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The KINGSTON MEDICAL QUARTERLY is presented to the Medical Profession with the compliments of the Editorial Staff. Contributions will be gladly received from members of the Profession and willingly published. JOHN HERALD, Editor.

VACCINATION.

EVER since Jenner introduced vaccination there has been waged a war against the practice. To it has been attributed many resultant ills. Syphilis, tuberculosis, erysipelas and many other diseases have been, according to the opponents of vaccination, introduced into the system of those who were vaccinated along with the vaccine lymph. While the evidence upon which these charges are founded is certainly not conclusive, it is yet freely acknowledged by those who are firm believers in the efficacy of vaccination that many minor ills did and, perhaps, still do follow vaccination but not as a necessary part and consequence of vaccination but as a result of the want of care in the preparation of the lymph, or on the part of the operator in the preparation of the patient, in the performance of the operation or in the after treatment. Notwithstanding these real and imaginary evils, in spite of the avoidable ill effects, vaccination has steadily won its way until at the present time the profession generally, and the public very largely recognize it as a safe and reliable prophylactic measure against the ravages of small-pox. In order, however, that vaccination may be carried on with the greatest safety and success certain precautionary measures are necessary. Of the first importance is the preparation and storage of the lymph. It is absolutely essential that the lymph must be free from pathogenetic and pyogenetic germs. To ensure this we must have the lymph collected under the supervision of competent bacteriologists and put up in a form to exclude contact with air and to prevent decomposition. This object it seems to us is best accomplished by using only such lymph as is prepared by a thoroughly competent and reliable firm, put up with

sterilized glycerine in hermetically sealed glass tubes—each tube containing only sufficient for one vaccination.

Then in the use of vaccine thus prepared great care and discretion are necessary. The condition of health in which the patient is at the time he applies for vaccination is always to be considered. A patient in a poor state of health—*i. e.*, one whose vitality is low and whose tissues have their power of resistance lowered—is more liable to such complications as cellulitis, abscess, etc., just as he would at such a time from any wound whatever. Cleanness of the part—in the surgical sense—is another prerequisite to vaccination. The part should be cleansed before vaccination, but if strong antiseptics have been used for this purpose, then the part must again be washed with sterile water else our vaccination may prove a failure, the vaccine be destroyed by the antiseptic used to cleanse the part. The skin having been abraided so as to cause an oozing of lymph but not of blood, the part should be smeared with the vaccine and the part left exposed until it is dry. The after care of the part must be such as would be given to any surgical wound. With these precautions in the selection of the vaccine used, in the selection of our patients, and in the care which we bestow upon the preparation and after care of the part there should not be any untowards results. It is by the neglect of these precautions that ill effects follow vaccination and bring the practice into disrepute.

ADVERTISING.

IN this country advertising by medical practitioners is extremely rare and the profession are practically a unit against the custom. An ordinary notice in the local press of one's residence and office hours is by all regarded as legitimate, and even this is becoming less and less frequent. Occasionally, however, we find a duly qualified practitioner stepping beyond the bounds prescribed by the unwritten law of the profession. The most glaring violation of this almost universally established guide to

professional advertising which we have seen lately came under our notice in the form of a circular letter signed by W. B. Lindsay of Strathroy, and advertising the great advantages which the people of that section would obtain by *trading* with the firm of Lindsay and Malone. We feel constrained to call attention to this circular for two reasons: I. The character of the circular. II. Dr. Malone is a recent graduate of Queen's and personally known to us.

I. The character of the circular—By this circular those who receive it are informed that Dr. Malone will pay *special attention* to *Obstetrical* and *Surgical Cases* and to the *Chemical, Microscopical* and *Bacteriological* examination of *Diseased Tissues, Sputa, Urine, etc.* Dr. Lindsay will treat all ordinary diseases such as *Gout, Rheumatism, Consumption, etc., etc.*, paying *particular attention* to their variation in the aged and infants; also all *special* diseases of the *Heart, Lungs, Liver, Spleen, Stomach, Kidneys, etc.* Both, we are informed, are qualified to properly diagnose and treat as *specialists*, all diseases of the *Eye, Ear, Nose* and *Throat*. Contracts will be made to treat families at a fixed charge per annum and medicines will be administered when so desired to suit delicate patients and children. The families of Odd Fellows, Foresters and other Lodges may make special rates. (The italics are ours; the circular is responsible for the capitals.) One cannot help but wonder at the amazing qualifications of these two gentlemen. Specialists in chemistry, microscopy and bacteriology; in obstetrics and surgery; in diseases of the eye, ear, nose, throat, heart, lungs, liver, spleen, stomach and kidneys, as well as in the treatment of all general diseases. How favoured are the residents of Strathroy and vicinity by having in their midst two such marvels of medical and surgical lore and skill! How accommodating are these wonderful followers of the healing art, and withal how generous to the suffering public! All this mass of special knowledge, all this wealth of skill to be placed at the disposal of poor, frail humanity at special rates to be arranged by contract! One cannot help having a feeling of sorrow for the residents of all other parts of Canada that the labours of these two gentlemen are confined to Strathroy and its vicinity. Why, oh why, do they not like Aesculapius of old travel through the country and give to all the benefit of their numerous specialties.

Thus would they be conferring a boon upon greater numbers and a grateful people would erect monuments or temples in their honour, and by and by cities would be contending with one another for the honour of being the place of their birth.

II. We deeply regret that Dr. Malone has commenced his professional career in this manner. He is personally known to us as a young man of good natural abilities, a pleasing manner, and of good education. His success in the well beaten track usually followed by Canadian practitioners was assured. Why has he departed therefrom? We regret his falling from grace for his own sake and also because he is a graduate of Queen's, upon all of whom is impressed the duty they owe themselves, their Alma Mater, and the profession at large.

DOMINION REGISTRATION.

IN the March number of the *Canadian Practitioner and Review* we find a very full *resume* of our editorial on this subject and a critique of the same by which we are delighted to find that our contemporary so cordially agrees with us on our two main objections to the proposals contained in Dr. Roddick's Bill, viz:—the composition of the proposed Council and the conduct of the examinations by the Council. With the general principles of the Bill neither our contemporary nor we find fault. As to representation on the Council we are of the opinion that the large Provinces of Quebec and Ontario are not fairly treated. On this point our contemporary says "that there is a fairly strong feeling that the proposals in the Bill in this connection should be modified to some extent." We went a step further and pointed out to what extent these proposals should be modified. As to the conduct of the examinations we find our contemporary at one with us. These are the views of *The Canadian Practitioner and Review*: "The proposal to hold the annual examination at Montreal and Toronto would be strongly opposed, and we think the plan proposed by our contemporary would be much more satisfactory." This endorsement of our position is highly satisfactory

to us coming as it does from a Toronto publication and reflects great credit upon the editor as it is an evidence that he is not guided by any narrow views of what would be of local advantage but is thinking rather of the good of the profession at large and of the success of the proposed Dominion Council. Our contemporary fears that our proposals to give to each university having a medical faculty, actually engaged in teaching, one representative on the Council would not meet with a hearty response from the great mass of physicians in Canada. On this point we must differ from our contemporary. We are of opinion that the great mass of the medical practitioners of this country are large minded enough to support any scheme which is for the good of the profession. On this point our contemporary appears to be of our opinion when he says:—"and, still, we think that a few university men in the Council would be found useful." The other objections which we made to the Bill were as our contemporary says, mere matters of detail, and yet it does seem to us that in launching any new scheme it is wise for us to see that it is as free as possible from defects even in matters of detail. We all know it is much easier to avoid objectionable features going into a bill than it is to remove them after the bill becomes law. The truest friend of Dominion Registration, it seems to us, is not he who is willing to take the necessary legislative defects and all but rather it is he who seeing what is objectionable in the proposals points it out and so, perhaps, prevents the scheme going through in such a form as in a short time would jeopardize the very existence of the Council.

CLINICAL REPORT OF A CASE OF INFECTIVE ENDOCARDITIS.

MAUD S. aged 16 years, was admitted to the London General Hospital under my care on December 21st 1896. Although not a strong girl, there was no history of her having previously suffered from any serious illness. Never had rheumatism. Her present illness dates from September last *i.e.*, three

months prior to her admission. She says that she was raped one night in September by 3 or 4 young roughs, who left her in an unconscious condition on the commons where she remained till the following morning. After this she was never well, although she was not confined to bed till her admission to the hospital.

