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The Canada Lancet

VOL. L. TORONTO, MAY, 1917 No. 9

EDITORIAL

GERMANS SPREADING TUBERCULOSIS.

The evidence is now complete that German doctors deliberately inoculated the French with tubercular infection. This is one of the most heinous of crimes, and is the prostitution of science to the vilest of purposes. It is almost inconceivable that members of the medical profession could descend to such deeds; and prior to this war, such a thing would have been impossible, but now we have the proof. Many doubted the Belgian atrocities until the Bryce report was published. Some doubted wilful murder until the Cavell, and the Fryatt, and the Lusitania cases convinced the world that what Germany could not do by war she would try to do by murder and frightfulness. Some time ago a lady gave out to the world the statement that Germany was spreading tuberculosis among the French. This is now a statement we are prepared to accept; for have we not the burning of Russian wounded with a doctor and some nurses in a building where they were surrounded? Have we not the deliberate sinking of hospital ships? Have we not the sinking of ships with food for the starving Belgians? Have we not the enclosing of prisoners with those who were ill with typhus fever?

The authority for the inoculation of tubercle bacilli is vouched for by Dr. Theodore Beebe, of Boston, and Drs. Cailleux and Caquille, of France. Under the pretext that smallpox was prevalent, the German doctors vaccinated the French citizens in the covered areas. Those who were not vaccinated contracted other diseases in the usual way, but those who had been vaccinated suffered heavily from tuberculosis. Here we have "confirmation strong as proofs from Holy Writ." Dr. Beebe said that "it is a highly significant fact that only those who have been vaccinated have developed tuberculosis, whereas unvaccinated children are suffering from pneumonia and other diseases, and unvaccinated older people, while extremely ill, show no signs of tuberculosis. This state of affairs must naturally point grave suspicion toward the German practices."

Dr. Beebe goes on to state that the Germans have not shown any humanitarian spirit during the war, and it is most unlikely that they would be vaccinating the French to safeguard them from smallpox, or using tuberculin in them as a preventive of tuberculosis. Dr. Caquille states that those who were vaccinated in many instances developed a very rapid form of tuberculosis and died like flies. Then, again, these vaccinations were only done a month or so before the recent retreat, when the Germans knew they would be leaving these people behind them. There would be no object, therefore, in their expending time and money in vaccinating the French against smallpox.

The fact is that this must be added to the many crimes that Germany must answer for. "This one thing more you have done," as was said of Herod when he ordered John the Baptist to be beheaded.

A TERRIBLE ACCUSATION.

A short time ago Mrs. E. Warrall, 126 St. George street, Toronto, in a most public manner, stated that her husband, a returned soldier, and in the Toronto Asylum, on account of nervous breakdown due to the war, had been ill-used. She also states that she saw another soldier harshly handled. Her words are: "I saw a warder grab a soldier by the neck and pants and run him along the corridor like a dog. He opened a door and flung him in—gave his feet, which were outside, a kick, shut the door and locked it. Oh, the thud, it sounded as though every bone must be broken. He seemed quite young and thinly built. I should have reported it before, but I was worried over my own sorrow, but as my husband has since died and they cannot punish him any more for me telling, I felt it my duty to the mothers of Toronto, so that these things could be looked into."

This story may be true, it may be made up on a very slim foundation, or it may be entirely false; but it must not be allowed to rest. It demands a full and thorough examination, and a full and frank report to the public. There must be no suspicion rest on the treatment of the returned soldiers whose minds have become affected from the stress of war. What some of these men have endured no tongue could tell or pen write. They risked life, limb, health, and reason for the sake of country, and the country must furnish them, if they are ill, with humane treatment. What Mrs. Warrall states we could only think as coming from that late monster, von Bissing, who murdered Edith Cavell, and equally brutally caused the deaths of many thousands of Belgians. It must be shown that Mrs. Warrall is wrong, or a complete remedy found for the evil.

Dr. J. M. Forster, superintendent, states that returned soldiers are well treated. We have implicit confidence in Dr. Forster and know that this is what he would desire. But some one may have blundered and he not know it. It must be shown that there is no one in the employ of the Asylum authorities with Teutonic sympathies to care for our mentally deranged soldiers. Should any one be found who could be cruel to a returned soldier, who through the horrors of war has for the time being lost his mental balance, it would send a chill down the back of the most callous.

Hon. W. D. McPherson, Provincial Secretary, has stated that the matter will be investigated without delay. The public may rest assured that this will be done.

MEDICAL SCIENCE IN THE WAR.

Sir Alfred Keogh, Surgeon-General of the British army, stated recently that during this war the utmost attention had been paid to the feeding and health of the soldiers. Among other things, he said:

"The layman usually thinks only of the killing efficiency of an army, not realizing that to be able to kill the enemy an army's health must be right up to scratch all the time.

"The first essential for an efficient army is that it be well fed. A well-fed army is an army in which disease prevention has its greatest chance of success. We can't protect health which is undermined by inadequate feeding. The next essential to an efficient army is the immediate investigation of epidemics. Both of these problems have been solved by us.

"The British army is well fed and is free of epidemics. Since the outbreak of war we have had but three epidemics in the British forces, and in each case these have been stamped out almost instantly. We did this by concentrating our best medical effort at the source.

"We learned our lessons in sanitation from the South African war. We first tried enteric inoculation in the Boer war and have perfected it since, with the result that this disease has been practically stamped out. In our whole army we now have but four or five cases of enteric fever in one month."

He also spoke of the close and friendly relationships that existed between the Medical Service of the British army and the medical profession of the United States. Sir Alfred went on to say that some of the leading army doctors of the United States had and were still studying the method of the British army medical services, both at the front and in the hospitals.

"We have and still are giving the United States army the benefits of our three years' experience in keeping healthy our enormous army. In fact a close co-operation between the medical branches of the British army and that of the United States has been maintained since the very beginning of the war. American army medical men from the start have been keeping in touch with our medical and sanitary arrangements, and if the results of their observations have been applied to their own organization, as I have every reason to believe they have, the United States army ought to take the field under better medical suprvision than any army in the world. In other words, the American soldier ought to be the healthiest, backed as he is by a medical organization that has benefited by all the experiences of our great armies."

These are wise words from the lips of Sir Alfred Keogh, and are destined to do much good. In the first place, they show what efforts have been made for the health of the man behind the gun. They also show that the medical professions of the United States and Britain have been co-operating with each other. Now that the United States is an active ally, the medical and surgical experiences of Britain will prove very valuable.

FINDING HOSPITAL ACCOMMODATION FOR THE SOLDIERS.

This is a large and by no means easy question to answer. There are now in this country about 5,000 invalided soldiers, and before the recent Arras battle there were at least 15,000 Canadians in Britain under treatment. These will be steadily returning to this country. They must be taken care of, and this will present several problems.

