multiple Intussusceptions of the Dying.

Dr. H. H. Oldright: The specimens of multiple intussusceptions which I present are from an autopsy on an infant three months old which died of marasmus. There were four present in this case, but there may be as many as from eight to a dozen or more. The intussusceptions occur during the death agony or during somatic death after the heart has ceased to beat, and are due to irregular peristaltic contractions. This condition occurring during the death agony was recognized and described in contradistinction to the clinical *ante-mortem* form as early as 1678 by Louis (Hévin: "Memoirs Academie de Chirurgerie," 1768, IV. p. 222), by Baillie in his "Morbid Anatomy," and by Voitgel, who saw it both in man and animals ("Handbuch de Path., Anat.," Bch. II. 568). Holt, in "Diseases of Infancy and Childhood," gives a good description of the phenomenon. He says it is found in about 8 per cent. of all autopsies on infants, that it occurs but seldom in children over two years of age, that the invaginations are usually descending, enteric and multiple, and more frequent in the jejunum than in the ileum. They may be two or three inches long and are sometimes twelve inches. They occur in all varieties of disease. On this point Ziegler remarks that the condition is more frequently found in death from cerebral or intestinal disease. The condition is easily differentiated from the clinical forms by the intussusceptions being multiple, and by there being no inflammatory adhesion between the layers.

Discussed by Dr. Rudolf.

Dr. Primrose presented specimens of pachymeningitis hemorrhagica (to be published later).

Discussion by Drs. Peters, Parsons and J. J. Mackenzie.

The meeting then adjourned.

H. C. PARSONS,
Recording Secretary.

FEBRUARY MEETING.

The regular meeting of the society was held on February 25th, 1899, Dr. Primrose, President, in the chair. Present—Drs. Hamilton, McPhedran, Carveth, Grieg, Wilson, J. J. Mackenzie, Goldie, Peters, and Rudolf. Visitors—Dr. Westman, Mr. Tanner. Minutes of last meeting taken as read and adopted.

Cardiac Hypertrophy.

Dr. Grieg presented specimen of cardiac hypertrophy. The patient had died suddenly. Clinically the case had shown increase of cardiac dulness. The apex beat was displaced

downward. There was a systolic and a diastolic murmur heard over the base of heart. The heart shows marked hypertrophy and dilatation of left side. Mitral valves negative. Aortic valves thickened and insufficient, with some slight calcification of aortic ring. There was marked dilatation of the arch of the aorta.

Discussion by Drs. McPhedran, Parsons, Rudolf, Peters and Hamilton. Dr. Grieg replied.

Timothy Hay Bacillus.

Dr. J. J. Mackenzie read a paper on the above subject (to be published later), and showed by specimens its resemblance to the bacillus of tuberculosis.

Discussion by Drs. McPhedran, Goldie and Parsons.

Arthritis Ossificans (with specimens).

Dr. Rudolf: These specimens appear to be of this nature. I have had them for a couple of years, and always looked upon them as examples of arthritis deformans. An article in London *Lancet*, December 17th, 1898, quotes Dr. Griffiths in *Journal of Bacteriology and Pathology*, for December, 1896, and January, 1897. He gives analytical tables of twenty cases. In none were all the joints affected. The joints became obliterated and the articular ends of bones grew together. Usually the disease begins in early life and is more common in males. Progress is slow, and it takes months or years to fix all the joints of the body. In the subacute form there is swelling and pain. In the chronic form no swelling. In either case the joints are left fixed, but not deformed. Dr. Griffiths concludes that the condition probably commences by the formation of spiculated growths at the articular margins of the bones, which bridge over the cavity and fuse. These marginal growths differ from the "lippings" of rheumatoid arthritis; they arise independently of the articular cartilage, whereas the latter are, as it were, a direct extension of the articular end of the bone. Thus the joints are obliterated centripetally. When fusion has occurred, the external ridges of bone tend to disappear, leaving the external surfaces of the bones smooth and even. The pathology is obscure. Whilst differing from rheumatoid arthritis, the view that it is allied to that disease has some evidence in its favor.

Dr. Primrose asked if this could not result from some injury where passive motion had not been carried out. Dr. McPhedran also discussed the case.

Tuberculous Bone Removed in Excision of Elbow.

Dr. Bingham reported as follows: Patient, male, aged 32. No direct family history of tuberculosis.

History.—Two years ago injury to the elbow, with later ankylosis of joint and pronation of forearm. Rest was tried, but was not successful. At operation the head of the radius was found disorganized, with a sinus leading into the joint. The lower end of the humerus was also badly diseased. The specimens were presented.

Tuberculosis of the Elbow-Joint.

Dr. Peters also presented a case. The patient was a male, aged 23, and had suffered from stiffness of the elbow-joint for thirteen years. There was a history of injury thirteen years ago, and the movements of the elbow had gradually become restricted until at the time of the operation there was not more than 5° movement in flexion and extension, and the joint was quite fixed in a position of pronation. There was some atrophy of the muscles above and below the joint, but very little swelling at the joint itself. On opening the joint the disease was found to be present in the synovial membrane, and also to a slight extent in the articular ends of the bones entering into the formation of the joint. There had evidently been, from time to time, vigorous attempts at repair, as the bones were firmly bound together by somewhat dense fibrous tissue. The Tuberculin R was used in aiding in the diagnosis and gave the characteristic reaction. The microscopic section shows typical tubercular disease both of the bone and the synovial membrane.

Enlarged Cirrhotic Liver.

Dr. McPhedran: R. H., aged 24, admitted October 19th, 1898, died November 29th, 1898. Family history unimportant. Irregular use of spirits (mostly beer) and tobacco; no history of specific infection, no severe illnesses; indoor occupation.

Condition on admission.—Temperature, 104⅘; pulse, 96; respirations, 24. Complained of weakness, loss of appetite, some nausea, but no vomiting; some abdominal pain and pains in the back and legs. No diarrhea. For a month he had had trouble with his eyes, dimness of vision and pain when exposed to bright light. The other complaints had troubled him for a week. Tongue moist, coated in centre, clear at edges. Breath very offensive; heavy, dull expression; respiratory system normal; circulatory system normal. Abdomen: right side more tense than left. Ill-defined tumor in right hypochondriac, right lumbar and umbilical regions. Tenderness in these regions on deep palpation. Percussion note over tumor relatively duller than elsewhere over abdomen. Absolute liver dulness from sixth costal border to one inch below costal margin in mammary line. Liver dulness blended with the dulness of

the tumor. Spleen palpable. Urine gave a marked diazo-reaction; slight amount of albumen, slight amount of bile pigment. Treated with cold baths.

October 23rd.—Abdomen somewhat distended; flanks full and dull on percussion. Fluctuation determined. Deep red papular rash on chest, many papules showing pustulation; back similar; no rash on abdomen. Widal's test tried; no clumping, but marked arrest of motility.

November 1st.—Liver greatly enlarged, from fifth costal cartilage to level of umbilicus in parasternal line; gallop rhythm of heart; signs of edema of lungs posteriorly; purpuric spots on legs; some ascites.

November 3rd.—Became very cyanosed during the course of a bath. Bathing discontinued.

November 4th.—Given supra-renal extract ℥x. three times a day. No local reaction. Pulse improved; temperature reduced. Signs of broncho-pneumonia.

November 6th.—Edema of both lungs. Crepitations and cough. Tenderness and friction of perihepatitis.

November 12th.—Crepitations heard in both lungs; deficient expansion. Examination of expectoration: No tubercle bacilli, no pneumococci, no blood. Liver still greatly enlarged; some ascites. Very weak and irritable.

November 21st.—Blood: reds, 4,120,000; whites, 10,000. Chills for first time since baths were discontinued. Evidences of pericarditis. Rash of a petechial character over abdomen, lower thorax and legs. Very weak.

November 29th.—Abdomen greatly distended and tympanitic; liver dulness almost obliterated. Very weak. Died 6.10 p.m.

Post-Mortem (Dr. Goldie).—Examination fourteen hours after death. Nutrition very poor, *rigor mortis* slight, *p.-m.* staining slight. Surface examination, prominent right hypochondriac region. Section: fat small in amount, normal in color; muscle very pale. Abdomen: peritoneum slightly injected, here and there patches of exudate on and between coils of small intestine and over liver surface, fluid in cavity brownish in color; appendix normal, hanging down over rim of true pelvis. Small intestine, small punctiform hemorrhages on serous surfaces, ileum presents non-elevated pigmented areas corresponding to Peyer's patches, only one presents what might be loss of substance. Large intestine, mucous membrane of ascending colon swollen and very red, but no loss of substance; spleen, 4½ oz., small, undefined capsular thickening, pulp dark and normally firm; kidneys, 8 oz., large, firm, but not tense, with many cysts to size of marble, capsule slightly sticky, cortex thinned, pale, cysts even down deep in kidney; right, 8½ oz.,

more cysts, cortex thinner and paler, abscess size of hazel nut with well-marked wall, rough with strands and pits, contents uneven in consistence, no appearance of surrounding reaction; bladder, ureters, etc., negative; stomach and duodenum, negative; liver (was removed without attention to common bile duct): right lobe greatly enlarged, rounded border extending to and slightly beyond umbilicus, left lobe proportionally not so much enlarged, surface fairly smooth but presents many white strands and stars of fibrous tissue, especially on anterior surface of right lobe, weight 6 lbs. 6½ oz., cuts very firm and cannot be broken down with finger, has a yellowish gray color, the lobules are distinctly marked off with semi-transparent fibrous tissue grayish in appearance, vessels of liver normal in size, main hepatic ducts are dilated, an enlarged but soft lymphatic gland (1¼ x ¾ x ½) lying between greatly enlarged quadrate lobe and hilum and on the junction of dilated common and hepatic duct. The cystic duct is patent, but lumen small, gall-bladder empty and contracted; Pancreas negative; Supra-renals negative, mesenteric glands slightly enlarged but soft, retro-peritoneal glands enlarged and soft. Thorax: Mediastinum, glands slightly enlarged; Pleuræ, visceral and parietal layers present fibrinous exudate patchy in distribution, right cavity contains 7 to 8 oz. of fluid and more than the left, fluid yellowish and cloudy; Pericardium, fibrinous exudate over right ventricle, auricle and on parietal layer opposite, about 3 oz. of slightly cloudy fluid; heart, 8½ oz., muscle pale and very firm, valves good, clots very white, firm and elastic, interlacing with columnæ carneæ and chordæ tendineæ, but not adherent to endocardium; dark clot small in amount, and entirely separate from white clot; walls normal in thickness, coronaries normal and free. Lungs: left, 16 oz., purplish, hypostatic congestion, in lower part of upper lobe and in lower lobe clusters of small abscesses, lobular in distribution, with well-defined, roughened wall, contains thick pus; fibrinous exudate on pleura does not correspond to these clusters, lung tissue does not break down readily, no tuberculous lesions; right, 17 oz., ditto, number of abscesses greater; bronchi contain a little purulent mucus, bronchial glands enlarged but soft. Brain and cord not examined.