She looked ill and anaemic, complained of feeling weak, also of chills followed by fever and sweating. She was put to bed and careful records made of her temperature, every 4 hours. Dr. W. J. Stevenson has kindly prepared a temperature chart of her case during her hospital residence, which shews that almost daily and sometimes twice a day she had a chill followed by high temperature and sweating. The temperature usually dropped to subnormal several hours after the chill. During the time she was in the hospital, her temperature on three occasions reached 105° or more, on two occasions it reached 104° or between that and 105 , and on further occasions it was 103° or between that and 104° . After each of these increases which were extremely irregular as to the time of occurrence, the temperature invariably dropped, so that in the course of a few hours it reached in the majority of cases a subnormal point, in a less number normal and in a still less number a point slightly above normal. Thus on Dec. the 30th *i.e.*, the third day she was in the hospital her temperature was 105° at 6 a.m., from which point it gradually and continuously dropped till at 4 p.m., of the same day it was $96\frac{3}{4}^{\circ}$ F. A record of the temperature, pulse and respirations for a day or two will give a very fair idea of these during the month that the patient was in the hospital.

		Temperature.	Pulse.	Respirations.
Dec. 31st.	2 a.m.	$96\frac{1}{2}$	94	27
	6 a.m.	105	112	32
	2.40 p.m.	$96\frac{3}{4}$	107	34
	10 p.m.	102	100	29
Jan. 19, 1897.	5.30 a.m.	$97\frac{3}{8}$	126	28
	9.30 a.m. chill	$103\frac{3}{8}$	144	24
	2 p.m.	$97\frac{3}{8}$	125	34
	6 p.m.	$103\frac{3}{8}$	124	38
Jan. 25th.	1.30 a.m. chill	$104\frac{1}{8}$	144	41
	6.30 a.m.	98	132	48
	11.20 a.m. cold	102	124	38
	10 p.m.	102	140	42

A careful examination showed the spleen, liver and lungs to be normal. Heart not increased in size, but on auscultation there was a loud blowing murmur at the apex, systolic in time and propagated to the left. Murmurs systolic in time, were also heard over the 3rd left and 2nd right cartilages. These were not nearly so loud as that heard over the mitral area.

Urine. Jan'y 10th. Pale amber, slightly acid, sp. gr. 1013, a trace of albumine, no sugar, a few leucocytes. Jan'y 25th. Urine, faintly acid, clear, sp. gr. 1012, no sugar, albumine $\frac{1}{2}$ ppte, urea, $1\frac{1}{2}$ per cent., slight mucous deposit. A great many epithelial casts, a few hyaline and blood casts, pus cells in considerable quantity, chlorides and sulphates sub-normal. No diazo reaction.

On the same date an examination of the blood showed 2,500,000 red blood cells per c.m., leucocytes increased, hæmoglobin 35 per cent., and a few nucleated red blood cells.

She vomited at times during the whole course of the disease. On Jan'y 24th her feet and face became œdematous and on the 26th she developed well marked signs of pneumonia from which she died on the 30th. During the month she was in hospital she was perfectly conscious and complained only of weakness, and that the chills followed by the high temperature and sweats were very disagreeable.

In trying to decide what was the matter with this patient, we considered first, typhoid fever. From the history, repeated chills, irregular temperature and sweats, and the absence of all the ordinary signs of typhoid fever, we had not much difficulty in excluding it.

We then thought of malarial fever and even without examining the blood for the parasite of malaria, we excluded malarial fever on account of the extreme irregularity of the paroxysms and also because a few large doses of quinine had no effect whatever on the paroxysms.

We then asked ourselves whether the disease was not septic. The type of temperature, the rigors, sweats and anæmia were suggestive of this. In this connection we considered the possibility of the patient suffering from acute miliary tuberculosis, which we excluded because of the absence of signs which would likely have developed during the three months that the patient

was ill before her admission to hospital. We then examined various organs and regions of the body to ascertain whether or not suppurative inflammation was present in any of them. Failing to discover any evidence of suppurative inflammation in the parts examined, we concluded that our patient must be suffering from infective endocarditis—the rigors, temperature, sweats and anæmia were suggestive of this, added to which the loud systolic murmur heard at the apex, rendered the diagnosis of malignant endocarditis almost a certainty.

Having decided that the case was one of infective endocarditis, we directed our attention to the discovery of the cause, in which we were not very successful. It is a well recognized fact that this infection is due to the presence of micro-organisms—to no one specific organism but to several, which may act either separately or combined. Streptococci and staphylococci are most frequently the cause, less frequently the diplococcus of pneumonia and still less frequently the specific organisms of typhoid fever, gonorrhœa, diphtheria and tuberculosis. We could not obtain any evidence that the patient had suffered from septic disease in any other part, nor that she had suffered from pneumonia, diphtheria or tuberculosis. We suspected that she might possibly have suffered from gonorrhœa, inasmuch as her illness dated from a time, shortly after that of which several young men—any one of whom or all of whom may have suffered from this disease—had had intercourse with her. I asked Dr. Meek to examine her, to ascertain if possible whether or not she had recently suffered from gonorrhœa. He kindly did so, but was unable to discover any evidence of this affection. Unfortunately a bacteriological examination was not made, either before or after death. In the absence of any positive information as to the cause, we were forced to look upon the case as one of primary infective endocarditis.

Post mortem by Dr. Neu. Cranium was not opened.

The stomach was slightly dilated and the spleen was $\frac{1}{3}$ larger than normal. Liver normal. Left kidney normal in size, right enlarged, capsule adherent—an infarct in cortex—there was tubal nephritis, evidence of which was found in the urine during life. Uterus normal. Left ovary normal, right showed a dark scar, star shaped, $\frac{1}{4}$ inch in length. Pancreas normal—intestines nor-

mal. Consolidation of both lobes of left lung and of the lower lobe of the right.

Heart normal in size and position, vegetations on the mitral valves, also a patch of vegetations with ulceration on inner and posterior part of the lining of the left ventricle, at distance of apex of mitral valves. There was also an ulcer in the left auricle on its posterior and outer aspect, $\frac{1}{2}$ inch above the base of the mitral valve. The tricuspid valve was reddened and inflamed.

London.

GEO. HODGE.

THE ROTUNDA HOSPITAL.

ABOUT 1750 Dr. Moss of Dublin, fully appreciating the need of a Maternity Hospital and the advantages of such an institution to the Medical profession, opened a small one on the south side of the Liffey. Shortly afterwards the present Rotunda Hospital was built in Rutland Square facing on Great Britain Street. It derives its name from a round room adjoining it in which all sorts of performances and meetings are held from Poole's Myriorama to Conferences of the Church of Ireland and good concerts which serve as a source of revenue. The grounds of Rutland Square are also used for garden parties and so forth during the summer. The people residing in the square are allowed to use the grounds. The Gynæcological work was carried on in a building on the opposite side of Great Britain Street until a few years ago, when the Cairns-Plunkett Wing was added.

The staff consists of a Master who pays for the privilege and is appointed every five years; two Assistant Masters, who also pay and hold the position for three years; an Intern and Extern Clinical Clerk; a Dispenser; a Lady Superintendent; a night Superintendent; Sisters; Staff-nurses and Pupil-nurses who pay for their training. A Pathologist gives demonstrations on gross and microscopical specimens every Wednesday afternoon. The Assistant Masters, month about, give obstetrical lectures three evenings a week from nine till ten. The first Asssistant Master has a special class in gynæcology every Thurs-

day afternoon from four to six, when quite a number of cases are examined. Every morning at ten, except Saturday and Sunday—the former being sacred to the instruction of the pupil nurse—the Master goes the rounds, commencing in the waiting-room of the Labor Ward, where patients nearing their accouchments are kept. Two or three students examine a patient. Their examinations consist of external palpation confirmed by auscultation of the foetal heart. Everyone records his diagnosis. Vaginal examinations are not made unless considered absolutely necessary, and then under the strictest aseptic precautions and by one of the Assistant Masters or as a great favor by one of the senior students. After examining their cases and having a clinic on any complication arising with them or on any abnormal labors, which have occurred since the previous morning, the Master leads the way to the Convalescent Wards, where the patients, who have been "made well" are lying. Here any complication of the puerperium are noted, binders are loosened and uteri after pregnancy are palpated by a few of the student; breasts are examined; rises in temperature noted and causes sought; infants are examined for any lesion. Then passing by a long corridor from the Maternity Department the Surgery of the Gynæcological is reached where the students in turn examine the patients, three students to each case. Chloroform is used in a great many cases to facilitate an examination. The Intern C. C. gives the anaesthetic and also reads the history of the case. Minor operations are performed here by the Master or Assistan. naster assisted by the students on the case. Major operations are performed in the theatre which is most unique. The portion of it in which the patient, the operator, the assistants and nurses stand is separated from the portion in which the students are by a glass partition. It is most amusing to watch the operators, see their lips moving and not understand one word. Such aseptic fadism is most trying to the eyes of the onlookers and not at all conducive to strict attention on their part. When there was anything very interesting beyond the glass the Master treated us to a conversation in the deaf and dumb alphabet and after the operation showed us the growth which had been removed and pointed out the interesting feature of the case.