In the first place, tents might be put up for them. This would be a quick method of providing accommodation, but in many ways a very unsatisfactory way. It certainly would not suit our winter season.

Then, as a second way of dealing with the problem, temporary buildings might be erected. These would be one-storey structures and made of framework and cased with lumber or metal. This plan, again, has many weak features, such as the heating, sanitation, and operating rooms. Finally, they would be useless after the war needs are over.

As another method, many types of building may be converted into hospitals. It is a very expensive thing to fix up old churches, school houses, large residences, etc., into soldiers' homes and hospitals. This outlay is wasted when the war is over.

Now, we take the liberty of offering a solution. The government should make many grants to the hospitals now in existence, with which these institutions would erect permanent and modern additions to their

present accommodation. When the war is over these new buildings would be valuable assets for the future, and would for many a year meet the needs of the country, which will become more and more densely peopled.

The only valid objection that can be advanced against this plan is that it would be some time before these new buildings could be ready. But this can be met by energy. It does not take long to put up a solid brick and cement fireproof building. The will to win is the real secret of success. When the advantages and disadvantages of the several plans are compared, we feel that the balance is in favor of new buildings.

THE WORKMEN'S COMPENSATION ACT.

The medical profession know that this Act was in a most unsatisfactory form as it was first enacted. The surgeon stood a very poor chance of being paid. During the past winter the need for some amendments to the Act was taken up, and several medical organizations gave much attention to the matter. Among these may be mentioned the College of Physicians and Surgeons, the Ontario Medical Association, and the Academy of Medicine.

The whole question was very fully argued out before the Premier, Sir William Hearst, and the Attorney-General, Mr. Lucas. As the result of these efforts and interviews, the Act has been amended so that the medical attendant is now paid for the first thirty days of illness. The hospitals and nurses are also paid. The medical attendant is paid by the Commission, so that the doctor has nothing to do with either workman or employer, so far as his bill is concerned.

It will at once be seen that these amendments are worth much to the profession, but they did not come without an effort. This, however, shows the value of organization. We urge upon the medical profession to keep up an active campaign looking to the forthcoming medical legislation.

THE CARE OF THE FEEBLE-MINDED.

The agitation that has gone on for proper care of this class is now becoming aged; but the ardor of the workers is not abated. It was hoped that the Legislature last session would have granted legislation that would have gone far towards meeting the situation. This hope was doomed to meet with keen disappointment.

The amendments to the Act do not go far towards improving the

situation. One subsection may do some good. The Board of Education is vested with power to raise the money required in the same manner as for other school purposes. But it may be a long time before the Board may be disposed to act in the matter.

It is to be hoped that this fear may not materialize, and that suitable accommodation and facilities for treating the feeble-minded may soon be forthcoming. There is no need further to dwell on the need. This has been doubly proven long ago.

THE VALUE OF EXPERIMENT.

There have been many who have condemned experiments upon the lower animals. These objectors have ranked among their numbers scientists of high standing, a few medical men, and a host of sentimentalists. The scientists may be ruled out as not being trained in medical methods of observation. Thus the late Alfred Russell Wallace was quite out of his sphere of thinking and obesrvation when he denounced vaccination against smallpox. The host of sentimentalists must be ignored for two reasons: lack of proper training, and their prejudices cloud their vision so that they cannot see the bearing of the facts revealed by these experiments. In this class one could place the late Mr. Goldwin Smith. There remain as opponents only a few medical men, whose opposition might influence public opinion. It must be held that they are either ignorant of the proper methods, or are dishonest. In this class might be mentioned the late Dr. A. M. Ross, an old U.S. army doctor, who died in Toronto some years ago.

Experiment is one of the rocks on which true medical science has been built. To see the proof for this statement one has only to recall to mind the disease known as rabies. As the result of a wisely conducted chain of observations and experiments this terrible disease can now be successfully treated. If we turn our thought to typhoid fever we have another brilliant example of value of research. This severe disease, and the curse of the armies, is now perfectly masterd, and its prevention one of the easiest of events. As the result of experiment and its application to preventive medicine, we have the Panama Canal to-day.

One of the most successful of experimental investigations is the one which has led to a true knowledge of infantile paralysis. Here the proof that the disease is of a microbic origin has been absoulutely settled. The infection enters through nasal mucous membrane. But while it is true that the organism enters through the nasal fossae, it is also true that nature there has established her lines of defence. This defensive system may be adversely affected by the state of the membranes and by the

peculiarities of the individual at the time, or as a feature of constant character of body.

Drs. Flexner, Taylor, Amoss, Chesney, and Lewis have done much sound experimental work at the Rockefeller Institute on the treatment of infantile paralysis. One of the observations is that monkeys injected with the virus escape, if they were previously treated intra-spinously with the serum of a monkey which had recovered.

As an outcome of these experiments one of the most interesting chapters in the history of medicine is being written. One may look confidently into the future for the discovery of a cure for infantile paralysis that will take its place with that for cerebro-spinal fever. As the result of observation and experiment, new medicinal methods are being worked out that enable one to inject into a vein agents that are able to control some of the most virulent of infections.

CHINA AND OPIUM.

The Chinese republic has adopted measures for the supression of the opium habit. This acts stands with the abolition of slavery, and far exceeds in importance the temperance acts of Russia and France. In 1907 a form of responsible government was established in China, and since then there has been a steady advance in thought for the betterment of the people.

Those who know best are prepared to state that it was opium more than any other agency that held China back. It was due to the use of this drug, and not to any lethargy in the people, that China fell so far back in the race with other nations. The new leaders of the country saw that so long as the Chinese remained slaves to the use of opium the country would remain asleep. It has been estimated that at least 40 per cent. of the adult population were victims of the opium habit.

In 1907 an edict was issued in China that all persons in the government's employment must give up the use of opium. To aid the Chinese in their efforts to rid themselves of the evil, Britain in 1907 adopted a measure preventing India from exporting opium to China.

The Ontario Medical Association meets in Toronto in the Mining Building, University of Toronto, beginning on the afternoon of May 30th.

ORIGINAL CONTRIBUTIONS

CARDIAC DYSPNEA.

By Professor Francis W. Peabody, Harvard University.

AFTER a few introductory remarks upon the subject of disturbances of the respiration and mention of some of the newer methods of approach to the study of its phenomena, the lecturer proceeded to a brief discussion of the use of the term dyspnea. He said that this term was commonly loosely applied to disturbed respiration and was often used to include simple tachypnea or hyperpnea. The derivation of the term indicated its true field of application, namely, to a condition of difficult or labored breathing in which there was an element of discomfort on the part of the sufferer. It was in such a sense that the term would be used.