Microscopical Examination of Tissue.—Liver: unilobular cirrhosis, connective tissue is not of embryological type but is not adult tissue, between lobules varies in thickness but seems to have no special relation to the vessels or ducts, strands varying in size penetrate the lobules well towards the central vein, and where two or more unite cut up the lobule, beyond this feature there is practically no intercellular fibrosis; bileducts in this tissue appear in great numbers, most are small without apparent

lumen, many are packed with leucocytes, and of these many are surrounded by the same cells, in some are found many bacilli (about the size of bacilli coli communis) even to the extent of plugging, the larger ducts do not present the same exudation of leucocytes around them nor are there a great many in the lumen, the epithelial lining is thrown up in folds; the communication of bileducts with the lobule can easily be made out, and apparently the bileducts are partly increased by the marginal liver cells; Vessels, arteries thickened, portal vein apparently no change, capillaries of lobules present proliferation and desquamation of endothelium; liver cell, a very slight granular change, occurring here and there are lobules which at first appear to be necrotic but on further examination liver cells are seen to be greatly altered, pigmented and atrophied, young connective tissue throughout all the lobule, in such a lobule many bacilli are found. Spleen engorged, and shows great desquamation of endothelial cells, a few bacilli were found. Kidney: slight increase of connective tissue. Intestine (pigmented areas): Peyer's patches with congested venules beneath, many of arteries showed great thickening of endothelium and in some cases desquamation, some of the venules were filled with desquamated endothelial cells.

Bacteriological Examination. — Lung abscess: one only showed a mould (undetermined), other gave bacillus pyocyaneus. Pleural exudate; streptococci only growing on first bouillon, no effect on rabbit; bacilli worked out as bacillus coli communis; Pericardial exudate: streptococci only growing on first bouillon, slight pus formation in rabbit but no cocci appeared from cultures of pus; Kidney pus: bacillus coli communis; Liver surface: streptococcus same as above and staphylococcus pyogenes aureus; liver substance: streptococcus same as above and bacillus coli communis; Spleen: streptococci same as above; bacillus: bacillus typhus abdominalis, clumped with blood obtained from patient a week before death, also with blood of undoubted case of typhoid.

Dr. Rudolf, discussing Dr. McPhedran's paper, said: The small spleen looks unlike typhoid fever. The typhoid fever may have been a condition secondary to the low vitality of the patient and the diseased liver.

Vermiform Appendix Removed for Recurrent Appendicitis.

Dr. Peters, in presenting the above case, said: The patient had had some five or six attacks at intervals of about twelve months. Each succeeding attack became more severe, and in the last attack in which I saw him a marked tumor was to be felt in the right iliac and lumbar regions. This was largely made up of fecal matter which was evacuated by purgatives

and enemata, but some swelling remained which was evidently of inflammatory character.

The appendix was removed in a quiescent period. It lay to the outer side of the cecum, and pointed upwards towards the right lumbar region, where it was bound down and partially buried by dense adhesions. It was dissected out and removed in the ordinary way. The organ shows fibrotic atrophy, its coats being thickened and greatly hardened, and the lumen almost obliterated. The mesentery contains an abundant infiltration of fat.

Dry Gangrene of the Thumb due to Carbolic Acid.

Dr. Peters showed a case in which the thumb was gangrenous superficially as far back as the metacarpo-phalangeal articulation. On cutting into it after amputation it is found that the whole of the terminal phalanx, including the bone, is completely necrotic, but the bone of the proximal phalanx has survived, as well as part of the subcutaneous tissue. The skin becomes less and less deeply affected as the hand is approached, showing that the cause of the gangrene is some substance acting from without inwards, and not due to any vascular thrombosis or embolism, nor to any vaso-motor spasm as in Reynaud's disease. The patient gives a history of having scalded the thumb with a mixture of carbolic acid, salt and soap, in June, 1898, and denies any contact with the acid since that date. There is very good reason, however, to discredit that history, and to believe that the poisoning was self-inflicted about ten days before the date of amputation.

Dr. Wm. Oldright, discussing Dr. Peter's paper, had also seen a case where he had to amputate through the middle phalanx of a finger which had suffered dry gangrene from the application of carbolic acid by a druggist.

Dr. Peters also showed an enlarged liver from a male aged fifty-eight years. Patient gave history of failing health for some months. Four weeks ago bronchitis; later, swelling of abdomen. One week ago, 1½ gallons of fluid removed from abdomen. Exploratory incision showed the liver enlarged and slightly and regularly rough; the pancreas was hard and thick. The case was thought to be one of diffuse carcinoma.

The meeting then adjourned.

H. C. PARSONS,
Recording Secretary.

TORONTO CLINICAL SOCIETY.

The fifty-second regular monthly meeting of the above society was held in St. George's Hall, Elm Street, on Wednesday evening, March 8th, at 8.30 p.m., an unusually large number of Fellows being present. Dr. F. LeM. Grasett, the President, occupied the chair.

The following Fellows were present: Drs. Grasett, Peters, Fenton, Primrose, Meyers, Badgerow, W. H. B. Aikins, McCollum, Parsons, Wm. Oldright, McIlwraith, Bruce, Trow, H. J. Hamilton, Thistle, Rudolf, E. E. King, Ryerson, Dwyer, Pepler, Bingham, Chambers, A. A. Macdonald, Cameron, Nevitt, and Geo. Elliott.

Ununited Fracture of Radius and Ulna.

Dr. Geo. A. Peters presented a patient with ununited fracture of the radius and ulna of the right arm, with the following history: Patient was a young man aged 25. Injured in a thrashing machine. His right hand caught under a pulley and wound round the shaft, bending the arm backwards over the shaft. The result was that the ends of the bones were driven into the fascia and muscles. It was properly set at the time on anterior and posterior splints; but the bandages had become displaced in some way, either by the patient himself or the carelessness of some of his relatives. There was a compound injury of both radius and ulna slightly below the junction of the middle with the lower third of the bones; but no communition. The accident took place on the 29th December, 1898. There is movement of both fragments although there was a good deal of callus thrown out and a fair attempt made at union. The hand is carried somewhat to the radial side. There is some slight shortening. The lower end of the upper fragment of radius can be felt far forward among the muscles, probably having gone in among the muscles and separated them and the tendons. One can place one's finger between the fragments and sink it down to considerable extent. There is not any contact in any part at all. The upper end of the lower fragment of the radius feels sharpened, and one detects with the finger that it is an oblique fracture. There is pretty full power of extension of the fingers. Thumb movements are pretty good, except flexion, which is impaired. Circulation is unimpaired, except so far as it is always impaired after such an injury. There is a certain degree of cyanosis and torpidity in the hand. The nerves are unaffected, except that the little finger is slightly benumbed. Dr. Peters expressed his intention of doing an open operation and dissecting out the bone in front

with the periosteum. Using any such thing as the bone ferrule introduced by Senn Dr. Peters condemned as most unsurgical.

The President, Dr. Wm. Oldright and Dr. King discussed the case. Dr. King described the skiagraph taken that day of the arm. The radius and ulna were fractured about on the same level, and the radius is overlapping antero-posteriorly to the extent of three-quarters of an inch each way. The skiagraph showed the fractures, if any, very slightly oblique. Replying, Dr. Peters said it would not matter if there is half an inch of shortening in the forearm.

Splenic Anemia.

Dr. Thistle presented the patient, a girl 9½ years old. She had been admitted to the Children's Hospital, October 15th, 1898. Family history: Mother and father both living and healthy; also four other children of the family, all healthy. Patient had an attack of measles about four years ago, and has never been sick since, except an occasional headache, until about a year ago, when it was noticed she was of a peculiar color, with occasional headaches. About a month prior to her admission to the Hospital she had vomiting and headaches, with legs slightly swollen. The patient sleeps well. On examination it was noticed she was of a peculiar pallor, a yellowish olive tint. Auscultation of the heart revealed a systolic murmur; and the cardiac dulness was increased. Liver showed no enlargement, while the spleen was decidedly enlarged, extending below the umbilicus, coming almost down to the pelvic crest. There was no change in any other organ, and the lymphatic system was not enlarged in any part. There was no enlargement of the thyroid, the axillary, or the glands in the groin. Occasionally she had attacks of diarrhea. Examination of blood on 10th October: red blood corpuscles, 2,347,000; whites, 13,511. The urine was 1035 sp. gr.; no albumen; no sugar; no bile, although decided jaundice affecting the skin. The spleen has gradually got smaller, and the blood count at the present time is about: red, 3,000,000; white, 20,000. Dr. Thistle arrives at his diagnosis of splenic anemia by a process of exclusion. It is clearly not a leukemia; not Hodgkin's disease because no enlargement of glands; and it is not a pernicious anemia. Charts were exhibited by Dr. Thistle to show the reduction of the splenic enlargement. The treatment was the employment of intestinal antiseptics; large doses of bismuth and small doses of salol combined; also arsenic with the iodide of iron. Bone marrow did not agree with the patient. There was slight elevation of temperature constantly, so that it has been up and down, above 99 degrees, instead of following the normal line.