At ten o'clock there is a dispensary for women and children

conducted by one of the Assistants. On Tuesday and Friday afternoon any of their patients requiring surgical dressings are attended to.

There is both an intern and extern maternity department in which the students of the Hospital take their turn in conducting cases. Every student has two days a week in which in his turn he conducts cases in the Hospital, and also two days for extern duty. The hours are from 9 a.m. to 9 p.m. Every student on entering the Hospital chooses his days, enters his name on the list and conducts two cases in the Hospital before he is allowed to take extern cases. The two having been conducted he is qualified to go forth to the slums of Dublin, where he meets with experiences ludicrous, sad and otherwise. Students when not otherwise engaged witness all cases conducted in the Hospital and are certified for attendance. The resident pupils live in the Rotunda and do day duty and voluntary night duty; the latter signifying that night men are not available for all the cases. The women students live in a residence about three minutes walk from the Hospital to which they are summoned by telephone. They do exactly the same work as the men. The night work from 9 p.m. to 9 a.m. is done by non-resident students from the various Medical Schools in Dublin; who spend that time in attending intern and extern cases. When summoned to attend an intern case the student bares his arms to above the elbow; scrubs them thoroughly in hot water and carbolic soap, washes off any excess of soap and then emerges them in a 1-500 solution of corrosive for one minute. The patients are delivered on the left side and turned to the back after the delivery of the infant and before the delivery of the placenta, which is not expressed until it has left the uterus except in cases of adherent placenta. Twenty minutes is allowed for the delivery of a non-adherent placenta. It is carefully examined and all doubts as to retained membranes removed. Such an accident having occurred any portions retained are at once removed under aseptic precautions. All being well the uterus is rubbed up till it is firm, patient cleansed, examined for lacerations, which if present are immediately repaired and a light binder applied. A dose of ergot is administered always at night and in doubtful cases. The patient then being "made well" the student writes

up the details of the cases. In abnormal cases the Master and Assistants are present and the student to whom the case belongs assists. In the extern maternity when any complications arise an urgency form is at once sent to the extern C.C., who as quickly as possible appears on the scene. A great number of the students—English, Scotch, and Irish—are undergraduates, who are doing their necessary maternity work in their vacations, and as these in many cases know little or nothing about obstetrics the Hospital to secure its excellent results is compelled to put a limit on the work done by students and does not allow them to undertake an abnormal case. The post-graduate of ten years standing is thus unfortunately put on the same footing as the third year undergraduate. Of course, he sees the work done in the most approved way, and assists. Every extern case has to be visited within twelve hours; then for the first three days and on the fifth and eighth. A great number of abortions are attended, many arising from a Saturday night or Sunday carousal. The number of abnormal cases at the Rotunda is not so great as at the Queen Charlotte Lying-in Hospital, London, or in the Extern Maternity in Glasgow. Irish women are generally well made.

The work at the Rotunda is hard, the visiting of the extern cases taking so much time, for one student's cases may be long distances apart; still few leave without some pleasant memories of the time spent there and the resident men ever have a tender feeling for the days spent in the mess-room.

One meets students from all parts of the world, English, Irish, Scotch, Americans, Canadians, Australians, West Indians, and various Europeans, and this last summer an African from Sierra Leone. There are fewer students and better opportunities for work during the winter months, when the under-graduates are as a rule attending their various medical schools and Hospitals.

JENNIE G. DRENNAN.

THE BUBONIC PLAGUE.*

*Read before the Kingston Medical and Surgical Society, April 9th, 1900.

THE present onward march of the plague must attract the attention of all thinking men and particularly of the sanitarian, when one considers its progress in spite of the stringent regulations enforced against infected districts since the well known outbreak of this disease in Canton and Hong-Kong in 1894. Slowly but surely since then it has advanced until now it has become quite widespread. In 1896 it obtained a foothold in India, especially in the Bombay Presidency though now it is raging in other districts, particularly in Calcutta. Week after week since the period of infection the same tale is heard from the infected districts and the plague has seemingly come to stay in India. In the city of Bombay alone during the first three months of this year there has been an average of 450 deaths per week from the plague, and at least triple this number for all India. Since 1896 it has progressively infected Madagascar, Arabia, Egypt, the Mauritius, some South American ports particularly those on the Rio Platte and some Brazilian ports (Santos and Bahia.) Last summer (1899) there was an outbreak in Oporto in Portugal but it seems to have been stamped out both there and in Egypt. Since the new year we have heard of the plague in epidemic form in the Hawaiian Islands (Honolulu) and recently the cities of Adelaide, Sydney and Melbourne in Australia have been declared infected, over 100 cases having already occurred in Sydney. Some cases have been brought into both English and American ports *e.g.* in London in 1897 several cases occurred at the Seaman's Hospital at Greenwich. It was from these cases I obtained the cultures I here show you. Quite recently you will remember a steamer from Bahia in Brazil brought 5 cases of plague into New York harbor. Cases of this kind must be occasionally cropping up, and without the exercise of the strictest surveillance at our ports of entry, we may yet have to cope with the plague in this country. I believe it very unlikely that it will ever obtain an epidemic footing as our sanitary conditions though not of the best are yet I think able to cope with the disease. Yet it is well to keep this probability in mind.

and to prepare to receive a possible enemy. I make this my excuse for this paper.

The bubonic plague is a disease hoary with antiquity. There are only two specific diseases (leprosy and ? syphilis) to which I can find any previous references. For the plague is no doubt the disease, mentioned in I. Samuel 5th and 6th chapters, which attacked the Philistines after the battle at Ebenezer where they obtained possession of the Ark, and which broke out in all parts of the country to which the Ark was sent, and which on the return of the Ark to the Israelites destroyed fifty thousand three score and ten of them. This conclusion was brought home to me in 1895, when after reading a description of the general features of the disease as it occurred in Hong Kong, I shortly after heard a scripture lesson from these chapters of the book of Samuel. I was pleased to see my conclusions backed up in an article by Prof. Adami a few months after (Montreal Medical Journal, June 1896), and according to whom the most recent biblical lexicographers draw the same conclusion. Dr. Simpson in B. M. Journal, Sept. 1898, also comes to the same conclusion so that I think we may take it for granted that this is our first reference to the disease. The statements in the book of Samuel are certainly very curious in that they record not only one of the most important clinical features of the disease, viz., the appearance of emerods (*i.e.* a tumor or bubo) in the secret parts (*i.e.* the inguino-femoral region); but also states that the Philistines in returning the Ark sent it back with an offering of golden emerods and golden mice. Why the mice? Must it not have been that the Philistines had noted the fact, now absolutely authenticated, that preceding and accompanying an epidemic of plague, rodents are attacked by the same disease and die in thousands and constitute without doubt, one of the most important factors in disseminating the disease.

Coming down to more strictly historic times, one can pass over numerous references to what may or may not have been plague, including however, the undoubted epidemic of plague in the reign of Justinian in the sixth century, until we come to the 14th century where under the name of the Black Death we have plague in its most malignant form, carrying off by repeated recurrences more than one-fourth of the population of Europe.

From this period on till the 17th century, with intervening epidemic periods, the plague remained endemic in England and Europe. With the great plague of London in 1666 and the few years following, the disease seems to have gone out from England altogether. We can still trace it however in Europe, particularly along the shores of the Mediterranean (Levantine plague) till 1841, when as is well expressed in Allbut's System of Medicine, plague left Europe by its eastern gate, Constantinople. It, however, only receded eastward to its endemic centres in Persia, Mesopotamia, and Thibet and southward to the Uganda district of British East Central Africa. These are the homes of the plague. The present epidemic seems to have come from Thibet eastward to the Province of Yunnan in China, thence to Canton and Hong Kong as described.