Before passing on to a discussion of the abnormal condition of dyspnea it was necessary to review some of the factors concerned in the regulation of normal respiration. It was now known that the essential factor for the stimulation of respiration was carbon dioxide, to which the respiratory centre responded with great sensitiveness. A very slight increase of the amount of this substance in the blood was capable of doubling the normal pulmonary ventilation. Other acid bodies present in the circulation exerted a similar effect. The respiratory centre was very delicately attuned to respond to changes in the carbon dioxide content of the blood and always responded under normal conditions in such a way as to maintain this content within normal limits. Since carbon dioxide was one of the products of normal metabolism, this latter became the basic factor in the control of respiration, and the respiratory function was capable in health of responding to the greatest needs of the body.

Thus in the normal person at rest the pulmonary ventilation, expressed as the volume of air respired in a minute, was five litres on the average. Studies on a group of normal persons subjected to prolonged and strenuous exercise to the point where they were compelled to stop on account of severe dyspnea showed that the normal capacity for pulmonary ventilation could be raised to ten or eleven times that found in the resting state. Thus the ventilation rose from an average minute volume of five litres to from forty-eight to eighty litres, depending upon the weight of the individual and upon sex. This capacity to increase the ventilation to meet the demands of the body might be described as the pulmonary reserve. The increased ventilation was brought about

by an increase in the rate of respiration and an even more marked increase in the depth of the individual respirations.

With these facts as a basis it was possible to analyze the factors present in cardiac disease which led to the production of dyspnea. It was well known that the tendency to dyspnea and the intensity of it when present presented great variations in different cases of cardiac disease, and it might be anticipated that the conditions and causes leading to its development would be different. The first of these factors to be studied was that of the metabolism.

Cases were studied in the Sage calorimeter and by means of the method of respiration calorimetry, the results in general being the same. It was found that the cases could be grouped according to the state of metabolism. In the first group were those cases in which this was within normal limits, and in this group were found all of the cases of cardiac disease which were well compensated. In the second group there was found to be more or less increase in the metabolism and this group contained those cases which showed more or less failure of compensation. Not all of the noncompensated cases, however, showed an increase in metabolism. Thus metabolism alone as a factor in the production of dyspnea in heart disease proved to be a variable feature.

The minute volume of the respiration was then studied and again the well compensated cases gave results within the normal limits. In cases of severe heart disease with a tendency to dyspnea the minute volume was found to be high. In all cases the minute volume was taken while the patients were at rest. It was found that the changes in this factor bore no relation to the state of the individual's metabolism. This high minute volume was proved, therefore, to be a factor of considerable importance in the production of cardiac dyspnea, for if the minute volume at rest was high it left a much restricted range for increase under conditions of exertion, even if mild.

A few years ago the occurrence of acidosis in heart disease was brought forward and used to account for the occurrence of dyspnea in practically all cases. It was proved that the respiratory centre was excessively sensitive to changes in the reaction of the blood in the direction of a reduction of its alkalinity. More extensive study of this factor was undertaken and it was shown that in cases of pure cardiac disease in a state of compensation there was no increase in the hydrogen ion concentration of the blood. In cases of pure cardiac disease with acute loss of compensation this factor was found to be variable, although in many there was found to be some increased accumulation of carbon dioxide in the blood, probably due to factors in the lungs which interfered with its diffusion. These studies proved, however, that carbon

dioxide accumulation was a factor of importance in the production of dyspnea only in the most severe cases of noncompensated pure cardiac disease. Where, however, there was an associated renal involvement, the increase in the acidity of the blood was of great importance. In such cases it was found that where the phenolphthalein output was normall there was no acidosis. Where the output was reduced acidosis was usually present, and where there was no excretion of phthalein acidosis was always very marked. In the group with low phthalein excretion the acidosis was alone of little importance as a cause of dyspnea, for it was usually relatively slight. It, however, diminished the buffer action of the blood salts and increased the sensitiveness of the respiratory centre to the accumulation of carbon dioxide. In the milder cases of this type the administration of alkalies was found of material benefit, for by neutralizing the slight acidosis the sensitiveness of the respiratory centre was restored toward normal.

The preceding factors produced a demand for an increased minute volume of respiration to meet which both rate and depth of respiration would have to be augmented. As has been pointed out, there was found to be a tendency for the resting rate to be increased in many persons with heart disease due to some degree of acidosis. This factor allowed less range of further increase and tended to the production of dyspnea. The capacity for increasing the depth of each respiration was then studied and was found to be impaired in many cases, thus further preventing the patient from meeting the demand for increased ventilation. The vital capacity of the lungs is measured by the volume of air which can be expired after the fullest inspiration. This was found to be decreased in many cases also, and its decrease was more or less parallel to the loss of capacity for increasing the depth. Thus in a study of cardiac cases the following findings were recorded: 1. Where the vital capacity was found to be at least ninety per cent. of the normal average the cases were found to be well compensated and to have little or no tendency to the development of dyspnea. 2. In all of the cases with a vital capacity between seventy and ninety per cent. of the normal there was some dyspnea on any unusual exertion, but the patients were usually able to get about with a very fair degree of comfort and relatively little restriction. 3. In the group with vital capacities between forty and seventy per cent. of normal there was dyspnea on moderate exertion and most of them were confined to bed or to the house and were much troubled with dyspnea on climbing stairs or going uphill, and many had frequent attacks of loss of compensation. 4. All of the patients with vital capacities less than forty per cent. of the normal presented severe states of loss of compensation, severe dyspnea, were confined to bed, and

gave a bad prognosis, sixty-one per cent. having died in a short time. It was thus shown that the degree of decrease in the vital capacity in cardiac cases ran parallel to the tendency to the development of dyspnea and constituted a fairly accurate measure of this tendency.

The causes of this decrease in the vital capacity were many and included such conditions as pleural and pericardial effusions, emphysema, pulmonary edema, etc. In others, in whom there was no physical signs to account for this decrease, it had been shown that there was often a loss of elasticity of the lungs from pulmonary engorgement and back pressure on the right heart. From these studies it was found that the vital capacity remained the same as long as the clinical condition was constant, that it paralleled the clinical condition and the tendency to dyspnea, and that it gave a rough quantitative measure of the clinical condition where dyspnea was the presenting symptom. It was often of more value in this respect than the blood pressure or the pulse rate.

Finally some remarks were made on the mechanism of the production of a special type of breathing known as periodic respiration. This condition was found to be commoner than usually believed, but as yet no full explanation of its cause could be offered. It was proved that it was not due to acidosis, for the blood carbon dioxide was not abnormal. It was found as a normal phenomenon in many persons in sleep and was known to be aggravated by respiratory depressants such as morphine. It seemed to be best explained as due to an alteration in the excitability of the respiratory centre, and possibly in part to some lack of oxygen. It could be checked temporarily by the administration of caffeine, which was known to be a powerful stimulant of the respiratory centre.—Selected from *New York Medical Journal,* 14th April, 1917.

THE REAL CANCER PROBLEM.

By L. Duncan Bulkley, A.M., M.D., New York.