Abdominal Tumor.

Dr. R. J. Dwyer presented a patient with an abdominal tumor in the epigastric region. The patient was a woman, aged 35, married, born in Canada. Parents: father died at eighty-five; mother at fifty-eight, dropsy. Brothers and sisters all strong and healthy. Has had eight children, two stillborn. Patient has had general complaints of childhood. Her menstruation has always been regular, and there is no history of any stomach trouble at any time previous to the present illness. She is not robust, but has worked hard up to the present time. First indication of present trouble appeared last September. She complained of pains in the stomach passing down towards the pelvis. These pains gradually increased in severity until November, when vomiting commenced. They were relieved by a drink of water. The pains caused her to feel hungry: and there was often a feeling of vomiting without any vomiting being present. By Christmas the patient was not able to keep anything on her stomach. Occasionally a light meal will stay down for half a day, although a test breakfast which was administered was rejected at once. The appearance of the patient is that of one weak and wasted. In the vomited matter there is abundance of mucus, a considerable quantity of lactic acid, but no hydrochloric acid. There is a marked fulness in the epigastric region. Notwithstanding her emaciated appearance she has not the cachectic look one would expect; and her age is against it.

Dr. Nevitt, in discussing the case, said it appeared to be a cancerous growth in the wall of the stomach. Its nodular appearance and its close proximity to the abdominal wall and the escape of gas on pressure all seem to point to the location in the wall of the stomach.

Enlarging on his previous notes, Dr. Dwyer spoke of the character of the peristalsis, and mentioned two distinct points at which gurgling could be obtained. There is no dilatation of the stomach. When the patient takes a full breath you get dulness at the upper border of the growth, and you get the stomach resonance above that. There are one or two nodules present. Dr. Dwyer thinks it probable that she had an ulcer of the stomach and peritonitis, or a tubercular peritonitis. The appearance of the tumor would suggest to him a thickening omentum with possibly transverse colon beneath. As regards the age of the patient bearing on cancer, there have been twenty-six cases of this in St. Michael's Hospital, and one only occurring under fifty years.

Rhinolith.

Dr. Chas. Trow presented a specimen, removed from a female patient, aged nineteen years. There was first a considerable

discharge from the left nostril, with some slight pain, increased on pressure externally, with some headache. Examination of the nose found the middle turbinate moderately thick. The rhinolith was considerably broken in removal. The part, after removal, was cleansed with Seiler's solution and iodol insufflated. The swelling on the outer part of the nose gradally disappeared. These nasal calculi are supposed to be formed by some foreign body becoming impacted in the nostril. As a rule, they are met with singly in adults, and are generally of an irregular ovoid form, the size varying from that of a millet seed to an almond kernel, and weighing up as high as two ounces. There was a high temperature after the operation and much lachrymation before.

Duct Carcinoma of the Breast.

Dr. H. A. Bruce presented the specimen and read the notes of the case. The patient has the following history: Aged sixty-one years. No relatives known to have cancer. The affection of the breast was first noticed about a year ago. There was dull aching pain in the left nipple on retiring one night. She never suffered pain again. Then a small lump beneath the nipple was noticed, which gradually increased in size. The breast gives sensation of weight, but no pain. The nipple was slightly retracted, and the skin immediately surrounding the nipple was adherent to the mass beneath. In size, it was about four inches in diameter, and surrounds the nipple equally in all directions. High up in the axilla there are three enlarged glands to be felt. The operation was performed with solution of cocaine (P. D. & Co.'s tablets—morphia gr. ¼, cocaine gr. i., and common salt), and the entire breast removed. The lymphatics leading to the axilla were entirely removed, and a drainage tube placed in the axillary end of the incision. Duct cancer is an exceedingly rare form of the disease. The nipple is usually not retracted, but in this case it was to a slight extent. The disease commences as a malignant papilloma. Into the ducts simple bacillary growths project. These increase and cause discharge from the nipple. The bacillary projections are composed of epithelium.

Malignant Disease of the Breast.

Dr. Bingham presented two cases, with gross specimens, which he had removed from patients whose ages were forty-five and thirty-two respectively. In the first case, there was absolutely no pain whatever, and no retraction of the nipple. A nodular mass was felt below the nipple line, with enlarged glands in the corresponding axilla. It was a five months' growth,

and was found to be firmly adherent to the pectoralis major muscle. In Case No. 2 the period of growth was six months. There was a considerable amount of pain and much trouble from the beginning. In both cases Dr. Bingham removed the lower part of the pectoralis major muscles, and had the glands of the axilla thoroughly cleaned out on account of their being involved very much. He did not touch the pectoralis minor. The point he would like to hear discussed was the advisability of removing the pectoral muscles. He was entirely prepared to say that the pectoralis major should be removed in all cases in which we operate. In all cases where we deal with malignant disease of the breast, we may have infection of the axillary spaces without any evidence of adhesion. Another point in reference to the method of removal which he thought of some interest—we should attempt to remove, as far as possible, the muscular layer and the growth in one mass without separation, or without cutting into the diseased tissues at any point.

GEORGE ELLIOTT,
Recording Secretary.

Editorials.

PURE WATER.

According to the latest information at hand we learn that chemically pure water is poisonous to human beings. One of the purest waters that Nature furnishes is that from natural ice, such as melted ice of the glaciers. It is generally recognized as a fact in mountainous districts that it is dangerous for tourists to quench their thirst with melted snow and ice in high altitudes. Some may be surprised to find that the danger connected therewith is due to the purity of such waters. We learn these things from Hans Koeppe, who discusses the subject in the *Deutsche medicinische Wochenschrift* (September 29th, 1898), as mentioned in an editorial in the *Medical Register* (February 15th). Dr. Koeppe also tells us a few other things about pure and comparatively pure waters. Distilled water is not so pure as the glacier ice water, but it is sufficiently pure to do much harm when taken into the human system. Absolutely pure water contains no dissolved salts or gases. Distilled water is an "active protoplasmic poison, due to its property of extracting salts from animal tissues, and causing them to swell up by imbibition. When taken into the stomach it causes swelling of the epigastric epithelium, which is followed by desquamation and the production of catarrhal inflammation. The practice of washing out the stomach with distilled water is condemned, but were it possible to obtain a really pure water the procedure would be even more injurious." Dr. Koeppe gives an interesting proof of his contentions by citing the instance of a spring at Gastein which has been known for centuries as the Giftbrunnen, or "poison spring." Numerous chemical analyses have shown that the water is wonderfully pure, more so even than distilled water, hence the danger in drinking it. These statements are of great practical importance in view of the fact that distilled water is now used to such an extent for drinking purposes. The *Register* suggests that when taken at ordinary meals it might be harmless

on account of mixing with salts in the food, and that when taken between meals it would be quite safe if a little saline material were added.

SMALLPOX AND VACCINATION.

During the last few weeks some unpleasant rumors about the prevalence of smallpox in the United States have been in the air. Dr. Reynolds, the Commissioner of Health in the city of Chicago, in a letter to the public, issued about February 1st, said: "Smallpox is spreading throughout the world to an extent not equalled since 1893. *Public Health Reports*, the official organ of the Marine Hospital Bureau, our national health service, records the recent invasion of nineteen States and sixty-three localities by the pestilence in this country alone, and the newspapers add daily to the number. When the contagion becomes so widespread as it now is, it is obviously impossible to prevent its introduction into a new city like Chicago, with its numerous means of communication with the rest of the country."

The *Buffalo Medical Journal*, in commenting on the prevalence of smallpox in the State of New York, says that the ordinary health reports give but a very inadequate idea of the extent of the disease, which has invaded a large number of districts, including some that are close to our own Province. The law as it stands at present in England makes primary vaccination compulsory, while revaccination is entirely voluntary. It was hoped that some change would be made in the statutory regulations this session, but in answer to an inquiry Mr. Balfour stated that the Government do not propose to introduce any legislation regarding vaccination during the present session. In Germany vaccination is obligatory in the first year of life, and revaccination in the tenth year. The result of the enforcement of this law was remarkable. With a population of 50,000,000 there were, in 1871, 143,000 deaths from smallpox; last year there were only 116 deaths from smallpox.

Are we becoming careless about vaccination in this country? If so, the prevalence of smallpox in the neighboring Republic, and especially in the States close to Canada, should be considered by our legislators and citizens a grave danger signal.

There are children now attending some of the schools in Toronto who have never been vaccinated, and have never been questioned about the matter. Vaccination with ordinary aseptic or antiseptic precautions is perfectly safe. The following simple rules should be carried out: Let the surgeon have clean hands and a clean scarifier, with the skin of the patient perfectly clean at the seat of vaccination; use only modern glycerinised lymph.

MEDICAL ITEMS.

Lord Lister has been appointed a Foreign Associate of the Paris Academy of Medicine.

Dr. Marie J. Mergler has been elected Dean of Northwestern University Woman's Medical School, in place of Dr. I. N. Danforth, resigned. Dr. Danforth has been elected Dean Emeritus.

Dr. George H. Simmons, of Lincoln, Nebraska, formerly editor of the *Western Medical Review*, has been elected editor of the *Journal of the American Medical Association*, in the place of the late Dr. J. B. Hamilton.

"We are pleased to note that the efforts of Dr. Price-Brown, of Toronto, Canada, will shortly be rewarded by the completion and publication of his work on 'Diseases of the Nose and Throat.'"—*Laryngoscope*, March, 1899.