Plague is caused by a bacillus, discovered by Kitasato and independently by Yersin during the Hong Kong epidemic in 1894, making this epidemic an epoch marking period in the history of this disease. I will not describe its morphological or biological characters as I think it is of more importance to know how it is transferred and gives rise to infection. As plague is due to a bacillus, this question apart from the predisposing factors, resolves itself into the means of carriage of this microbe. But we have a factor to deal with in the plague that we have not in other acute infective diseases, viz. :—that plague attacks not only man but rodents (rats, mice, bandicoots, marmots, etc.,) and consequently we must take these animals as well as infected individuals, into account in considering the spread of infection.

Let us examine first the spread of infection from an infected region to one previously unattacked. Here we have as a factor of first importance the propagation of the disease along lines of travel by individuals either in the incubation stage (2-7 days) of the disease, or by patients suffering from that mild type of the disease known as *Pestis minor*. This latter form of the disease no doubt serves as a connecting link between epidemics of more severe type but they are occasionally combined. Besides the individual transference we may have the carriage by fomites and rags. As owing to the short vitality of the plague bacillus under ordinary condition of exposure to air drying and sunlight, these with the exception of rags could not be of great importance in the

transmission of the disease to another district, though undoubtedly they are of import in spreading infection through a locality. The individual and his surroundings must be the most important factor in spreading the disease along land lines of travel, for as a rule, we can here exclude the spread of the disease by rodents, especially over long distances. Along sea routes we have the same dangers from the individual, but we have the added factor of carriage of infection from rats which as is well known often swarm on board ship. Let plague attack these rats and they may transmit it to their fellows on coming to a port either by direct contagion, or by the dead rats being eaten by their cannibal brethren, and thus disseminate the infection among the rats of the port. That plague can be transmitted from one rat to another can be readily demonstrated by shutting up healthy rats with rats inoculated with the plague. In the course of two weeks all die with the disease. Koch says "Plague is primarily a rat disease" and he seems to have much evidence to back up his statements, though that rats are the only means of carrying the infection he nor no one else claims. Cantlie says "It is the flesh eating animals that are the sufferers from the plague, the rat being the one most likely to be attacked and probably infects other animals. Rats are infected from man, from plague infected dust or from other rats." In spreading the disease through a community rats must be a factor of very great importance. Looking into the history of the epidemic in Bombay beginning in the autumn of 1896, we find that the first cases occurred in an area of the city, densely populated, amongst whom were many grain dealers, and in which locality large stocks of grain were stored—an ideal place for rats. The people had noted the deaths of large numbers of rats in their houses before the plague got a foothold in man. The sanitary condition of the poorer native quarters of these Indian cities defies description. With the filth goes too often famine and what is almost as pernicious in its effects, fatalism.

Again on examining into the outbreak of last summer (1899) at Oporto as reported in the December 1899 number of the "Annales de l'Institut Pasteur," by Drs. Calmette and Salimbemi, these investigators after excluding on careful inquiry infection by man say,—(translation). "We think that the

plague has been imported into Oporto at some period, now impossible to state precisely; and without doubt by rats out of some ship coming from Alexandria, the Persian Gulf or the island of Mauritius. At Oporto it seems that for a long time one met with dead rats in the alleys of the Rue Fonte-Taurina and its neighbourhood. The plague spread by these rodents, quickly attacked the other rats and mice that abounded in this quarter and in the vast docks of the port. The first cases of human plague appeared only after several weeks and attacked at first the dock porters and other poor classes that live in these quarters, containing the most unsanitary houses in the city."

These statements are again borne out by recent newspaper reports of the disease in Sydney and Adelaide, where it was noted that rats were dying in hundreds before cases were recognized in man.

We have two great modes then of transmitting infection to a previously unaffected area, viz:—plague infected man and his immediate surroundings—and plague infected rats. Necessarily if the first were the only means of dissemination, isolation of the individual and disinfection of the individual and his surroundings would suffice to stay the ravages of the plague. Plague infected man throws off the bacilli in his sputum, fæces, the pus from buboes and often too in his urine and other secretions and excretions. From these sources the dust of rooms may be infected and while it can be shown experimentally that plague bacilli die out when exposed to light and drying in from 8 to 10 days at the outside, death does not necessarily follow when such bacilli get in the earth and floor dust in the hovels of our great cities or in the cruder hovels of the poorer classes in the East. For it has been time and again demonstrated that houses in which plague cases have developed, have been evacuated by their tenants for from 4 to 8 weeks and on their return plague has again broken out. In the laboratory culture tube the plague bacillus may retain its vitality for at least 3 months. Of this I am certain and no doubt in warmer climates and particularly under the unsanitary conditions which are found in many cities, conditions might be found in houses or soil which would tend to keep the bacilli alive for long periods. This vegetative existence of the plague bacillus is altogether apart from the possibility that the animal

life of the soil may have a great deal to do with the propagation and retention in houses of this germ. For many think and with much show of reason that fleas, ants and flies may be important factors in carrying infection. Thus, if fleas from a rat dying of plague be transferred to healthy rats they will transfer the infection to them. It is not at all likely however that such fleas could transfer the infection to man as they are of different species from those that attack man and it is questionable if they ever attack him. Ogata has demonstrated plague bacilli in flies and ants in plague localities. So that we have a factor of more or less importance in keeping infection alive in the animal life. I have already spoken very fully of the propagation of the infection by rats throughout a community so that I will now proceed to the next question. How does the bacillus obtain entry to the body of man *i.e.* what are its avenues of attack. To answer this question fully one needs to know the clinical history of the disease, including the distribution of the bacillus in the body.

Clinically we meet with plague in two types, *Pestis major* and *Pestis minor*. The latter form is a non-fatal, almost ambulatory form in which we have bubo formation without marked constitutional symptoms, and generally a termination in resolution without suppuration of the buboes. These cases may occasionally develop acute symptoms during the course of a benign attack and then the picture changes to that of the common form of *Pestis major*. Cases of *Pestis minor* are important in that they serve as a connecting link between epidemics of grave character and also they may be an important factor in carrying the disease elsewhere as the disease in this form may be so readily overlooked.

Pestis major or true plague presents itself under several different forms such as plague pneumonia, plague septicaemia and the typical bubonic form. In the pneumonic form we have a primary and special localization in the lung without typical bubo formation, though the internal lymph glands are commonly found engorged. In the septicaemic form (Black Death) we have general glandular enlargement with hæmorrhages, etc, while in the typical form we have the appearance of buboes in inguino-femoral or axillary region, followed later by general glandular enlargement. This form may be complicated with nephritis, pneumonia, etc. Pneumonia is always of grave import.

Thus in the common form we find the infection is first localized in the lymphatic glands draining the leg or arm and this points to infection via the skin. Among the poorer classes in tropical countries who usually go with bared legs and feet the inguino-femoral glands are usually the ones to be involved. It has been demonstrated that the plague bacillus can enter through the skin without producing a local lesion. Often, however, on careful examination a vesicle or pustule may be demonstrated and occasionally the plague bacillus produces severe local lesions. These latter usually occur as the result of direct inoculation of the virus as has happened a number of times to those holding post-mortems. Even in such cases there may be an absence of local lesions. It is however highly probable that the skin is a common avenue of entrance for the plague bacillus.

Another channel of infection is via the respiratory tract by the inhalation of plague laden dust. Cantlie says "Plague is infectious chiefly by the dust arising during the cleansing of dwelling houses which plague patients have occupied, (or which have been infected from rodents)." The fact that plague is not very contagious is well borne out by the experiences of the doctors, nurses and members of the disinfecting services in Hong Kong, India and in Oporto. Very few of such individuals were attacked, and yet they were of necessity daily in contact with the disease in all its forms as well as almost certainly breathing in plague laden dust. This would point to the exceptional importance of the skin as a channel of infection, but it is well to remember that blood infection might occur through the lungs without any local lesion and the bacillus might lodge in some set of glands and there first manifest itself. More commonly still in such cases we would expect general lymphatic involvement perhaps more acute in some regions than in others. The general symptoms accompanying or perhaps in some cases preceding bubo formation are rapid onset of fever with marked prostration of strength and corresponding effects on the various viscera. Primary plague pneumonia is of course always an infection via the respiratory tract and such cases might be mistaken both clinically and pathologically for acute broncho-pneumonia. The plague bacillus is found in such cases in the sputum as also in pneumonic complications of ordinary cases and post-mortem can be demonstrated in the lungs, blood and lymph glands generally.