Senior Physician to the New York Skin and Cancer Hospital, etc.

Selected, *Medical Record,* 17th March, 1917.

CANCER has long been a problem over which master minds have wrestled, and to read much that is written it would seem that we were yet as far from its solution as ever. Countless able men, at the expense of millions of dollars, have labored faihfully in the laboratory, and it may safely be said that more effort and time have been expended in investigations on cancer, and more has been written concerning it, than ever in connection with any other disease affecting humanity. And yet its mortality is steadily increasing pitifully, in spite also of active, skillful, and faithful surgical treatment.

Is it not possible, therefore, that there is something wrong in our conception of cancer and its treatment? If any other disease presented such a steady and alarming increase in its death rate, would we not stop and consider if our treatment were the best possible? If with the introduction of antitoxin the mortality from diphtheria had steadily risen until it was about 90 per cent. of all cases, would we persist in employing it? And yet the profession and the laity go blindly on, with the idea that surgery offers the only hope of reaching cancer, when the mortality statistics of the United States show that under this line of treatment the death rate has *risen steadily* from 63 per 100,000 of the population in 1900, to 81.1 per 100,000 in 1915, or 28.7 per cent.

Surely the lesson taught by the steadily and greatly *decreased death rate* of tuberculosis should teach us something of the value of most careful dietary, hygienic, and medical control of other diseases. For the great white plague, which a while ago threatened even the destruction of the race, shows now a mortality which has steadily *fallen* 27.8 per cent. since 1900, and that even with the continued presence of the tubercle bacilli. I realize that the comparison is not quite correct in all respects, for it is well established that cancer is not due to a micro-organism; but it does show us that nutritive errors are at the bottom of the ravages of tuberculosis, and efficient biochemical studies in cancer have satisfied many that the same, although different in character, is true of this disease.

In other words, erroneous nutrition, which is productive of disease of the kidneys, heart, and blood vessels, with their steadily rising mortality of 10 to 20 per cent. since 1900, as shown by ample statistics, is operating to increase steadily also the morbidity and mortality of cancer, in spite of active and intelligent surgical treatment. And yet the profession and laity seem to be blind to this fact.

It is also not a little remarkable that during the year 1915, when there was a special effort made to educate both the laity and the medical profession in regard to the advisability or necessity of early operations in cancer, the actual death rate rose by 1.7 persons per 100,000 living, whereas the average yearly rise for the preceding five years had been only 1.2 persons per 100,000!

What then is the real problem of cancer? Surely it is not to increase the surgical activity, which has resulted only in a steadily ascending scale of mortality, which in reality is greater than that observed in any other malady! For the increase in the death rate from cancer throughout the United States from 1900 to the present time has been coincident with the greatest activity both in laboratory research and in the advanced surgery of the disease. I repeat, is it not time for us to stop and consider whether our laboratory work with the miscroscope on morbid tissues, and our ex-

perimentation on rats and mice, are truly serving the real problem of cancer? Or whether we had not better turn our attention to human beings, and by careful clinical study of our patients discover where the fundamental error lies, which first induces the formation of an aberrant cell mass which we call cancer, and then continually feeds it by the same deranged blood stream, so that it becomes utterly uncontrollable and invades and destroys other tissues; while at the same time the anemia, pernicious and progressive in character, gradually saps the life of the patient, to a lethal end. For repeated and most careful laboratory studies have demonstrated great and significant changes in the blood in cancer. I hope to satisfy you that the mass which is excised is only the *product* of a far deeper systemic change, which has probably already produced other, more or less similar, masses or deposits elsewhere, in the bones and internal organs or lymphatics. So that surgical removal of the one often stimulates the development of others.

It is seen, then, that it is here denied that the local lesion which we call cancer is the first and only cause of disease. It is also denied that the surgical removal of the offending lump and adjoining glands and tissues, however early it is performed, is a sure and only cure for cancer.

In the recent cancer propaganda, urging the very early and complete removal of everything which could possibly be called pre-cancerous, it is interesting to observe that most of the pictures shown and arguments presented relate to cutaneous epithelioma, which the United States Mortality Statistics show to be the cause of only 2.7 per cent. of all deaths included under cancer! Moreover, those of us who see epithelioma daily know that, if properly treated early by other means than the knife, it is commonly a relatively innocent affection. It is acknowledged. however, that by meddling and wrong treatment, as with nitrate of silver, it can be goaded on so as to become a serious affair. In our present consideration of cancer, as a disease it is to be understood, therefore, that cutaneous epithelioma is excluded, and that reference is made to the serious malignant disease known as cancer, affecting various other organs of the body. However, many cases of what might be called epithelioma of the lip and oral cavity are of such malignity that they are properly ranked as carcinoma.

Looking at cancer, therefore, as a general disease of which the local lesion, which is ordinarily excised surgically, is simply the result or product of a previous, perhaps long-standing, blood or nutritive disorder, we can readily understand why the simple excision of the tumor and surrounding tissues cannot be expected to eradicate the malady permanently. We can also see why the disease recurs so readily in the scar tissue after the operation; for all recognize and admit that cancerous degeneration is

apt to develop on any scar tissue. It is also well known that occasionally a tumor which after removal has been proved microscopically to be only a simple adenoma, has eventually been followed by true carcinoma in the cicatrix or elsewhere, under the stimulation of surgical procedure.

Metastatic development, after or without operation, can only be readily understood on the ground of the disease being a constitutional disorder. For, as far as I have observed, there is seldom or never any continuous attempt made after an operation to alter the dyscrasic condition producing the tumor, but the patient is dismissed with the vain hope that there will be no more trouble. It is quite natural, therefore, that the transference of cancerous cells, by the lymphatics or blood vessels, will form foci which are readily made to grow further by the vitiated blood stream.

Regarding, then, cancer as a systemic disease, of which the tumor is but a local expression, often or perhaps always the result of local injury or irritation, possibly of one or more "embryonic rests," let us briefly review the evidence in support of this view and the measure found successful in combating the basic cause of the disease.

First let me remind you of the *negative* and *positive* results of laboratory and other study, which are pretty well conceded by those who know most about the disease; and in presenting these I cannot do better than to quote what I have collected in a former article.

1. Clinically and experimentally cancer is shown to be *not* contagious or infectious; although under just the right conditions, certain malignant new growths can be inoculated in some animals of the same species, but not in other species, and human cancer cannot be transplanted on animals.

2. Although micero-organisms of many kinds often have been found and claimed as the cause of cancer, there has been no concurrence of opinion in regard to them, and it is now pretty conclusively agreed that cancer is *not* causeed by a micro-organism or parasite.

3. Cancer is *not* wholly a result of traumatism; although local injury may have much to do with its development in some particular locality, even as in connection with the late lesions of syphilis.