Cooke's School of Anatomy, Physiology and Operative Surgery was reopened on Tuesday, February 14th, and it will be carried on in future according to the methods so successfully initiated by the late Mr. Thomas Cooke, F.R.C.S.

Aguinaldo, the Filipino patriot, is a Spanish half-breed. At the age of fifteen he commenced the study of medicine in Manila, and afterwards continued his studies at Hong Kong. He was remarked for his ability as a student, but whether he graduated or not is a matter of doubt.

THE MEDICAL AND SURGICAL "REVIEW OF REVIEWS."—This journal is published after the plans and methods of Stead's *Review of Reviews*, but deals exclusively with medical subjects. Its chief object will be to summarize and index the principal contents of the medical journals of each month, and also to publish occasionally original papers dealing with the questions of the day. We are glad to be able to express a positive opinion that it is in all respects a most admirable journal, and ought to be (as we are sure it will be) very highly prized by the general practitioner.

Personals.

Dr. J. E. Graham has returned from his trip to the Southern States greatly improved in health.

Dr. J. T. Fotheringham, of Toronto, returned home March 16th, after spending a short holiday at the Gleason Sanitarium, Elmira, N.Y.

Dr. Thomas McCrae (Tor. '95) spent a few days recently in Toronto, and left, March 25th, for Germany, where he will spend about six months in the study of Pathology. In the fall he will return to Johns Hopkins Hospital and resume his work in clinical medicine.

Dr. J. T. Fotheringham, of Toronto, and Dr. Ingersoll Olmsted, of Hamilton, are the latest additions to the staff of the CANADIAN PRACTITIONER AND REVIEW.

We learn with regret that Dr. James Fulton (Trinity, '76), of St. Thomas, was seriously injured by a runaway accident, March 21st. His carriage collided with a hydrant, and the doctor was thrown against the stone curb. There was an extensive scalp wound and slight (it is hoped) concussion of the brain.

We have to announce with regret that Dr. Neil McPhatter (Trinity, '80), formerly of Guelph, Ont., was seriously injured at the recent disastrous Windsor Hotel fire, New York. He very heroically endeavored to save two women, Mrs. (Dr.) Henry, and Mrs. Price, by lowering them down a rope. One was killed, the other was seriously injured. The doctor then went down the rope himself, but after his hands had become seriously lacerated, he fell a considerable distance, and had both legs broken.

Dr. L. F. Barker (Tor. '90) was in Toronto, March 21st, but only remained a part of the day. He and Dr. Flexer, with two assistants, have been sent to Manila, in the Philippines, by the Medical Faculty of Johns Hopkins University to study tropical diseases as found in these Eastern islands, lately acquired by the United States. Dr. Barker left Toronto for British Columbia on the evening of the 21st, and the whole party sailed from Vancouver, March 27th. They expect to return in about six months.

Progress of Medical Science.

LARYNGOLOGY AND RHINOLOGY.

IN CHARGE OF J. PRICE-BROWN.

Treatment of Hay Fever with Supra-renal Capsules.

S. Solis-Cohen (*Philadelphia Med. Jour.*, August, 1898) gives a preliminary note upon the subject. The attacks are neither hysteric nor hypnotic, but are due to congenital weakness of vaso-motor control. They are not due to lithemia. The usual remedies have been used with some degree of success, but supra-renal extract in tabloid form has been of the greatest value. One 5-gramme tabloid is taken five times a day; sometimes, if the attack of sneezing was severe, two were taken at a time, and one was always taken at bedtime, and thus a "sneezeless, coryzaless night" was insured. The effect is attributed to the power possessed by supra-renal preparations, to raise blood pressure by increasing vascular tone, and so contraction of the nasal mucous membrane is brought about.

X-Ray Photograph of a Silver Tube in the Antrum of Highmore.

Mr. Cheatle (*Jour. of Laryng., Rhin. and Otol.*, February, 1899) reports the case. The patient was wearing a tube through the canine fossa for chronic antral suppuration. The top broke off, and the patient continued to wear it. One morning on waking, it had disappeared. In order to see if it was inside the antrum, Mr. Low took the photograph, which clearly showed it lying across the cavity.

Dundas Grant also recorded a case in which he found a vulcanite tube lying in the antrum. It had broken off the plate, and was lying there unknown to the patient.

Watson Williams cited a case where a peg was similarly lost in the antrum. In this case, however, it passed out through the ostium maxillare without operative interference.

William Hill recorded another case, in which the loss of a tube in the antrum was fortunate for the patient, as it necessitated the opening of the front wall of the sinus, which proved to be diseased. The result of the treatment was a perfect cure.

The abstractor might relate a somewhat peculiar case of a similar character. His patient was a young man of a very tuberculous family. When operation for antral disease became

necessary, he declined to have a tooth extracted, and a silver tube was inserted through the canine fossa. For three years successive tubes were worn without effecting a cure. Then a tooth was extracted, and a hole drilled through the alveolus. As hard-wood plugs had answered well in previous cases, one was placed in position in this. The patient was instructed how to make them when required, the two points, *of fitting tightly and being tapered,* being insisted upon, the plug being removed only for the purpose of irrigation. As for years he had managed the irrigation treatment himself, he did not return to the office again for some time. When he did come back he had a doleful tale to tell. Two nights previously he had put in a large new plug. He said it was a very tight fit. When he awoke in the morning it was gone. He passed in a probe to ascertain if he could feel it, but could not. Then he washed out the antrum as usual through the alveolus, and arrived at the conclusion that he had swallowed the plug. He at once made another one, even larger than the first, and put it tightly in. The next morning, when he first woke, he could feel it deeper in the socket with his tongue. Then he went to sleep again, and when he arose an hour later it, too, was gone. Chloroform was administered, the opening in the canine fossa enlarged by hammer and chisel, and two long, large and smooth plugs removed. They were not *tapered,* however, but perfectly straight.

Tumors of the Naso-Pharynx.

John R. Winslow (*Jour. of Eye, Ear and Throat Diseases* October, 1898) says: "In the matter of treatment, with the possible exception of symphysiotomy, there is no more horrible operation than temporary resection of the upper jaw, as practised by Langenbeck and others. Unfortunately, these dangerous and disfiguring operations are attended with no greater success than simpler measures. Case after case is on record of recurrence even of non-malignant growth, in spite of such so-called 'radical procedures.'"

Modern treatment has practically narrowed down to four methods, which are stated in order of preference: 1. Snare, either cold or by electro-cautery. 2. Electrolysis. 3. Doyen's method of rapid enucleation. 4. Electro-cautery dissection. The relative merits of these different methods are a subject of much dispute.

A Fatal Case of Pharyngeal Hemorrhage.

G. E. Brewer (*Yale Med. Jour.*, December, 1898) describes the history of the case. It occurred in a young man aged 25, from a comparatively insignificant wound, probably occasioned

by the rupture of a small abscess upon the posterior surface of the soft palate. He first complained of sore throat. There was difficulty in swallowing and the left tonsil was red and swollen. There was also moderate edema of palate and uvula. In a day or two there was rupture of the supposed abscess of tonsil, followed by slight bleeding. Small hemorrhages occurred from time to time, and then the pain and swelling subsided. Later a hemorrhage occurred which resulted in syncope. From this he rallied, with a slight feeling of soreness in left side of throat. On examination the left side of palate was thickened and presented a small clot upon its posterior surface. Two other similar hemorrhages occurred, the last one resulting in death. The author is of opinion that ligation of the common carotid would have saved the patient.

Voice from a Medical Standpoint.

H. D. Hamilton (*Montreal Med. Jour.*, February, 1899) draws attention to the accessory parts of the body concerned in voice production, as the thorax, lungs, resonance chambers of the nose, the ear and the cranial cavities, wisely insisting that to obtain the musical voice in its perfection, the whole body should be in a condition of perfect health. Faulty methods of vocalization and overstrain of the voice are likewise to be avoided.

Wesley Mills, speaking upon the same subject, and in the same journal, suggests that voice might be an indicator of disease, just as the face is, particularly in reference to the pitch and the qualities of sound. Those who sing should be warned against using the voice during the change of life. Singers in societies often strain the parts, producing congestions and exhaustion of the nervous system, from attempting a range beyond their power. He speaks of the frequency of voice troubles among preachers and their rarity among actors—the former being caused by the high pressure, worry and irregularity of their work; the latter being the result of regularity in the use of the voice, and control of it by the principles of common-sense.

Tracheotomy in Tubercular Perichondritis.

Herr Nauratil (*Monatschrift f. Ahrenheilkunde*, July, 1888): A charwoman, aged 32, six months pregnant, was admitted to the hospital in a state of suffocation from swelling of the false cords and ary-epiglottic folds. Tracheotomy was done at once. There was catarrh of both apices and some dulness. In three weeks swelling subsided and she went out, wearing the tube on account of her approaching labor. Two months after confinement she returned with her larynx perfectly sound, except for

slightly impaired motility of one arytenoid. The case shows the possible value of tracheotomy as a curative measure in tubercular peri-chondritis, without extensive lung disease.

Treatment of Laryngeal Phthisis.