Can infection occur via the digestive tract? To this question we can only answer possibly, but if so it must be rare. For on post-mortem examination one never finds any gastro-intestinal localization or exceptional involvement of the mesenteric glands. Further, as plague bacilli die out rapidly when freely exposed to air and light and as most foods are cooked above the thermal death point of this bacillus (168° F. for 10 minutes), and as finally the plague bacilli would have to withstand the well known germicidal action of the gastric juice, it makes the possibility of gastro-intestinal infection less likely. The presence of plague bacilli in the fæces can be explained by the fact that we not infrequently find little hæmorrhages into the intestinal mucosa.

We can sum up by saying that the avenues of infection are via the skin, commonly without any special local lesion, and via the respiratory tract also with or without special local involvement.

(PROPHYLAXIS AND TREATMENT OF PLAGUE.)

The treatment of the plague has been up to quite recent times to a great extent symptomatic, but since the discovery of the bacillus, attention has naturally been directed to the possibility of its treatment by serum therapy. Yersin was the first to employ this method of treatment, but his first series of attempts were attended by very indifferent success. His serum was obtained from horses immunized by intravenous inoculations of living plague cultures. In view of later developments his indifferent success may be ascribed to the use of too small doses. His work has since been extended by many investigators, particularly at the Pasteur Institute in Paris, by such men as Roux, Borrel, Calmette and Simond. Owing to the danger both to the experimenters and the experimental animals, by the use of living cultures, it was found advisable to use for immunizing purposes, increasing doses of the toxins and bodies of the microbes killed by heating to 158° F. for one hour. The serum obtained from such animals has been used in India and elsewhere and was given an extended trial in Oporto last summer, (1899). In Oporto according to the reports of Drs. Calmette and Salimbemi (*Annales de l'Institut Pasteur*, December, 1899), it reduced the mortality from 63.72 per cent. in those untreated to 14.78 per

cent. in the treated, showing it to be a specific of marked power.

As to its method of use these investigators say :—“All patients suffering from bubonic plague and especially its pulmonary forms should be treated as soon as possible after the onset of the illness with an intravenous injection of 20 cc of antiplague serum, followed in the first 24 hours by two subcutaneous injections, each of at least 40 cc. Either further intravenous or subcutaneous inoculations may be made according to the severity of the case.” They advise that the intravenous injection be made into the veins of the dorsal aspect of the hand or the front of the wrist. This serum can also be employed in 5 cc doses to produce an immunity against an attack, but the passive immunity so conferred is fleeting and the dose must be repeated after 12 days, and hence as a prophylactic its value is markedly lessened though while the immunity lasts it is very complete.

As a prophylactic measure the serum cannot take the place of Haffkine's fluid which has been used with marked success for the last 3 years in India. This fluid consists of the toxins and bodies of the plague bacillus killed by heat, after growing on bouillon for some weeks. Inoculation of this fluid is followed by a more or less well marked local reaction and often with considerable constitutional disturbance. After a few days immunity becomes established and lasts at least several months. This immunity is an active one, lasts for quite a long period, and is as secure as that produced by the antiplague serum, and hence is better adapted for use where a community is to be inoculated against the disease. Needless to say it is a prophylactic agent, not a curative remedy, and hence should not be given once the plague has declared itself in an individual. If given during the incubation stage of the disease it would certainly hasten its onset. Many thousands have already been and are still being inoculated against the disease by this prophylactic fluid and all facts and figures show its efficacy. Thus, taking a single carefully recorded instance into consideration:— In Damaun in Goa, (India), between 26th March and 31st May, 1897, there were 6033 uninoculated individuals amongst whom there occurred 1482 fatal cases of plague, *i.e.* 24.6 per cent. of their number, whilst in the 2297 inoculated individuals there were 36 fatal cases, *i.e.* 1.6 per cent. a reduction of 89.2 per cent. in the mortality. The Bombay

Plague Research Committee (1898), record that Haffkine's fluid diminishes the risk of infection by 70 to 80 per cent., and increases the prospect of recovery in those attacked by 68 to 70 per cent. The same story is still being recorded from India and the method is now I believe being adopted in the infected Australian cities. Lustig and Galiotti of Naples, have during the past two years been working upon a purified prophylactic material which they claim to have all the specific properties of Haffkine's fluid, minus its marked reactive disturbances at point of inoculation, and to have the added advantage of being more readily preserved and capable of being kept for long periods without losing its specific properties.

We, of course, cannot depend on such prophylactic measures alone during an epidemic. We must attack the bacillus itself, prevent its spread and localize and destroy the infection. For this we must isolate the infected and very carefully disinfect all secretions and excretions from their bodies. Dead bodies should if possible be burned, or else buried very deeply after being wrapped in cloths wrung out of strong disinfectants. After the care of the individual comes the necessity to cleanse and disinfect the infected houses. It would be advisable to burn all hovels. All floors and walls should be first carefully cleansed, and then washed with strong bichloride solutions, and the walls lime washed. Clothing and such like, either burned, steamed or baked in a disinfecting oven. Finally, we must not forget what is so frequently the main factor in disseminating the disease, viz., the rats and mice. They must be destroyed by every means in our power, even to wholesale poisoning or the use of the virus of Danysz which produces a contagious rapidly fatal disease of rodents.

W. T. CONNELL.

A CASE OF APPENDICITIS.

L EVI GOWIN came under my care for operative interference at Hotel Dieu Hospital on March 31st, 1900. He had been sent to the city by Dr. Mather of Tweed.

Seven years ago he had an attack of "inflammation of the bowels." It was quite severe in character and lasted two days. In July '98, he had a second attack somewhat milder in character lasting one day. In July '99 he had a severe attack of appendicitis which lasted seven days. He was attended by Dr. Mather, Tweed, who reported the attack a very serious one. There were great pain, distention of the abdomen, and every evidence of extreme inflammatory action. So profound were the symptoms that a fatal issue was feared. From the time of his recovery from this last attack until he came to the Hospital he enjoyed fairly good health, though troubled occasionally with pain in the right Iliac fossa. The discomfort was much accentuated by work or active exercise. On April 2nd the operation was performed Dr. Mather and Dr. Morrison assisting. There were slight adhesions which gave away without any difficulty. The appendix was withdrawn from the abdominal cavity and was found constricted at the base but much distended throughout its entire length. A ligature was applied and upon cutting away the appendix about a drachm and a half of pus issued therefrom. The patient made an excellent recovery and is now moving about freely. The point of particular interest in this case appeared to me to be the presence of pus in the appendix so long after the last acute attack which as has been noted occurred nearly nine months prior to the operation. With the presence of pus in the appendix the patient's life was certainly in constant danger. While the time for operative interference in appendicitis is a debatable question the history of this case would point to surgical action during or at least after the subsidence of one severe attack.

E. RYAN.

THE OPERATING AMPHITHEATRE—HOTEL DIEU HOSPITAL.

THE completion of the new operating Amphitheatre in connection with the Hotel Dieu Hospital, Kingston, brings to the assistance of the Surgeons of that institution all that modern science can give in the prosecution of their work.

The greatest care has been exercised in the selection of the most suitable materials of construction, and in securing the latest plumbing devices to meet the exacting demands of a building of this character, and the result is the new operating room is a model of what is best and most modern. The arena floor is of cast glass which was chosen for its non-absorbent properties, and will have an outlet in the centre to carry off water when being hosed out after an operation. The arena wall is of cement started on a score of expanded metal and faced with procelain glass tile, the side walls are also faced with tile to a height of four feet. Where walls and floor meet is a coved tile doing away with angles where dirt might lodge; all angles in plaster work are rounded in similar manner. The arena is lighted by large windows in the Johnston street side glazed with ribbed glass and a sky light on roof over the operating table. Below the skylight is a ceiling screen glazed with radiant glass; this glass is made especially to give a brilliant diffusion of light. The arena is provided with five basins and a slop sink supplied with hot and cold water and in such manner that the faucets need not be touched by the hands in drawing water, by reason of a distinctly modern device. Each basin has a set of three pedal valves at floor; a pressure of the foot on the different valves will give either hot or cold water or empty the basin. Hot water is furnished to basins through an automatic gas heater, a simple pressure of the foot on the hot water valve will turn on the gas and give a flow of hot water in a few seconds and in unlimited quantity. Adjoining the arena are six service rooms consisting of etherizing, sterilizing, recovery and instrument rooms, the floors of which are double with top floor of polished maple; mineral wool is placed between the two floors to deaden sound. The window jambs and stools are finished in cement with rounded corners and the interior wood

work is finished in the natural wood and white enamel; the stairs have oak treads and birch blustrade. The students' entrance is on the Sydenham street front; from here stairs lead up to a waiting room and lobby provided with toilet and cloak room accommodations, and with entrance to students' gallery, which has seats raised in tiers for giving a good view of operations, with seating capacity for about 65. The building is heated by hot water and ventilated by means of foul air ducts artificially heated by Munsen burners, and the operating room is equipped with the latest surgical furniture. The exterior of the building is of pleasing appearance. It is built of six inch coursed stone work enriched with cut stone quoins and belt courses. The Johnston street elevation has for a central feature a pediment crowned with a cut stone coping and cross, and the Sydenham street front has an entrance portico and steps.