4. Cancer is *not* hereditary in any appreciable degree; although some tendency in that direction has been demonstrated in certain strains of mice.

5. Occupation has *not* any very great influence on the occurrence of cancer; although it is more frequent in some pursuits than in others.

6. Cancer is *not* altogether a disease of older years; although its occurrence is decidedly influenced by advancing age.

7. Cancer does *not* espeecially belong to or affect any particular sex, race, or class of persons.

8. Cancer is *not* confined to any location or section of the earth, but has been observed in all countries and climates.

But while laboratory and other investigations have not demonstrated any single cause of cancer and have yielded only negative results, they have, by elimination, cleared the way for a study of its cause along other lines, which are bright with promise. They have also established certain facts which confirm the views which from time to time have been briefly expressed by many who were best acquainted with cancer; namely, that, because of its constant recurrence, and from the failure of surgery to check its rising mortality, it must be of a constitutional nature, intimately associated with dietary or nutritional elements, as I have esewhlere shown.

The *positive* results of laboratory investigation are more encouraging:

1. We know now that the local mass, which we call cancer, represents but a deviation from the normal life and action of the ordinary cells of the body. These once normal cells for some as yet unexplained reason, take on an abnormal or morbid action, with a continued tendency to malignancy which invades and destroys contiguous tissue, and is associated with a progressive anemia which destroys life.

2. Microscopic study has shown that there is a certain change in the polarity of cells about to be cancer-genetic, with an altered relation of the centrosome to the nucleus. These changes have been well attributed to an alteration in the enzyme contained in the cell, which further depends on the nutrition of the cell as influenced by a faulty metabolism of food elements.

3. The exclusion of all other possible causes leads us naturally to look to a disordered metabolism as a cause of the disturbed action of the hitherto normal cells; and we find much to confirm this view both in laboratory studies on the biochemistry of cancer, and also in clinical and statistical observations.

4. The blood in advancing cancer has repeatedly been shown to exhibit many manifest changes, which indicate vital alteration in the action of the organs which form blood, and so control the nutrition of the body and its cells.

5. Laboratory and clinical evidence demonstrate that the secretions and excretions of the body, both in early and late stages of cancer, exhibit departures from normal which deserve consideration. Although none of these have as yet been established as pathognomonic of cancer, they indicate metabolic disturbances which influence the nutrition of the cellular

elements, and so these secretory and excretory disturbances are of importance in connection with its causation.

6. As all healthy cells of the body, by their catabolism and anabolism contribute a hormone or something to the general circulation, so experimental evidence shows that the cells of a cancer mass itself, when fully developed, secrete a hormone or something which is poisonous to animals, and which probably hastens the lethal progress of the disease.

7. Repeated laboratory experiences have demonstrated, in a most remarkable manner, the absolute controlling effect of diet on the development of inoculated cancer in mise and rats, so that the process was inhibited almost entirely with certain vegetable feedings.

8. We thus see that as the laboratory has eliminated the local nature of cancer, it has also, in a measure, established the fact that there are medical aspects of the disease which further studies will show to be of the utmost importance. These all tend to demonstrate its constitutional origin, that is, its relation to deranged metabolism, which is now recognized as the basis of so many diseases.

But clinical and statistical studies come in with overwhelming force to confirm the correctness of this position.

1. We have already seen that with utter medical neglect the death rate of cancer has steadily and greatly increased in the United States, of late years, in spite of the prodigious advances in surgery during the same time. This is also true in all the countries from which we have any accurate statistics. We know also that tuberculosis, as a result of careful medical attention, has decreased in mortality, by almost as great percentage as cancer has increased. The same is reported by reliable observers all over the civilized world.

2. Any number of observers, in many lands, have recorded the almost entire absence of cancer among aborigines, living simple lives, largely vegetarian; they have also shown the definite increase in the disease, and in its mortallity, in proportion to their adoption of the customs and diet of so-called modern civilization.

3. This increase of cancer mortality seems to depend largely upon the altered conditions of life attending advanced civilization, particularly along the lines of self-indulgence in eating and drinking, and in indolence.

4. Statistics from many countries show that increase in the consumption of meat, coffee, and alcoholic beverages, appears to be coincident with a very great and proportionately greater augmentation of the mortality from cancer.

5. Clinical observation has time and again shown the effect of specific nerve strain and shock in the development of cancer; and there

seems to be little question that the enormous nerve strain of modern life is an element of importance in this direction, both through metabolic disturbance, and by direct action on living cells.

6. At present no clear demonstration is possible of the direct method by which errors of metabolism effect the changes in cells to which we give the name malignant, any more than we know how other alterations on the body are produced, such as arterial degeneration, bone changes, obesity, etc., which are recognized as due to metabolic derangement.

7. The results which have been observed in connection with the starvation of cancer, by ligature of vessels, illustrate the relation of the blood supply to growing cancer.

8. Finally, the repeated observation and report of the spontaneous disappearance of cancer, by careful and competent medical men, shows that conditions of the system may arise which are antagonistic to malignant growth, even when it has begun to take place; just as there are other conditions of the system which favor the aberrant action of previously normal cells, resulting in cancer.

The medical aspects of cancer thus loom large, and appear in quite a different light from that in which they have been commonly viewed. We now begin to see some of the reasons why cancer is not primarily a surgical disease, and some of the lines along which observation and investigation should proceed; namely, biochemistry, secretory and excretory derangements, metabolic disturbances, diet, etc. The subject is too new a one to afford a great amount of corroborative proof at present, other than the long personal experience of the writer and others, who have seen tumors disappear under means other than surgical, X-ray, and radium. More clinical and laboratory investigations of human beings are needed, and not simply microscopic studies and experiments on animals, valuable as these have been in the advancement of medical science in connection with other diseases.

We will now consider briefly some of the practical points in regard to the successful treatment of cancer by means other than the knife. I will not take time to review or even to mention the various methods and means which have been proposed and advocated for the cure of cancer, only to end in disappointment, for the reason that they did not reach the basic cause of the complaint. The very multiplicity of the suggestions proves their futility.

The line of thought and practice to which I would direct your special attention is not entirely new, but has been hinted at by many careful observers during the past hundred years or more, though it has never before been fully developed or strongly urged. But the experiences of over forty years, together with much study, has so convinced me of the cor-

rectness of the principles and practice which I advocate that I cannot too strongly urge you to consider them fully and without bias, and to put them to a satisfactory test; although I quite realize that they are contrary to the generally accepted views of the profession and laity.

The fundamental principle of my thesis lies in the fact that with the so-called advance of modern civilization, certain diseases, for the last fifteen years at least, have showed a steadily increasing mortality. The deaths in the United States from apopplexy, nephritis, and heart disease have steadily increased over 10, 15 and 20 per cent. respectively, and those from cancer 28.7 per cent. We all realize that the results in the three former disease conditions are from errors in the mode of life, including eating and drinking, and indolence, and careful study shows that cancer has the same origin. On the other hand, as already stated, the deaths from tuberculosis have steadily declined 7.8 per cent. under rational medical treatment, directed mainly along the lines of correct nutrition: the death rate of tuberculosis and cancer have thus approached each other 56.5 per cent., and at this rate in fifteen years more the mortality from cancer will exceed that from tuberculosis!