R. Lake (*Jour. Laryng., Rhin. and Otol.*, February, 1899) says that while "general treatment is useless, one must not lose sight of the enormous aid one derives from increasing the powers of resistance in the body, and by increasing the numbers and energy of phagocytes and white corpuscles." Local measures he divides into surgical and non-surgical. The former consist in removing diseased portions, curetting ulcers, and depleting edematous tissues by puncture, etc. The latter consist of insufflation of powders, painting on or rubbing in of solutions, the injection into the tissues of hypodermic remedies, and the injection into the trachea of oily solutions by syringes and atomizers. In using any "paint" to the larynx a brush should never be used, but always a cotton wool mop, for the two reasons of cleanliness and efficiency. Brisk and firm friction are required, and all solutions should be as strong as possible. When injections are given the temperature should be about 80° Fah., the patient being instructed to inhale deeply, hold his breath immediately after the injection, and not to cough. The conditions attending laryngeal tuberculosis are divided into six clinical heads. 1. Granular condition of vocal cords. 2. Superficial excoriation or ulceration. 3. Edema. 4. Edema and superficial ulceration. 5. Deep ulceration. 6. Mixed edema and deep ulceration. In Nos. 1 and 2 no method of treatment has been so efficacious as intratracheal injection. In Nos. 3 and 4 surgical treatment is required as well as the application of paints. Cutting forceps do the most effective work. Formic aldehyde, or lactic acid, should be used after every intra-laryngeal operation on a tubercular subject, no matter how small the operation. In Nos. 5 and 6 frictions and operations are useless as well as intolerant to the patient. In such cases insufflations of iodoform and orthoform will have a wonderfully soothing effect, particularly the latter, which is noted for its prolonged action. It is a non-toxic anodyne, producing anesthesia of the parts for nearly twenty-four hours. The prognosis, under judicious treatment, is good under the first two divisions, fairly good in some of the third and fourth varieties, and universally bad in the other two.

Foreign Bodies in the Lung, One for Eight, Another for Five Years, Simulating Tuberculosis.

M. A. B. Smith (*Maritime Med. News*, January, 1899) reports the case of a young man who accidentally drew the head of a

piece of timothy into his larynx, producing symptoms resembling those of tuberculosis, which lasted for eight years. When the accident occurred severe coughing with some expectoration of blood followed. After this, off and on for years, he had similar attacks, in which particles of timothy would be expectorated. Sometimes also severe hemorrhages would occur. On two occasions he spat up each time nearly a quart of blood. Eight years after the accident, a number of particles were spat off while the doctor was present. These were examined under the microscope and found to be identical with those from a fresh timothy head. The patient subsequently materially improved in health.

D. A. Campbell (*Maritime Med. News*, January, 1899) reports a similar case. A young man while walking through a meadow, amused himself by biting off the heads from the stalks of timothy. One of these slipped into his larynx. He was not affected much immediately, but hemorrhages developed, occurring off and on for five years. Finally the head was brought up almost unchanged.

Carcinoma of the Esophagus with Fatal Hemorrhage from the Subclavian Artery.

F. G. Finley and D. P. Anderson (*Montreal Med. Jour.*, February, 1899) give the history of a man, aged 60, addicted to chronic alcoholism. Swallowing had been difficult for some time and he had been hoarse likewise. Subsequently he was examined by Birkett, who reported complete paralysis of left vocal cord and deficient adduction of the right. No. 8 esophageal sound was arrested 13½ inches from mouth, but No. 7 passed into the stomach. Four months later a No. 3 esophageal sound was arrested 8 inches from the mouth. As the symptoms became more severe, there was evening rise of temperature, dull pain over the sternum, cough with scanty and fetid expectoration, rigors, etc., with extreme emaciation. Finally a slight attack of coughing was followed immediately by profuse hemorrhage and death. *Post-mortem* revealed cancer of the esophagus above the bifurcation of the trachea and extending to the left. There was gangrene of the left lung and perforation of the second portion of the subclavian artery 2½ inches from its origin. There was also broncho-pneumonia and secondary growths in tissues of neck and epigastric glands.

THERAPEUTICS.

IN CHARGE OF GRAHAM CHAMBERS AND J. T. FOTHERINGHAM.

The Thyroid Therapy.

The *Northwestern Lancet* has in it an article on Thyroid Therapy by Haldor Sneve. The conclusions which he reaches are as follows:

1. The thyroid gland produces a secretion of the greatest importance to the metabolism of the body. Absence of function produces cretinism if congenital, myxedema if acquired.

2. Simple hyperplasia (simple goitre) does not produce marked pathological disturbances, but the writer believes it to be a larvated form of exophthalmic goitre, and that so-called "nervousness" can be found in the vast majority of cases.

3. Hyperplasia associated with disturbance of the cervical sympathetic is the disease known as exophthalmic goitre.

4. Surgical interference in diseases of the thyroid gland should be limited to the removal of neoplasms; thyroidectomy in exophthalmic goitre is unphysiological, irrational and dangerous.

5. In the majority of cases of exophthalmic goitre, medicinal hygienic treatment, rest, galvanism through the neck (two to five milliamperes), tonics, sodium phosphate and thymus gland will effect amelioration. In cases refractory to medical treatment where life is threatened, section of the cervical sympathetic should be practised.

6. Many cases of neurasthenia are cases of masked exophthalmic goitre and should be treated accordingly.

7. Thyroid therapy is specific in sporadic cretinism, myxedema, and simple goitre, and removes obesity.

8. Thyroid extract increases the unpleasant symptoms in exophthalmic goitre, and is a reliable test also in the masked form of this disease.—*Therapeutic Gazette.*

Treatment of Ulcer of Stomach.

Ewald (*Brit. Med. Jour.*, October 29th, 1898) writes upon the treatment of several diseases of the stomach. His treatment of recent ulcer is briefly as follows:

The patient is kept absolutely at rest in bed, and for five or six days nourished on nutritive enemata. The thirst is relieved by pellets of ice, and if hunger is excessive, small doses of cocaine may be given. Pain is generally quickly relieved by this method of treatment, but if not, morphine may be given, and is best administered hypodermically in the region of the stomach. After three to six days, according to the clinical symptoms and

condition of the patient, teaspoonfuls of some easily digested food, such as milk gruel of wheat or oats, are given, and if this causes no pain the quantity is gradually increased and the number of nutritive enemata decreased. As a rule, in a few days the patient will be able to take a light diet of non-irritating fluids and soft solids.

Formalin for Sweating Feet.

Gerdeck (*Riformo Medico*) recommends formalin in sweating feet. The sole but not the dorsum should be painted with pure formalin three times a day, and the region between the toes once a day. Four or five drops of the drug may also be applied to the shoe, as it serves to disguise the fetid odor, as well as to preserve the leather. When the pure formalin cannot be tolerated a 30 per cent. solution may be employed. The good effects last for three or four weeks, when the treatment may be repeated. Under the applications the skin becomes dry and leathery.—*University Medical Magazine.*

Sodium Sulphate in Chronic Mucous Catarrh of the Stomach.

Simon (*Jour. de Médecine de Paris*) has employed sodium sulphate in several diseases of the stomach. He found that it gave good results in chronic mucous catarrh with hypochlorhydria, but was of no avail in gastralgia, atropic gastric catarrh, and carcinoma. Simon gives the drug in 10 to 15 grain doses, dissolved in 6 or 7 ounces of lukewarm water, before breakfast. He attributes the good results to stimulation of acid secretion and the motor function of the stomach.

Two Cases of Carbolic Acid Gangrene.

Steinmetz (*Therap. Monatsh.*, September, 1898) reports a case of gangrene of the finger following the application of a dressing moistened with an 8 per cent. solution of carbolic acid. On the first morning after the dressing was applied the finger was white, and on the second the tip was black. On the seventh day the distal half of the finger was dry and black. Amputation was performed on the sixteenth day.

In the October (1898) number of the same journal Havemann records a similar case of gangrene of the thumb following the application of a dressing moistened with a 3 per cent. solution. The skin was dry and black, similar to that of the former case.

The Influence of Formaldehyde upon Digestive Ferments.

Finossier (*Revue de Thérapeutique Médico-Chirurgical*) gives the results of several interesting experiments upon this

subject. He finds that it only slightly retards the action of ptyalin and amylopsin, whilst considerable delay occurs in proteid digestion by pepsine and trypsin, but was not sufficiently marked to prohibit its use as a gastric or intestinal antiseptic.

The Use of Bicarbonate of Soda in the Treatment of Suppuration.

Brucker (*Thése de Bordeaux*) states that he has obtained good results from the treatment of wounds by the application of absorbent cotton or lint moistened with a 2 per cent. solution of bicarbonate of soda. He sometimes uses a 1 in 25 ointment of vaseline. He believes that the success of the treatment depends upon rendering the serum more alkaline and not upon the antiseptic power of the drug, as strong solutions do not act any better than a 2 per cent.

Hay Asthma.

In cases of hay asthma, with cough and difficult expectoration following exposure, give:

℞	Ammon. chlorid	℥iv.
	Tinct. hyoscyami	āā ℥i
	Syr. scillæ comp.....	
	Syr. senegæ.....	
	Syr. tolutanæ	
M.	S. Teaspoonful every three hours.	

—Dr. Eshner.

The Treatment of Recurrent Epistaxis.

According to the *Riforma Medica* for January 10th, Rendu recommends:

℞	Antipyrine	7½ grains
	Tannin.....	15 "
	Powdered sugar	150 "

To be used locally.

Belladonna in Broncho-Pneumonia in Children.

The *Brit. Med. Jour.* of January 28th, 1899, contains an article on this subject by Coutts, Physician to the East London Hospital for Children. He says that he was led to try the remedy from the fact that it had been found most useful in paralysis of diaphragm following diphtheria, and also in the bronchitis with excessive secretion which sometimes follows ether anæsthesia. Several dozen cases have been treated by this method, and, so far, the mortality has been greatly reduced. Coutts gives the remedy in large doses—¼ grain of the alcoholic extract every four hours—and makes

no distinction for age. The efficacy of the treatment no doubt depends upon stimulation of the respiratory centre and diminution of the bronchial secretion.

Pernicious Anemia and Pseudo-Leukemia.

In cases of this kind inject liquor potassæ arsenitis in aq. laurocerasi. Or, since considerable local irritation or pain may be occasioned, it is better to use arseniate of sodium in water. —VINAY.

Headaches.

℞ Sodii brom ..... ℥i.
Phenacetin ..... gr. xxx.
Caffein. citrat ..... gr. xviij.
Sodii bicarb ..... ℥i.