EYE LESIONS IN PARANOIA AND PARETIC DEMENTIA.

NUMEROUS ophthalmoscopic examinations have been made in the insane, but, with the exception of general paresis and complications such as tabes, no constant changes have been determined. Conditions of depression and exaltation do not furnish corresponding appearances in the fundus. The injection of the conjunctiva, amounting often to conjunctivitis in excited patients is a result of this condition and of the insomnia, and there is probably no direct corresponding congestion of the cerebral cortex. When an affection of the eye is present it is due to some material cause such as tabes, syphilis, or albuminuria, in the course of which insanity develops. Psychoses also develop after eye operations. This, of course occurs more readily in predisposed individuals, the operation being the exciting cause. The greater frequency of mental disorders after such operations may be due to the darkness and seclusion with closed eyes and partly to the absolute rest, all of which favour the production of hallucinations. The origin of visual hallucinations is the irritation of the visual spheres, as a result of which the cortex experiences the same changes as are produced by visual impressions conveyed

from the retina. Subjective visual sensations may also be peripheral as, for example, the phantasms of fire and sparks which occur in optic neuritis, in retinitis and choroiditis and in santonin poisoning. Visual hallucinations are either simple and elementary, such as seeing lightning, fire or colours, or compound, as the vision of shapes, animals, processions, sometimes shadowy, sometimes perfectly distinct. But such hallucinations may occur long before the mental disease is established. The insanity begins at the moment when the hallucinations are no longer recognized as such, but are regarded as objective.

In Parietic Dementia eye symptoms are important as they often occur at an early period or supplement other doubtful symptoms. They are:—1. Disturbances of vision. 2. Muscular disorders. The disturbances of vision are either peripheral or central. The peripheral disorders are not characteristic. There is usually a simple grey atrophy of the nerve, affecting one or both eyes and leading to gradual impairment of vision, concentric narrowing of the field, diminished color sense, and finally complete blindness. Among the central disorders of vision, hallucinations are very common during the course of the disease. Homonymous hemianopsia either paroxysmal or permanent, is also observed. Psychical blindness also occurs: it may be paroxysmal, lasting a few days and disappearing.

The muscular disorders are more characteristic and important. Single muscles or all the muscles of the eye may be affected. Apart from the pupil, the external rectus and the ciliary (accommodation) are affected most frequently. The characteristic change in the pupil is a reflex rigidity that is present in about one half of the cases, and is not seen in other diseases except tabes. This has been called the Argyll-Robertson pupil. At first the pupil reacts very little to the stimulus of light, and later not at all: still later, it does not react to convergence and accommodation. The pupils may be normal in size, contracted, or dilated, but myosis is common. Irregular shape of the pupil is also common. The pupil may continue to dilate under cutaneous irritation long after the ordinary stimuli have lost their power. The pupils are often unequal, especially at the beginning. According to authorities, irregular shape and reaction are more frequent than inequality and rigidity.

J. C. CONNELL.



DR. H. E. M. DOUGLAS.

DR. H. E. M. DOUGLAS.

WE have much pleasure in presenting to our readers a cut of Dr. H. E. M. Douglas together with a letter from him to his parents written shortly after the battle of Magersfontein. In reading this letter we would have our readers bear in mind that it was written to his family and naturally he refers with pardonable pride to little incidents which perhaps may appear to those who do not know him as savouring of egotism. But to us who know him so well no such thought occurs. "Harry" Douglas as the "boys" called him was always most unassuming, strictly attending to his duties but prepared at all times to join the others in legitimate sport. We who for four years came into daily contact with him could see that behind that quiet, reserved, unobstrusive manner there lay a vast reserve of force and determination. None of us are surprised that when the opportunity offered he proved himself equal to it and displayed in the face of danger coolness, determination and pluck in the discharge of what he regarded as his duty. We are proud of him. We congratulate him and we would extend our congratulations to his parents. That his wounds may soon heal is the sincere wish of all who knew him. When he again visits Kingston, as we all trust he will some day, we hope to find him wearing that coveted distinction, the Victoria Cross. He has earned it and he has been recommended for it by those who were on the scene and knew what he had dared and done and we trust that those who have the final decision will see fit to reward him.

No. 1, General Hospital,
No. 4 Ward, No. 1 Bed,
Wynberg, Cape Colony
South Africa.

Sunday, 17. 12. 99.

MY DEAR MOTHER AND FATHER :

By the above you will know where I am, and you already know what brought me to this place of luxury—Well, to cut a long story short, I shall start at the beginning, so here goes :

Sunday last at 3 p.m., we, (I mean the Highland Brigade) all fell in in the midst of the rain and marched out of the Modder River towards a line of Kopjes about four miles away. We got pretty well wet. We shelled the little hill for all we were worth, but only saw a few Boers running. We believed them to be entrenched on the top of the hill, but after a short time we ceased firing, as we could not get them to give their position away, so we came back and turned in for the night about 8 p.m. We were then told to be on the move at midnight. It still kept pouring rain and was rather cold. We managed to get some sleep in the meantime.

Well, at twelve we got up and were off by a quarter past in one of the blackest and darkest nights I ever saw. We trudged along very slowly over the very rough ground, no trees, only a little flash of lightning to shew us to our point of operation. During the march, we were massed together in less than quarter column for if we had been otherwise we would not have been able to keep together as we did. We made for a corner of one of the hills, the one on our extreme right. We got within about 150 yards (closer than we thought) and were just beginning to develop into extended order when we heard the whizz of a bullet and then just in front of us and at the base of the hill we saw a flash of light running from one end of the trench to the other. Well, we gave a shout, a cheer and a charge, but it was of no good. We were in too close a mass. Just here one Black Watcher was unable to draw his sword, so I did it for him, how, I don't know. I gave him a clap on the back and sent him on. We had not gone very far when somebody said "Retire" (who, nobody knows) and with that there was a similar rush in the other direction by all except the Black Watch who were leading the column, they extended in some sort of a way and held their ground. Needless to say, I got back in some sort of a way and found myself mixed up with Seafortths, Argyles and Sutherlands, &c., in the great rush for the rear. Shortly after this the bullets ceased to fly at such awful speed or throw up such dust around us, but still the Seafortths, Argyles and Sutherlands were retiring. I tried to stop them but it was of very little use, so I got hold of a piper and induced him to play the "Fall in" which nearly all responded to. I soon put them into some

sort of extended order and by this time it was daylight. I told them to hide behind stones and every thing they could. I then went off in search of the "Black Watch" which I lost. I made my way to the right, but soon had to take to my heels as they drove our right flank right back. By this time things were getting a bit warm so I took cover for the first time behind an "Ant hill" which did glorious service. I waited then for about a quarter of an hour and nearly went to sleep, *truth!* but to keep awake I had my breakfast off a biscuit which was none the worse of a wetting that it had the night before when it was under my head for a pillow.

Well from this onward till about 12 or 1 o'clock I wandered here, there, and everywhere doing what I could. The Gordons came up as a support about nine o'clock in grand style, and doubtless you will know perhaps before you receive this, that it is to them (I mean the Officers) that I will owe what distinction, if any, I may get out of the battle of Magersfontein.