Careful and prolonged studies of cancer patients, in both the earlier and later stages of the disease, as I have recorded elsewhere, show that there are always departures from normal metabolism, as is shown by the condition of the blood, and in the excretion from the bowels, kidneys, and skin, in the salivary and hepatic secretions, and possibly in those of the ductless glands. Time does not permit here of elaborating this subject, which has been done elsewhere, but it is evident that some combination of internal systemic disorders must be recognized as the basic cause of the complaint, although at the present time it is difficult to point to a single causative element, if indeed it will ever be discovered.

But a broad view of metabolism and nutrition recognizes that all cell changes, whether good or bad, depend on the character and composition of the blood furnished to the tissues, although little definite may be known concerning it. Thus, no one has demonstrated the single causative change in the blood in arteriosclerosis, gout, rickets, scorbutus, etc., but no one questions that it exists, and we direct our therapeutic measures accordingly, largely from experience.

The same is true in cancer. Most careful and prolonged study of the patient in every respect has shown a certain uniformity in regard to particular deviations from health, the correction of which has been followed by a complete disappearance of tumors classed as malignant, so that the connection must seem obvious to an unprejudiced mind. And yet it cannot be claimed that the exact, single cause of the cancerous growth has been demonstrated, and from the nature and character of the systemic

disorders found, it is evident that there can never be any single remedy which can be rightly claimed as a cure for cancer.

But that cancer can be cured by medical means and without the knife is absolutely certain, as the experience of many testify, and as the writer has observed in so many cases during the past thirty and more years. Many of the instances in the hands of others have occurred unexpectedly, and without definite or careful study and record of the measures employed. But in some way the condition of the blood and system has become altered so that there has occurred a retrogressive process which resulted in the absorption of the tumor. I may say that this was the case in regard to the earlier patients in my own practice, when I observed that tumors of the breast, which had been diagnosed as cancer by surgeons, disappeared under dietetic and other measures given for some skin affection; later observation and study have crystallized my views and confirmed by methods of procedure, which I hope to make plain, as briefly as possible; lack of time to explain everything must make me a little dogmatic.

An absolutely vegetarian diet is the first requisite in the treatment and prophylaxis of cancer, for as mentioned, this has been found experimentally to inhibit, often to a remarkable degree, the production of artificially produced cancer in rats and mice, and experience throughout the world has shown cancer to be extremely rare in vegetarians. This diet, which should be maintained indefinitely, must be rigorous and absolutely vegetarian, excluding animal protein, even eggs and milk; butter is the only article allowed which does not grow, and of this one-quarter of a pound is to be taken daily, by a person weighing 150 pounds. Cereals are to be freely employed, eaten slowly, with a fork, and with butter, and not with milk and sugar, though the latter may be used moderately, where it seems necessary and where it perfectly agrees with the patient. Perfect mastication, with thorough insalivation, is essential, and I insist on at least half an hour being taken for even the lightest meal. Coffee, chocolate, and cocoa are excluded from the diet, only weak tea being allowed, with some postum or other artificial substitute for coffee.

Alcohol in any and every form is absolutely excluded, as it always has a very harmful effect on cancer. Sufficient water, not iced, should be taken to answer to the needs of the system, and I commonly give half a pint with each meal, and half a pint, hot, one hour before both breakfast and the evening meal.

Cancer being a disease of advancing civilization, with all it s temptations and errors in living, it is essential that the cancer subject lead a very simple and healthy life, with regular hours of eating and sleeping,

with a reasonable amount of exercise, and the avoidance of everything which could disturb normal metabolism.

There is, of course, no single medicine which can cure cancer, but proper medication plays a very important part in overcoming the disease and should never be neglected or interrupted in any case; indeed, one suffering from or threatened with cancer should be under the most careful medical guidance indefinitely, and this is especially true after the surgical removal of the tumor, or local manifestation of the morbid process, as Abernethy so strongly asserted, nearly a hundred years ago.

Medical treatment lies mainly along the lines of elimination, which is always found to be faulty, both by the bowels and kidneys. My records of large numbers of private patients show that there is imperfect intestinal secretion, both in the very early stages and late in cancer, even before morphine is taken. Therefore I have long come to look upon intestinal autointoxication as a prime factor of causation, and lately Sir Arbuthnot Lane has spoken of cancer as a terminal result of intestinal stasis. This constipation, however ,is not to be met with occasional purgatives, but by measures which will secure a good normal evacuation once or oftener daily. My principal reliance for this is cascara, in combination with other remedies, although I also very often give once a week, on alternate days, two good laxatives of blue mass, colocynth, and ipecac. Mineral waters, Russian oil, etc., are not desirable, and enemata are resorted to only in emergencies.

The kidney secretion in early and late cancer is always faulty. This does not refer to albumin and casts, or sugar, which are searched for but seldom found. But very careful and repeated volumetric analysis of its many normal ingredients reveals errors in its composition which are of significance and which serve as a guide in therapy. There is always a faulty nitrogenous partition, and in that of sulphur; indican is commonly in excess, often very greatly so, and the chlorides, phosphates, and sulphates are deranged. The urinary secretion will constantly be found to be extremely deficient, both as to the actual quantity passed in the 24 hours, and in its total solid contents, which are often hardly one-half of that called for by the body weight of the patient; this I have verified by hundreds of analyses. As these errors are corrected by proper treatment there will be a coincident improvement in the vitality of the patient and in the tumor.

The remedy which I have largely relied on in these cases for many years is acetate of potassium, and it is interesting to note that Ross of London claims that a cause of cancer is found in a disturbance in the mineral contents of the blood, and that there is a lack of potassium, and he gives as high as 90 grains of phosphate and carbonate of potassium in

the day, with excellent results. I commonly give the acetate in combination with other remedies, thus:

℞ Potass. acetatis .....ʒi
Tinct. Nucis Vom.....ʒiv
Ext. Cascara fld. .....ʒi-ʒiv
Extr. Rumicis radicis, fld. ad. .....ʒiv

M.—Teaspoonful in water ½ hour before eating.

But in the long treatment necessary for these cases before the malignant growth has quite disappeared, and possibly for a good while afterward, there may be many remedies used with advantage to secure and maintain that healthy metabolism requisite to overcome the cancerous habit. Iron and arsenic, phosphates and strychnine, and even cod liver oil and many reconstructive remedies and measures may bear their share in overcoming this dire disease. Thyroid extract sometimes assists materially in removing the mal-growth, but must be given with caution, and in connection with other proper remedies; for sometimes it will promote catabolism and disintegrate the diseased tissue faster than the enunctories can remove the effete products, and these may poison the system.