M. et ft. chart. No. vi. S. One every fifteen minutes till relieved, to be followed by a Seidlitz powder.

—DR. M. STALLER.

Acute Colic.

℞ Tinct. opii deodorat ..... ℥i.
Chloroformi ..... ℥iss.
Camphoræ ..... gr. iv.
Ol. cajuputi ..... ℥i.
Aquæ ..... ℥ij.

M. S. One teaspoonful every hour.

Neuralgia.

℞ Menthol ..... } āā 1
Guaiacol ..... }
Spt. vini rect absol 18

Vaginismus and Vaginitis.

℞ Ol. eucalypti ..... ℥iij.
Ceræ albæ ..... } āā ad ℥iij.
Olei theobromatis ..... }

M. Div. in supposit. No. iv. (bougie-shaped).

—LUTAUD, *Jour. de Méd.* —*Medical Record.*

CLIMATOLOGY AND PUBLIC HEALTH.

IN CHARGE OF WM. OLDRIGHT, M.A., M.D.

Pavements, slaughter-houses and tuberculosis come under the above caption at the present time; and in our sanitary section of this and forthcoming issues will be found some clippings dealing with these subjects, in which so many of our readers are interested. We (not the editorial "we" alone) are now getting thawed out so far as to be fondly hoping we are quite near the time when we shall be—rolling through the mud, and then enjoying good (?) roads and the balmy breath of spring. In our provincial, municipal and other deliberative bodies people are discussing the problem of "mending our ways," and so we make a few cuttings *apropos* thereof from the *Sanitarian*. The first of these is from a paper read before the Association of Medical Health Officers, by A. W. Campbell, C.E., Provincial Road Commissioner for Ontario. We are pleased to see "the prophet is not without honor" in another country and gladly re-import him. His article is entitled "The Influence of Pavements on Public Health." Amongst other things he says:

"There is no one paving material which possesses every quality desired in a pavement to meet all conditions and uses. The ideal pavement remains to be discovered; but the features which should belong to such an ideal pavement are so numerous and of such varying character as to render the search apparently a hopeless one. The ideal pavement: 1, should be cheap and economical of maintenance; 2, should be durable; 3, should suit all classes of traffic; 4, should offer little resistance to traction; 5, should give a good foot-hold to horses; 6, should be adapted to all grades; 7, should have a good appearance; 8, should not be muddy nor pervious to water; 9, should be sanitary, that is, non-absorbent, not subject to decay, easily cleaned, not dusty, not noisy. . . . Just as no absolutely perfect paving for every time and place has been discovered, it is doubtful if any paving material now used should be utterly condemned. Each has its place in which, until the ideal universal pavement is found, it will be more satisfactory than any other which could be used under that particular set of circumstances of soil, climate, traffic, etc. . . . Cedar block has received the greatest censure on the score of unhealthfulness. The late Dr. O. W. Wight, Health Officer of Detroit, is quoted as saying: 'On sanitary grounds I must earnestly protest against the use of wooden block pavements. Such blocks, laid endwise, not only absorb water which dissolves out the albuminoid matter that acts as a putrefactive leaven, but also absorbs an infusion of horse-manure and a great quantity of

horse-urine dropped on the street. The lower end of the blocks, resting on boards, clay or sand, soon becomes covered with a fungoid growth thoroughly saturated with albuminous extract and the excreta of animals in a liquid, putrescible form. These wooden pavements undergo a decomposition in the warm season, and add to the unwholesomeness of the city. The street, in fact, might as well be covered a foot deep with rotting barnyard manure so far as unwholesomeness is concerned. Moreover, the interstices between the blocks and the perforations of decay allow the foul liquids of the surface to flow through, super-saturating the earth beneath, and constantly adding to the putrefying mass.' Cedar block has been condemned in similar terms by many others. On the other hand, Col. Heywood, Engineer of the city of London, England, has said: 'It has been said that wood pavements at all times smell offensively and may be unhealthful; but although some city streets have been paved with wood for thirty years, no complaints that I am aware of have been made to the commission on this head; and the inhabitants at all times have not only expressed great anxiety lest the wood should be replaced by other materials, but have subscribed towards the cost of its renewal. . . . I have at times noticed offensive emanations from it near cab-stands, but am unable to find further evidence of its unhealthfulness. These remarks must be held to apply only to public streets open to the sun and air, and traffic; in confined places and under some conditions, wood might be objectionable. I have seen it decaying in confined places without traffic.'

"The one statement by the Medical Health Officer of Detroit refers directly to the cedar block pavement as we understand it in this country. The other opinion, that of Colonel Heywood of London, is expressed regarding the wooden pavement as laid in European countries. Between these two pavements there is a vast difference. Under European practice, many of the pavements are of the Karri and Jarrah woods of Australia, which are thoroughly saturated with resins, are very hard and are not subject to decay. They are sawn into brick-like blocks and laid on concrete. Where soft woods are used, they are also cut into regular oblong blocks and laid on concrete, and are saturated with creosote or treated with some other preservative process. Wooden pavements of America, however, represented by cedar blocks, are of a very different order."

Then follows a very practical consideration:

"From a sanitary standpoint, the cedar block pavement of this country would indicate a serious menace to health. At the same time, while we are justified as a matter of theory in arriving at this result, there do not appear to be any statistics to prove the conclusion to be a correct one. The death-rate of

cities most largely paved with cedar block does not bear any ratio to the extent of such pavement; nor does a change from cedar block to another less absorbent pavement produce a noticeable effect on the death-rate."

Next, bacteriology is again to the fore:

"The bacteriological examinations showed that, in specimens taken from blocks which had been in use for four years, and from a depth of one centimetre and two centimetres below the surface, there were at the end of five days 650,000, 220,000 and 12,100 bacteria per gramme of wood. A later examination showed 1,200,000 colonies per gramme in the surface of the wood, and 8,600 colonies per gramme at two centimetres below the surface. An estimate, in terms of its nitrogen, was made of the organic matter absorbed by the wood, and indicated that the surface layer of wood contains more nitrogen than the most polluted soil. A comparative estimate of the pollution of the atmosphere was made by placing a definite quantity of sulphuric acid under a glass bell, on the surface of wooden and asphalt pavements, the result, as indicated by the quantity of ammonia absorbed by the acid, being much in favor of asphalt. The observations show that while a wooden pavement gives absolute protection to the soil and to the subsoil water, there was considerable atmosphere contamination."

Then other forms of pavement are discussed:

"Broken stone or macadam would next arouse suspicion with regard to its absorptive qualities. There is this great difference between the two, however, that whereas a wooden pavement itself decays and affords food for the decay of other organic matter falling on it, the macadam does not in itself decay. With under-drainage such as well-built macadam roads possess, it should be little more than a good sewage disposal bed for the comparatively small amount of sewage which falls upon it. A macadam pavement can be scraped and swept, it is not noisy, dust can subdued by sprinkling, and on sanitary grounds appears to be an excellent pavement for residential streets where traffic is not excessive. For business streets or for heavily travelled thoroughfares of cities, a harder surface is advisable.

"With regard to absorption, there can be no objection to asphalt, vitrified bricks nor stone blocks. Asphalt is impervious to water; while the joints of brick or stone pavements are practically perfect so far as absorption is concerned. To be sanitary a pavement should not be dusty. The dust of a pavement is not only an irritant, but carries with it the bacteria of disease which, from various sources, are a part of street filth. To prevent dust the pavement must be so perfectly cleaned that a practically harmless amount is taken up by the wind; or if perfect cleanliness is not possible, dust must be subdued by sprinkling. Un-

less perfectly cleaned, much better cleaned than is commonly the case in this country, an asphalt pavement is very apt to be a disagreeable dusty pavement on a windy day in summer. This, indeed, is one of its greatest faults from a sanitary standpoint. Toronto has the reputation of being a clean city, with a well-organized street department; yet even under these favorable conditions, a walk or drive down Yonge Street on a warm, windy day is a very trying experience. The smooth, hot surface quickly dries any matter falling upon it, a wheel passing over this dry substance grinds it to powder, and the result is that clouds of dust find their way into the eyes, nose, mouth, throat and lungs of pedestrians. Business men in their offices are not safe from its attack, as it drifts in through the open windows. The dust imbeds itself in clothing, fastens itself on articles of food exposed in the shops, to be eaten finally by the purchaser. One case came to my notice in which a consumptive patient was ordered by his physician to leave one of the best residence streets of Toronto, because of the dust which came from the asphalted roadway. These streets are swept by machines, and are hand-swept by a corps of city employees, but are not, to my knowledge, flushed as are similar pavements in London and Paris. Flushing is the only method whereby asphalt can be freed from this unsanitary dustiness, but in addition to being expensive and hurtful to the asphalt, such a proposal will doubtless meet the disapprobation of the engineer in charge of sewers. The dust, however, is not a defect of the pavement so much as it is a fault in the method of cleaning. Asphalt has, nevertheless, the disadvantage of being a very hot pavement. Its smooth surface reflecting back the heat and light, is productive at times of sun-stroke, and the glare is frequently painful to the eyes. This is most noticeable in closely built business sections where there is least circulation of air, where the sun beats down between high brick walls; and is not so objectionable on a shady residential street with houses well apart. Vitrified brick and stone block pavements are neither so dusty nor hot as asphalt since the surfaces are less smooth and assist in retaining in the joints the finer particles of dust. Sprinkling, too, is in a greater measure effective in subduing dust on brick or stone block than on asphalt, from the hot, smooth surface of which moisture evaporates rapidly. A macadam pavement is dusty if not properly treated, but if scraped and swept as are other pavements, the dust can be largely subdued by sprinkling."

Then, turning from features of pavements which are violations of sanitary conditions when viewed from a chemical and bacteriological standpoint, there comes a matter of sanitation that is too constantly overlooked—the want of thought practically for the abused nervous system.