About one o'clock I heard a man asking for a doctor, I said here's one. He then told me that a doctor and a stretcher were wanted in the advanced firing line. I asked who for, he said one of the Gordon Officers who was badly hurt. This was about 1,600 yards from the Boer trenches. I got up, marched in the direction pointed out to me till I got within 1,200 yards, when I found a stretcher and put it on my shoulder and went on. At this time both sides were waiting for a sign from one another, and not a shot was being fired. I made a rush and got within 1,000 yards. I then saw I was the object of their fire, so I took it into my head very soon to lie down and pull the stretcher after me, which was hard work I tell you. I soon gave it up and here our guns opened out, so I made another rush of 50 yards and so on, and so on, under cover of our guns. However, I took both the *doctor* and the *stretcher* up to within 20 yards of the Adjutant, Captain Gordon of the "Gordons." I lay down for a while as I was somewhat blown, but very soon heard "Pass the word back to the rear for a doctor." I could just say, here he is, and asked where the officer was, and found he was about 20 yards ahead of me and on my right. I said I am coming and was about to make another rush when they shouted to me to crawl along on my stomach. I did so over a lot of stones and small bush, and while

doing so it was gratifying to hear, Brave Doctor. Well done Doctor, from all sides. Well I got to the Gordon and found he was shot through the stomach, but as he seemed not very bad from it, I assured him it would be all right. I dressed his wounds and gave him a hypodermic of morphia. All this was in the first firing line with no cover except perhaps a foot high of brushwood. I soon had more clients and made off on my stomach again telling Capt. Gordon I would come under cover of darkness and take him away. I attended to several this way, and by this time our right flank started to give away again. We were ordered to retire, so I again made tracks to the rear but took good care to wait till our guns went off before making my rushes. I did get back behind one of our guns and here with a crowd of other officers rested and had our dinner off regimental biscuits and a pot of Leibig meat which I had in my haversack, and under the influence of a limited supply of whiskey and water we took our own sides on all questions.

I may also add that I heard a young officer say that he saw a plucky doctor bandaging up a chap who was shot through both knees under a cross fire. Well, that Doctor was "Old Hendry," that's all.

I forgot to say that before I had my dinner, everybody was making tracks for the Camp about two miles away, and as I heard somebody ask for a line to cover the retirement of the guns I again set to work and made one as I seemed to be the only officer about. I somehow knocked them into shape, gave them some water and told them to take care of the gunners as they took care of them all the day, and it was wonderful to see how they all responded. I gave them a slap on the back and a drink of water and this helped them.

Now I again went in search of the "Black Watch" and found about 100 without any officers. They soon started asking for water, so I went off to the cart the Gordons had and got a supply. At the cart the Colonel of the Seaforths sent to say that they were to go and report to the General that the Colonel was hit and missing. I went and asked if I could take them as they had no officers with them. He said yes. I went back and was just pulling them together when a shell burst over our heads and down I went like a thousand of bricks by a piece of shell

hitting me on my left cheek. I was not down a minute till I had a bandage out and held it to my face and convinced myself that it was not very bad and up I jumped and made my way to a more quiet corner of the country with some of the Black Watch I was forming up. After going about 300 yards my legs got "groggy" and a Lieutenant of the Gordons gave me his arm and soon I was on a stretcher and from that on to my own cart with six mules pulling me over boulders of all shapes and sizes back to Camp which I reached about seven o'clock. I was soon patched up and put into a *beautiful bed* which was so comfortable and soft that I could not sleep on it after six weeks or more on *good hard ground*. I was, and am well looked after. I was unable to walk about as my head swam although my feet didn't. I consoled myself that I got off cheap with only a stellate scar that a penny will cover about an inch below the eye and one and a half inches from my nose, a broken upper jaw, a few loose teeth and a most glorious black eye that does one good to look at.

Well next day, Tuesday, 12th, I was sent on down here. On the Monday night most of the officers and men were sent down to Orange River and there we picked up the wounded officers of the "Black Watch" and the "Gordons" who were picked up on Monday soon after I was wounded. I tell you it was hard lines for me to see all my old officers hopping in and I not able to help them, but it was gratifying, although it upset me, to hear their kind enquiries of me.

The second in command (Major Duff) who was wounded in the the hand, said, "You won the V. C." and you will get it and passed on. I was unable to answer him. A lot of Colonels and other chaps came in and complimented me and talked nonsense about me, but a young Lieutenant of my own corps got the only pint of milk in the place for me, so I was well looked after I must say.

We arrived here on a Friday. I walked with assistance into a buggy. I hear I am doing wonderfully well except that I am unable to chew my food which is hard lines on a chap, but I eat all the same.

Capt. Gordon is in the next ward to me and he has not had a symptom, and this is the seventh day.

What else to say I don't know except that I am living in the light of surgery, with a bandaged face.

As the mail does not leave till Wednesday, I can't say that the post is closing as I generally do.

I suppose you got my wire. I thought I would wait till I got here before sending it as you would then receive it some time after the fight and would know how things were going on. It is too expensive to send many. At last the post is going to close and with heaps of love to all at home.

Your affectionate son,

HENRY.

P.S.—They took photos of our Ward for the "Ladies Field" so if you can find it I am sitting on the end of a bed with a patch under my eye.

H. E. M. D.

KINGSTON MEDICAL AND SURGICAL SOCIETY.

FEBRUARY 5th, 1900. The regular monthly meeting was held this evening, Dr. Herald presiding and twelve members present. A general discussion occurred on the provisions of Dr. Roddick's proposed "Dominion Medical Act." It was moved by Dr. Kidd seconded by Dr. Gibson that we protest as being unfair, against the proposed composition of the Council as defined in Section 6 of the Act, and recommend as an amendment "That in accordance with the precedent established at the time of Confederation, in dealing with the composition of the Senate, that the Dominion be divided into four divisions (1) Ontario, (2) Quebec, (3) Maritime Provinces, (4) Manitoba, the Territories and British Columbia, and that six members be allotted to each. Further that each University actually engaged in the teaching of medicine be allotted one representative, in accordance with the precedent set by the General Medical Council of Great Britain and our Provincial Medical Council.—Agreed.

It was moved by Dr. Campbell seconded by Dr. Mylks and resolved:—That we protest against the proposal contained in Sub-section 2 of Section 13 of the Act (calling for examinations to be held alternately in Montreal and Toronto) and would

recommend instead " That all written examinations be held simultaneously at each centre at which is situated a Medical School, and that all practical and clinical examinations be held in succession at these same centres." It was moved by Dr. Anglin seconded by Dr. Mylks and agreed: "That the Society appoint Drs. Herald, W. T. Connell, and Third a standing committee to draw up, print and distribute our objections and to take such further steps as are considered advisable to have our ideas carried out, such committee to report progress at each meeting of the Society."

February 16th. A special meeting of the Society was held this afternoon on the occasion of Dr. Oliver's death. The Society unanimously adopted a resolution expressing sympathy with Mrs. Oliver in her bereavement, and expressing our own loss of a valued member and past President of the Society. A wreath was forwarded to be placed on the coffin of our dead member.

March 5th. The regular monthly meeting was held this evening at the Medical College, Dr. J. M. Forster presiding in the absence of the President. 14 members were present.

The Secretary reported progress of the committee appointed at last regular meeting re " Dominion Medical Act." Circulars have been prepared and forwarded to all members of the Houses of Parliament, newspapers, graduates of Queen's in Medicine, Queen's University Council, and others, including the Kingston City Council and Board of Trade, both of which bodies drafted resolutions and petitions protesting in like manner to the Society against the Act. Many similar responses were received from all over the country and encourages us to suppose our claims are justifiable.

Dr. Knight then gave an address on Neurons and the Neuron theory illustrating his remarks with lantern slides. This address showed very clearly how the neuron conception rendered intelligible various nervous phenomena.

Dr. W. T. Connell followed by showing how readily the neuron conception gave one an intelligent understanding of the clinical and pathological features of the nervous diseases, illustrating his remarks from the clinical features and pathology of locomotor ataxia.

April 9th. The regular monthly session occurred this evening, Dr. Herald presiding and 12 members present.

Dr. W. T. Connell read a paper on the Bubonic Plague which appears in this issue of the QUARTERLY.

DR. A. S. OLIVER.