It has been difficult in a single address to present such a vast subpect, which is more or less new to many, in a clear and concise form, and I fear that I have trespassed too greatly on your patience, and have yet only imperfectly made matters clear. But I shall be satisfied if I have excited your interest sufficiently to cause you to investigate the medical aspects of cancer, in which lies the real problem of its prevention and cure. Surgery has been tried faithfully by many brilliant and honest men, some of whom now and then acknowledge the failure of the knife to arrest the steadily increasing mortality from the disease, which is now about 90 per cent. of all those once attacked.

But I fully realize that there is danger in my strenuous advocacy of other lines of treatment, lest these should not be fully and perfectly carried out, with such intelligence, patience, and persistence, on the part of the physician and patient, as is requisite to accomplish the end desired. For I must say that it is extremely tedius and tiresome to care minutely for these patients, who should be seen at least weekly, and even for months or years, with careful and accurate records, innumerable urinary and blood analyses, etc., etc.

On the other hand, however, we have the alternatives of leaving the patient to suffer and die, or to submit to a surgical operation with the expectation of recurrence in a considerable proportion of cases, attended often with greater suffering and final death.

My experience with the disease for forty years or more in private practice, and for the last few years in my medical clinic for cancer, in the

New York Skin and Cancer Hospital, and in the wards of the hospital, have so fully convinced me of the correctness of the views I have stated here and elsewhere that I cannot too strongly beg you to give them due consideration, and not simply to class them with the various passing claims and suggestions regarding cancer, which have so often proved illusory. For along the lines which I have presented lies the real cancer problem, as I can demonstrate by many cases more or less similar to those detailed in my little books.

EDWARD JENNER—1749-1823.

Remarks Made on Presenting a Portrait of Jenner, 6th March, 1917.

By John Ferguson, President of the Academy.

IN presenting this portrait of Jenner, I feel I have a special right to do so. When in Britain in 1880, I became acquainted with Dr. Hugh Clark, who as a young man had been an intimate friend and patient of Jenner. Dr. Clark was ever delighted to speak of the fine qualities of head and heart possessed by that great man; and, on one occasion, said that he could think of no better words to express his feelings regarding him than by recalling the words of Antony over the body of his friend Brutus:

> "His life was gentle, and the elements
> So mixed in him that nature could stand up
> And say to all the world, 'This was a man.' "

Jenner was only five years of age when his father, the vicar of Berkeley, died. His primary education was secured for him by his eldest brother, Stephen, who sent him to study under Rev. Mr. Clissold. At a very early period in Edward's life he manifested a marked fondness for the study of nature, and was an active collector of fossils and botanical specimens.

His medical studies began in 1770 at Sodbury, where he became apprenticed to Daniel Ludlow, a surgeon of that village. The year following he went to London and entered St. George's Hospital, being at the same time a resident in the home of the famous John Hunter. In 1771, he was commissioned by Sir Joseph Banks, the eminent scientist and navigator, to arrange and describe the specimens that had been brought home by Capt. James Cook from the South Seas. He performed this task so well that he was offered the post of scientist to Cook's second voyage, but he declined the offer.

In 1773, he commenced practice in Berkeley, where he remained all his life. During his spare time he took much interest in natural science

and wrote on fossils, botany and ornithology. He was fond of playing on the flute and violin. His style of dress was simple and neat, his usual costume being a blue coat, top boots and silver spurs.

He took an interest in the formation of medical societies, and contributed papers on the temperature of animals, on valvular diseases of the heart, on angina pectoris, on ophthalmia, and on cowpox, and a number of other subjects.

In 1788, he was elected a fellow of the Royal Society. In March of the same year he was married, and John Hunter acted as godfather to his first born son. In 1792, his practice became so large that he was compelled to give up surgery and midwifery. In this year the University of St. Andrews conferred upon him the degree of M.D., *honoris causa*. During these years he had been making his observations on cowpox, or variolæ vaccinæ. In 1794, he passed through a severe attack of typhus fever.

From this period on his attention was given almost entirely to the study of cowpox. On 14th May, 1796, he vaccinated James Phipps, a boy of eight, with lymph taken from the hand of Sarah Holmes, who was suffering from cowpox. The lymph acted well on the boy. On 1st July, 1996, Jenner innoculated the boy with smallpox, but it did not take.

His first account of his observations and experiments were sent to the Royal College of Surgeons. It was not read at any society. In 1798, he applied to the Royal Society for the privilege of reading his manuscript, and received the following from the president:

"You should be cautious and prudent, that the credit already gained by your communications to the Royal Society, and that you ought not to risk your reputation by presenting to that learned body anything which appeared so much at variance with established knowledge, and withal so incredible."

However, in this year he published in London his observations, which will ever remain a classic. The title of his small book was "An Inquiry into the Causes and Effects of Variolæ Vaccinæ, a Disease Dicovered in Some of the Western Counties of England, and Known by the Name of Cowpox." The book contained a number of colored plates. He came to the conclusion "that the cowpox protects the human constitution from the infection of smallpox." In 1800, he published further observations; and, again, in 1801.

From that date onwards he made several visits to London with the object of securing the co-operation of influential persons. He stayed with Lord Egremont, and later the Duke of York took an interest in the formation of an association for the purpose of supplying pure lymph. The Duke of York accepted the dedication of the second edition of the "In-

quiry." In 1800, he was requested by the Commander-in-Chief to vaccinate the 85th Regiment.

In 1799, Dr. Waterhouse, in Massachusetts, published an account of vaccination under the title "Something Curious in the Medical Line."

In 1802, the Parliament voted him a grant of £10,000. In 1813, the University of Oxford conferred upon him the degree of Doctor of Physic, *honoris causa*. He died on 26th January, 1823, at the age of 74.

There are many portraits of Jenner; but the one now presented is from the engraving by J. R. Smith. The portrait shows Jenner when he was in his 49th year; and had for its theme the following words of Jenner written in 1798:

"While the vaccine discovery was progressive, the joy I felt at the prospect before me of being the instrument destined to take away from the world one of its greatest calamities, blended with the fond hope of enjoying independence and domestic peace and happiness, was often so excessive that, in pursuing my favorite subject among the meadows, I have sometimes found myself in a kind of reverie. It is pleasant for me to recollect that these reflections always ended in devout acknowledgments to thta Being from whom this and all other mercies flow."

Dr. Hugh Clark, who was himself a superior type of man, a widely read scholar, and a keen judge of character, said to me that Jenner was patient and painstaking in his work, a skilful and hardworking physician, a devoted and sympathetic friend, and an affable and lovable man. He conformed in every respect to the words of Horace—

In se ipso; totus, teres atque rotundus.