"Noisiness, if excessive, is another unsanitary feature. A noisy pavement is jarring to the nerves, grating upon the sensibilities, and for either a heavily travelled business street or a residential quarter, a quiet pavement is much to be desired. Noise itself is not always unhealthful. It is doubtful if the workman in a boiler factory, or a railroad engineer or other employee, is much influenced by the noise incidental to his occupation. Both are muscular of body, constantly taking vigorous exercise. But to the more sedentary man of business, whether at high nervous tension in his office or resting in the quiet of his home, a din, constant or intermittent, is a source of annoyance, and as such is wearing on the nervous system. The most objectionable in this regard is granite or other stone block pavement. Vitrified brick is apt, unless great precautions are taken, to create a disagreeable rumbling. Asphalt, wood, and macadam are the least objectionable with respect to noise."

And finally, a little bright gleam athwart our smoky pathway:

"Streets should be the public parks, pleasing to the cultivated taste, adding to the culture and refinement of the people, and enticing them to breathe health and vigor, whether walking, bicycling, riding or driving. Passing along the city street we reach the country highway, which, as a means of permitting the people of the city to leave the congested portions and to reside in the less thickly populated suburbs, forms an important factor in securing public health."

From another source we note that in Lyons, France, a substance called ceramo-crystal, ceramic stone or devitrified glass, is being used as an experiment in street paving.

Wheelmen as Benefactors.

From the Baltimore *Sun*, through the *Sanitarian*, we also find something on the same subject under the above heading:

"There is no public institution more potent in social, political and commercial well-being than the public highway. . . . Banded under the banner of the League of American Wheelmen, the riders of the tireless tire have, since their organization in 1880, raised the cry of 'good roads,' and have kept it up with wondrous energy. They have not only through their engineers devised or selected the best methods of making the cheapest durable thoroughfares, but they have conquered many obstacles that have stood between them and other groups of persons who are to be benefited equally with them in securing smooth roads. . . . The State aid system, as shown in the resolutions, recites that the cost of construction of first-class roads connecting farms with market towns is too considerable to be borne by farm

property alone: that as the entire population is benefited directly and indirectly by good roads, all property ought to contribute through the medium of a State tax. The Higbee-Armstrong law, by which State aid has been introduced in New York, is popular. It provides for a division of the cost of road construction among the State, the county and the local township, and it is said, many of the towns availing themselves of it will secure from outside sources four or five times the sum they raise themselves, while in the large cities, which will pay most of the fund, the tax will not fall more heavily than 1 per cent. per thousand dollars of the assessed valuation."

The Administration of Somatose.

Joachim (*Pharm. Zeit.*) has found that patients are often unable to prepare solutions of somatose. The best method of preparing it is as follows: Fill a wineglass with cold water, and then add three teaspoonfuls of somatose, which must be sprinkled on the top of the water. The wineglass should be moved as little as possible, so that the somatose remains on the surface of the water. After a few hours the solution is ready for use. The quantity required during the day is best prepared the evening before. The three teaspoonfuls of somatose is sufficient for the day. In the morning a third part may be taken with milk, at lunch, and later at dinner; the remainder should be mixed with soup or porter. —*Brit. Med. Jour.*

The Etiology and Prophylaxis of Tuberculosis.

Andvord (*Norsk. Mag. for Lögevid*) bases his paper partly on the extraordinary constancy of the death-rate from tuberculosis at all ages in any particular locality, and partly on the after-history of 814 children who had been treated in hospital for "scrophulo-tuberculosis." It was found that 60 per cent. of these were in excellent health, while a third had either succumbed to tuberculosis or were suffering from it at the time the inquiry was made. This shows that the percentage of persons with tuberculous phthisis rises with increasing age. The writer, therefore, comes to the conclusion that infection with the tubercle bacilli begins, as a rule, in childhood, and that in crowded areas the whole population is more or less infected, and inherits the predisposition to infection. The tuberculosis death-rate in any locality depends on a local constant, which Andvord considers to be the inherited or acquired power of resistance of its inhabitants to the infection. The practical conclusion is that, in the battle against tuberculosis, the chief point is to protect the children from infection, and therefore to attack all enlarged tuberculous glands.

Obituary. Apr. 1879

DR. HENRY HOVER WRIGHT.

It was no great surprise to us when we heard that Dr. H. H. Wright, of Toronto, was dead. He had completed his life-work, and was for some time simply waiting for the last summons. He had a slight attack of influenza about March 1st, and, although there was no serious complication, he sank gradually after March 4th until the morning of the 7th, when death came. He was born in Prince Edward County, 1816, and was therefore in his eighty-third year. He derived most of his preliminary education from the ordinary common schools that existed at that time, and from his father, who was one of the pioneer ministers of Upper Canada, as this province used to be called. He commenced the study of medicine in York (Toronto) under Dr. Rolph, in 1832, and remained with him until the troublous times of 1837, when Dr. Rolph was compelled to leave the country on account of his connection with the Mackenzie rebellion. Young Wright shortly followed, and remained with Rolph, in Rochester, more than a year, after which he returned to Canada, and received his license to practise from the College of Physicians and Surgeons, Upper Canada, January 28th, 1839.

Dr. Wright practised for a short time in Dundas, and then went to Markham, where he was engaged in general practice until 1853, when he came to Toronto, and became a lecturer in Rolph's School. He was best known as Lecturer on the Practice of Medicine in the Toronto School of Medicine, in which he and the late Dr. W. T. Aikins were the two leading spirits after the split in the Faculty, when Rolph established a separate medical school. As a lecturer he was fortified by a thorough knowledge of his subject, acquired by systematic work and careful observation. He aimed at nothing brilliant in an oratorical way, but simply attempted to teach in a plain, simple, and practical way what he well knew about each disease. His great desire was to make his students take a broad view of the subject, and he devoted much time to teaching the general principles of medicine. The good student liked his lectures, the poor student often preferred a small text-book.

Apart from his work in the lecture-room, he did much to raise the general standard of medical education and of the profession in this province. He took a very active part in the establishment of the Ontario Medical Council, firmly believing

that a central examining board would be the best safeguard against cheap degrees. We believe that, although much credit is due to his co-workers at that time, W. T. Aikins and Thorburn (of Toronto), Dixon (of Kingston), and some others, Dr. Wright may fairly be considered the father of that organization. His motives were high-minded and perfectly unselfish, and his efforts were untiring and judicious. We will not attempt now to go further into detail with reference to the great work that was then done, but we hope the profession of this country will never forget what they owe to Dr. Wright in connection with the formation of our Provincial Medical Parliament. Dr. Wright was an active member of the Council from 1880 to 1890, and for a time its President.

It is somewhat difficult to do justice to the admirable character of Dr. Wright. He was fully possessed of honesty, not of the modern sort, which is so much tinctured with diplomacy, but honesty absolutely unveneered and uncompromising in all respects. He hated shams and tricks, and was never afraid to express his opinions. He was sometimes terribly severe in his criticisms of time-servers and their methods. He was blunt and outspoken at all times, but beneath a bluff exterior he carried a heart as tender as that of a child, and as generous as that of any philanthropist that Canada has known. As one of the leading physicians of Toronto he must be placed in the list with Widmer, Rolph, Aikins, Bovell, Hodder and Workman, who were recognized as great men. As Dr. Wright lived in comparative retirement for several years on account of the infirmities of advanced age, many of our younger physicians have but little conception of what he did for our profession; but there exists a large number of men, in and out of Canada, who well remember what he was and what he did in the old days. Many grateful students and other warm personal friends will ever respect and revere the memory of one of the greatest physicians that Canada has produced.

CHARLES McDONALD, M.D.

Dr. Charles McDonald, of Tilsonburg, died suddenly under peculiarly distressing circumstances, March 1st, 1899, aged 40. We learn from the Toronto daily papers that his health had not been good during the last few months, but he was able to attend to his work fairly well. On the day before his death he saw several patients. He made one midnight visit, returned to his home at 1.30 a.m., and went into the drug store of his brother, Mr. John McDonald. At seven o'clock his brother found his dead body lying on the floor of the dispensing room. It was supposed that death was

instantaneous. Dr. McDonald received his medical education in the Toronto School of Medicine, the degree of M.B. from the University of Toronto, M.D. from the University of Victoria College, and the double Edinburgh and Glasgow qualification all in 1880. He commenced practice in his native town of Tilsonburg in 1881, and remained there till the time of his death. He was always popular as a student and as a practitioner, and, in addition to his relatives, leaves many warm friends, all of whom deeply deplore his untimely end. A widow and two daughters survive.

ARTHUR GEORGE MACHELL, M.B.

We have to announce with deep regret the death of Dr. Arthur Machell, of Owen Sound, which occurred at the house of his brother, Dr. Henry Machell, Toronto, March 4th, 1899. He had an attack of la grippe some weeks ago, the chief symptom for some time being inflammation of the middle ear. His brother went to Owen Sound to see him, and decided to bring him to Toronto. Although he suffered much pain it was hoped that recovery would soon ensue. Suddenly, however, about March 1st, serious cerebral symptoms appeared, and grew rapidly worse until the morning of the 4th, when his medical attendant realized that death was inevitable. He was forty-three years of age. Arthur Machell and Charley Macdonald, as their friends were wont to call them, spent three years of their student life together in the old Toronto School of Medicine, and both were general favorites. McDonald graduated one year before Machell, and both died in the same week. Dr. Machell settled in Owen Sound shortly after graduating, and remained there until he came to Toronto three weeks before his death. His widow and one daughter survive.

THEODORE S. COVERNTON, M.D.