ON February 15th last, after a very brief illness there passed away one of Kingston's best known and most highly respected physicians in the person of A. S. Oliver. Dr. Oliver began the study of medicine at the Royal College of Physicians and Surgeons, Kingston, at a very early age, completing his course when he was but 19 years old. Notwithstanding his youth his career as a student was brilliant and as a reward of merit he won the position of house surgeon in the Kingston General Hospital. As he could not obtain his degree until he had attained his majority he went to England and walked the hospitals for a few months. On his return he went to Albany and passed the necessary examinations and received a commission in the New York 20th Regiment. He was present at the battle of Fredericksburg. Shortly after this he was attached to the White Oak Hospital where he contracted Typhoid Fever. He was then transferred to Washington. Here he resigned his commission and returned to Canada, obtained his degree and commenced the practice of his profession in Kingston, where he remained until his death. For a number of years he was on the Faculty of the Medical College, holding in succession the chairs of Jurisdrudence, Physiology, Materia Medica, and Clinical Medicine. For over a quarter of a century he was Surgeon to the Gaol. When the Kingston Medical and Surgical Society was re-organized his confreres unanimously elected him President and this position he held for two years. Dr. Oliver had a singular quiet life—he attended strictly to the duties of his profession and to those of the positions which he held. He was very careful to observe all the requirements of Medical etiquette. By his confreres he was regarded as an honourable and reliable practitioner and as a consequence his advice was frequently sought by them. In consultation his opinions were well founded and given in a kindly and courteous manner. He was intimately known to us for many years and in all our intercourse with him we never heard him make an unkind remark about any other practitioner. Of him it may be truly said he had not an enemy in the profession. Dr. Oliver leaves a widow to mourn his loss and to her we would extend our feelings of deepest sympathy and would assure her that those are the sentiments of all members of the profession in Kingston.

BOOK REVIEWS.

Disease of the Nose and Throat. J. Price Brown, M.B., H.R. C.P.E.

The F. A. Davis Company, Philad. 1900. Dr. Price Brown is to be congratulated both for the courage he displays in adding another to the long list of recent works on the nose and throat, and for the manner in which his task has been executed. We have no doubt that the profession, in Canada at least, will give this book a favorable reception. The descriptive anatomy is extremely condensed but it furnishes a reason for the insertion of some very fine plates representing frozen sections prepared by Dr. Primrose for the anatomical museum of Toronto University. Diphtheria is not discussed at all, and the chapters on Intubation and Tracheotomy are very inadequate. The author states in the preface that it was only after careful consideration that he decided to omit the subject of Diphtheria but we think that, to be of the greatest use to students, it would be advisable to include it in the next edition which we trust may soon be called for. The illustrations, one hundred and forty-four in number, are chiefly from Lennox Brown and Bosworth, the original ones however, being well executed and of real value.

A Manual of the Diagnosis and Treatment of the Disease of the Eye. Edward Jackson, A.M., M.D., W. B. Saunders, Philad. 1900. This is not only the latest manual on this subject but probably the best for the beginner in ophthalmology and for the general practitioner. For the latter the most important side of ophthalmology is undoubtedly the relations between ocular symptoms and general diseases. The last chapter is devoted to these relations and a series of references to other parts of the book enables one to readily command the information desired. Another valuable feature of this book is the bibliography at the end of each chapter which as Dr. Jackson says, "is not intended to be complete. It is merely an attempt to open a path for the student into the broader literature of ophthalmology." We can heartily recommend this work to these two classes of seekers after ophthalmological truth.

A Manual of Pathology. By Joseph Coats, M.D., late Professor of Pathology in the University of Glasgow. Fourth edition (1900) revised by Lewis R. Sutherland, M.B., Professor of Pathology, University of St. Andrew's, pp. 1132. Four hundred and ninety illustrations. Longmans Green & Co., London. Canadian Agents:—J. A. Carveth & Co., Toronto. Price \$6.00.

In this posthumous edition of Dr. Coats' great work on Pathology, we have maintained the high standard of the previous editions. We need scarcely say anything else for when a book of this character is in its fourth edition criticism is needless. The work is throughout based on pathological anatomy, a subject on which the author can speak with the weight of over thirty years experience in the mortuaries and laboratories in connection with the University of Glasgow. The work will scarcely find favor with the general student owing to its large size and the wealth of detail. The observant student and the practitioner who wishes a carefully worded and accurate work on Pathology cannot do better than consult this work. The volume is throughout well illustrated, mainly by photographs and micro photographs of specimens, almost all of which are good. This book is and will remain for years the best memorial to the late Professor Coats, and a standard work on the principles of Pathology.

Hygiene of Transmissible Diseases. Their causation, modes of dissemination and methods of prevention. By Dr. A. C. Abbott, Professor of Hygiene and Bacteriology, University of Pennsylvania, pp. 311. W. B. Saunders, Philadelphia. Canadian Agents: J. A. Carveth & Co., Toronto. Price \$2.00.

This is a book for which there has been a crying need, for in it we have given a systematic and accurate account of the causation, dissemination and means of prevention of the Transmissible diseases, a subject for which one had to hunt through many books on medicine, surgery and bacteriology. The book is divided into three sections of which the first deals with the general principles underlying the causation of disease. In the second section the transmissible diseases are considered in detail and the various factors of causation, distribution, avenues of infection and the necessary prophylactic measures are given due consideration. Very full and explicit is the chapter devoted to

typhoid fever and a consideration of it alone is worth the price of the book. One only regrets that its teachings are not more fully carried out. The author speaks very plainly on the subject of the venereal diseases—a subject which our sanitary authorities entirely neglect yet one which is of vast hygienic importance. We feel that the author might have said more on the subject of tuberculosis particularly as regards its sanitarium treatment. Dr. Abbott does not recognize Sanarelli's bacillus of yellow fever, which is recognized now by most authorities. Nor does he lay stress on the carriage of plague infection by rodents, a fact which is so clearly insisted on now a days.

The third section deals with general prophylactic measures against the infectious diseases, considering the subjects of immunity, disinfection by heat and chemicals, and the general management of infectious cases including isolation and quarantine.

This work should be in the hands of all live practitioners and certainly in the hands of all Medical Officers of Health.

QUEEN'S MEDICAL CONVOCATION.

ON Friday April 6th, the Medical Faculty of Queen's University held the annual Convocation for conferring degrees and awarding prizes won by the students during the past session. The following are the winners of prizes :

Second year.—Best examination in Anatomy, Physiology and Chemistry—T. O. McLaren, Lancaster.

Third Year.—Best examination in Materia Medica, Therapeutics and Pharmacy—G. F. Dalton, Kingston.

Fourth Year.—Medal in Surgery—T. H. Johnston, Drayton.
Medal in Medicine—B. B. Bridge, Westbook.

House Surgeoncies in Kingston General Hospital.—R. C. Hiscock, M.A., Kingston ; C. P. Johns, B.A. ; R. F. Carmichael, Strange.

Chancellor's Scholarship.—W. A. Hall, B.A., Kingston.

The following gentlemen received the degrees of M.D. and C.M.:

Allison, D. M.	Adolphustown.
Barnett, T. J.	Clayton.
Bridge, B. B.	Westbrook.
Burton, S.	Kingston.
Carmichael, R. F. ; B.A.	Strange.
Connolly, E. W.	Cataraqui.
Edwards, J. W. ; B.A.	Kingston.
Ferrier, G. C.	Kingston.
Hall, W. A. ; B.A.	Kingston.
Hastings, F. R.	Ottawa.
Hiscock, R. C. ; M.A.	Kingston.
Johns, C. P. ; B.A.	Kingston.
Johnston, T. H.	Drayton.
McConville, A.	Kingston.
O'Hagan, T. F.	Fort William.
Parker, R. D. W.	Bermuda.
Porter, S. E.	Lindsay.
Ross, W. J.	Martintown.
Proderick, W. S.	Ottawa.
Smith, S. M.	Kingston.
Wilson, T. A.	Kamloops, B.C.

We congratulate these young gentlemen on their success and extend to the graduates the right hand of fellowship, bid them welcome to the ranks of our profession and hope that their future may be satisfactory to themselves and of benefit to the people amongst whom they may labour.

Messrs. Frederick Stearnes & Co. of Windsor, are now occupying their handsome new laboratory, which is said to be the most modernly equipped one to be found in Canada. Their first Canadian laboratory was erected in 1884, and their business has increased so largely since that date that the building has long been too small to meet the demands of their trade. The new building is not only very extensive but is completely furnished with every requisite for manufacturing in an economical manner the finest pharmaceutical products. Great credit is due Mr. Irving H. Taylor, who has been manager of the Canadian business ever since its inception. His energy and ability have largely contributed to the success of this firm in Canada. We wish Mr. Taylor and the firm all the prosperity to which their enterprise is entitled.