We have to record with deep regret the death of our dear friend, Dr. Theodore Covernton, which occurred at Los Angeles, Cal., March 16th, 1899. He received his medical education in the Toronto School of Medicine, and became M.B., University of Toronto, in 1875, and M.D. in 1878. After practising some years in Toronto he went to England, and took a post-graduate course in sanitary science in Cambridge in 1884. On his return he resumed practice in Toronto, and was appointed lecturer in Sanitary Science, Trinity Medical College. On account of failing health he resigned his position, about 1889, and went to Spokane Falls. As the climate there did not agree with him he went to

California, and lived in Ontario for a number of years. A few weeks ago he was so ill from phthisis that his friends persuaded him to go to a sanitarium in Los Angeles. He was forty-five years of age and unmarried. He was much liked by all his friends and patients, and, if his health had been good, he would undoubtedly have attained a high position in Toronto.

HENRY PORTER McCAUSELAND, M.D.

Dr. H. P. McCauseland was a native of Toronto, and took his medical course in Trinity Medical College, and became M.D., University of Trinity College, in 1882. Soon after graduating he went abroad and lived for some years in Sydney, Australia. Recently he came to America, and, when in Baltimore, died suddenly, March 11th, 1899, aged 37. His remains were brought to Toronto, and buried March 16th.

LEVI BOWMAN CLEMENS, M.D.

Dr. Clemens, of Berlin, died after a brief illness of forty-eight hours on March 17th, aged 41. He was attending to his work as usual until the evening of the 15th, when he complained of feeling ill. Next day at noon his symptoms were considered serious, and he was removed to the Berlin-Waterloo Hospital in an unconscious condition. He remained in a condition of coma and gradually sank until the following day, when death came, caused by cerebro-spinal meningitis. He was one of the most prominent physicians and popular citizens in that section of the country. At the last general election for the Ontario Legislature he was the Liberal candidate in opposition to Dr. Lackner, and was defeated; but, Dr. Lackner having been unseated, he would again have been a candidate, had he lived, at the new election which will take place shortly. Last year he was Reeve of Berlin, and at the time of his death was Medical Health Officer.

ARCHIBALD CHARLES GAVILLER, M.D., C.M.

Dr. A. C. Gaviller, who resided at Grand Valley, Ont., died on January 7th, 1899. He was much respected, and deeply regretted by a wide circle of friends, who knew him to be a man of no ordinary worth in every way. He was an exceptionally well-qualified medical man. He graduated in 1882 at Trinity, and took the University gold medal, the highest honor of the year, as well as the first silver medal of Trinity Medical College, the second honor of this medical col-

lege of the same year. In addition to this, some years after graduating, he took at least two post-graduate courses in New York, and had just before his death qualified himself fully as a specialist in ophthalmological and otological work. His death was due to overwork and exposure to the excessive heat in New York, while there for some months last summer. He was only forty-one years old at the time of his death. He was a nephew of Dr. Geikie, Dean of Trinity Medical College, Toronto.

DUNCAN McCALLUM, M.D.

Dr. Duncan McCallum, of Detroit, died of pneumonia after a brief illness, March 9th, 1899. He was born in Brantford, and lived there until he came to Toronto to study medicine in Trinity Medical College. He completed his course in this school and graduated in Trinity University.

NICHOLAS HOPKINS, M.D.

Dr. Hopkins, a resident of Kincardine for twenty-four years, died March 21st, 1899, aged 83. He was a native of Ireland and came to Canada in 1837. He lived at Montreal, Brockville, Toronto, London and Dunnville before going to Kincardine. He was an ardent Orangeman, a strong Conservative, and a physician of more than average ability.

WILLIAM FRANCIS SCOTT, M.D., M.R.C.S.

Dr. Scott, of Hull, Que., died suddenly at his home, of heart failure, March 9th, 1899. He was a son of the late Judge John Scott, of Goderich, and a nephew of the late Alonzo Wright, of Ottawa. He was an ex-Mayor of Hull and a surgeon-major of the 43rd Battalion. He received M.D. from McGill and M.R.C.S. (Eng.) in 1876. He was one of the most prominent Conservatives in Ottawa County, and would probably have been a candidate at the next Federal election had he lived.

HENRY JONES, M.R.C.S.—Mr. Henry Jones, of London, England, better known as "Cavendish," the great authority on whist, is dead.

WILLIAM RUTHERFORD, M.D., F.R.S.—Dr. William Rutherford, the distinguished Professor of Physiology in the University of Edinburgh, died of influenza after a brief illness, February 21st, aged 60.

THOMAS COOKE, F.R.C.S.—Mr. Thomas Cooke, the founder of the well-known London School of Anatomy and Physiology, died suddenly in February last.

W. M. NELSON, M.D.—The *Montreal Medical Journal* announces the death of Dr. Nelson, a graduate of McGill in 1894, who made a specialty of dermatology.

JAMES HENRY ETHERIDGE, A.M., M.D.—Dr. Etheridge, of Chicago, died February 9th, 1899, aged 55. He was Professor of Gynecology and Obstetrics in Rush Medical College; and had the reputation of being an admirable teacher and skilful operator.

SIR JOHN STRUTHERS, M.D., F.R.C.S.E., LL.D.—Sir John Struthers, emeritus Professor of Anatomy in the University of Aberdeen, died February 24th, aged 76. He was one of the greatest anatomists, and one of the best teachers of anatomy that Great Britain has produced. He attended the meeting of the Canadian Medical Association at Montreal in 1884, and was present at the banquet given in the Windsor Hotel on that occasion. His genial and kindly manners endeared him to all who met him at that time. He took special interest in Canadian medical matters, and had several conferences with representatives of the various provinces, including those of the Ontario Medical Council.

GEORGE HENRY ROHÉ, M.D.—Dr. George H. Rohé, of Baltimore, while in attendance upon the National Prison Congress at New Orleans, died suddenly, February 6th, 1899, aged 48. He was well known as one of the best alienists and gynecologists in the United States. His work in connection with the Maryland Hospital for Insane, at Springfield, gave him a world-wide reputation. He held many positions of honor in various societies, and was at the time of his death President of the American Health Association. He will be remembered by the profession as the able and genial gentleman who presided at the meeting of the American Association of Obstetricians and Gynecologists in Toronto in 1894.

Book Reviews.

The Principles which Govern the Treatment of Diseases and Disorders of the Heart. The Lumleian Lectures, Royal College of Physicians, London. By SIR RICHARD DOUGLAS POWELL, BART., M.D. (Lond.), F.R.C.P., Physician in Ordinary to the Queen, etc., etc. London: H. K. Lewis, 136 Gower Street, W.C. 1899. Pp. 116; demy 8vo. Price, 6s.

Even among the multitude of recent works upon the heart, such as those of Balfour, Gibson, and the Broadbents, one finds a welcome and most useful addition to his library in this series of three lectures. They are typically "post-graduate" lectures, dealing in a large and luminous manner with a most important subject, without attention to the minutiæ of drugs, dosage, and diagnosis, which would probably have found place in the work of a physician less experienced and less broad in his outlook and grasp of the subject. No practitioner can read this work without going about the hygienic, dietetic, regiminal, and psychical treatment of patients suffering from disorders of the heart with greatly widened notions of his duty towards such cases. The literary quality of the work is what one would expect from its distinguished author. The publisher's work is quite up to its high standard.

David Harum. By EDWARD NOYES WESTCOTT. Illustrated. Cloth, $1.25; paper, 75 cents. Toronto: William Briggs, Publisher.

A writer in a recent number of a medical journal discusses in a light vein the question of the literature suitable for influenza patients. Zola undiluted, according to this authority, would be likely to aggravate the symptoms in the gastro-intestinal type, and in the catarrhal type the "Sorrows of Satan" must be avoided as tending to stimulate the flow of tears, while "David Copperfield" is said to afford great relief in properly selected cases. Had this writer known of the existence of "David Harum" he would undoubtedly have recommended this work as almost a curative agent in most cases. As a stimulant, in some respects it surpasses "Canadian Club," and is guaranteed to relieve certain nervous symptoms more rapidly than any of the coal tar preparations when judiciously administered. Though published at the Methodist Book Room it cannot be accurately classed as theological literature of an

inflammatory character. It should be read by every unregenerate man and the truly good physician.

The *Philadelphia Item* speaks thusly of the author: "We give Edward Noyes Westcott his true place in American letters —placing him as a humorist next to Mark Twain, as a master of dialect above Lowell, as a descriptive writer equal to Bret Harte, and, on the whole, as a novelist on a par with the best of those who live and have their being in the heart of hearts of American readers. If the author is dead—lamentable fact—his book will live."

The *Boston Literary World* says that it is "true, strong, and thoroughly alive, with a humor like that of Abraham Lincoln, and a nature as sweet at the core. . . . The book adds one more to the interesting list of native fiction destined to live portraying certain localities and types of American life and manners."

"PROGRESSIVE MEDICINE."—The following announcement should have appeared in our last issue: Messrs. Lea Brothers & Co. announce for publication in March, 1899, the first volume of *Progressive Medicine*, a new annual which will be issued in four handsome octavo, cloth bound and richly illustrated volumes of about four hundred pages each. The several volumes will appear at intervals of three months. In this age of unusual progress, so rapid is the advance in all departments of medical and surgical science that the need for condensed summaries which shall keep the practitioner up to date at the least possible expenditure of valuable time has become imperative. What the busy physician needs to-day is a well-told tale of medical progress in all its lines of thought, told in each line by one well qualified to cull only that matter worthy of his attention and necessary to his success. He needs material which shall teach him all that the master of his specialty knows of the year's work. To insure completeness of material and harmony of statement, each narrative will receive the careful supervision of the general editor, Dr. Hobart Amory Hare. Those associated with Dr. Hare in the production of *Progressive Medicine* include a brilliant gathering of the younger element of the profession. With the appreciation of the self-evident utility of such a work to all practitioners, the publishers are enabled to ask the very moderate subscription price of ten dollars for the four volumes. The publishers offer to send full descriptive circulars and sample pages to those applying for them.