Ringworm will usually respond to the application of the following ointment:

℞ Acidi benzoici .....
Acidi salicylici .....aa 1.0
Olei cocanucis 12.0
Petrolati, q. s. ad., ...30.0

If it does not the parts should be thoroughly rubbed with tincture of iodine fololwed by a solution of 0.6 gram of silver nitrate in 30 mills of sweet spirit of nitre and the application of the preceding ointment. Finally, psoriasis can often be controlled by the application of an oinment of the following composition:

℞ Hydrargyri ammoniati 4.0
Liquoris picis carbonis (B. P.) 15.0
Unguenti paraffini (B. P.) 180.0

—*New York Medical Journal.*

CURRENT MEDICAL LITERATURE

DIAGNOSIS IN DYSPEPSIA.

At a meeting of the Harveian Society, London, when Dr. Amand Routh was in the chair, Dr. Robert Hutchison read a paper on diagnosis in dyspepsia, which he defined as a disturbance of digestion caused by organic disease or functional disorder of the stomach. Owing to the widespread nervous connections of the stomach and its close relations to other organs in the abdomen, dyspepsia was apt to be simulated by disease elsewhere than in the stomach itself. Among such conditions in which vomiting was chiefly the deceptive symptom, were pregnancy, uraemia, pulmonary tuberculosis, obstruction in the urinary passages (uro-kinetic dyspepsia) or colon, cerebral tumour, gastric crises of tabes, migraine, movable kidney, nervous or hysterical vomiting, and, possibly, vicarious menstruation. Gastric pain might be simulated by gall stones, angina pectoris, and agnina abdominalis, mucous colitis, and chronic appendicitis. Extra-abdominal causes had also to be thought of—for example, pleurisy, spinal caries, myalgia, and herniae. Finally, air swallowing (eructatio nervosa) was often mistaken for the flatulence of dyspepsia.

Having eliminated the possibility of simulation it had next to be determined whether the symptoms were due to organic disease in the stomach or to perversion of its functions. If the patient complained of severe pain, or if there were much wasting, or if vomiting were a prominent symptom, the presumption was in favour of organic disease and of the necessity for surgical treatment.

The organic diseases which had to be differentiated were (1) ulcer, characterized especially by pain coming on at a definite interval after food; (2) carcinoma, in which pain was more constant, and wasting and loss of appetite prominent features; (3) stenosis of the pylorus and hour-glass stomach, in both of which vomiting was pronounced; and (4) gastritis. The differential diagnosis of these by symptoms, physical signs, and the use of special methods such as test meals and X-rays, was considered; and Dr. Hutchison then pointed out that midway between the organic diseases and functional disorders of the stomach were two conditions which partook to some extent of the character of both: (1) The painful dyspepsia of young women, variously known as gastralgia, acute ulcer, gastric erosions, haemorrhagic gastralgia, and gastrotaxis; and (2) gastroptosis. The diagnostic features of these were described, and it was pointed out that they were not cases for surgical treatment. If cases of simulation and of organic disease were eliminated it might be concluded

that the case was one of functional dyspepsia. Further differentiation depended upon classification.

Various classifications of functional dyspepsia had been suggested. On an etiological basis the cases might be divided according to their supposed cause—for example: (1) Those due to physical causes, such as fatigue, unsuitable diet, defective chewing, and so on; (2) mental causes, such as overwork; and (3) moral causes, such as worry and depressing emotions. This classification, though unsatisfactory, was of some use in radical treatment; or a purely symptomatic division might be adopted into "flatulent," "acid," and other types. Such a basis, though often used, was apt to lead to unsatisfactory and rule-of-thumb therapeutics. The most scientific plan was to divide cases according to the nature of the disorder of function present. The physiologlcal functions of the stomach were three—(1) secretory, (2) motor, (3) sensory ,and any of these might theoretically be disordered in the direction either of excess or defect. Secretory disorders were hyperchlorhydria and achylia, motor disorders atony and hypertony, and senory affections (theoretical) hyperaesthesia and anaesthesia. These disorders might also occur in various combinations with one another or along with organic disease. The differential diagnosis of these functional affections was then considered in detail.—*British Medical Journal.*

THE TREATMENT OF VENEREAL DISEASE.

In the House of Lords on March 8th, Lord Rhondda, President of the Local Government Board, moved the second reading of the bill to prevent the treatment of venereal disease otherwise than by duly qualified medical practitioners.

Lord Rhondda said that the proposals were largely, if not mainly, based upon the conclusions reached by the Royal Commission. He recalled the opinions expressed by the Commission that 10 per cent. of the population were affected, and that the continued existence of unqualified practitioners was one of the principal hindrances to the eradication of the disease. While not claiming that the bill was a watertight measure, as very possibly its provisions might be evaded by unscrupulous persons, Lord Rhondda thought it would mark a very considerable advance. Many resolutions approving of the steps the Local Government Board was taking had been received from medical societies and from local bodies. The intention was that the bill should be applied to areas in which provision had been made by the local authorities for the gratuitous treatment of the disease. County councils and borough councils had already submitted schemes for districts covering a population in England and Wales of

23½ millions out of a total population of 36 millions approximately, and schemes covering a population of 16 millions had been approved. Therefore in all that area the practical difficulties which the Commission had in mind had been removed. In nearly half the country already there was provision for free diagnosis and treatment by qualified persons. He hoped that the bill would be regarded as of a non-controversial character. No doubt it would press a little hardly on chemists and druggists, but he had every confidence that the pharmaceutical body as a whole would offer no opposition. It would no doubt interfere to some extent with the livelihood of herbalists; but after listening to a deputation very attentively he saw no reason whatever to change his view that the Government ought to stand firmly for the suppression of all unqualified practice. He had approached the question of compulsory notification with a perfectly open mind and had concluded that, without closing the door to some modified form of compulsory notification later on, the action now being taken by local authorities should be given a fair trial; it would be prejudiced if compulsory notification were instituted now. Medical opinion, too, was overwhelmingly against compulsory notification. In conclusion, Lord Rhondda said that if the present bill were passed through the House of Lords, the intention of the Government was that, after it reached the Commons, it should be referred to the same Committee which was now considering the Criminal Law Amendment Bill.

Lord Sydenham said that abundant evidence had been given before the Royal Commission to prove that the treatment of venereal disease by quacks and the resort to quack medicines had been disastrous. The result of quack treatment was that there was delay and the disease became generalized. Unqualified persons, from want of knowledge, would also sometimes diagnose an ailment as the disease where it did not exist, and an immense amount of mental suffering was thus caused. The Commission did not like at the time it reported to recommend legislation for the suppression of quacks, feeling that this ought to come when free and ample treatment was provided for all classes. The bill would be a considerable step in the direction in which they ought to move without delay.

The only other speaker was Lord Gainford—until recently Mr. J. A. Pease—who said that when he was President of the Board of Education his attention was called to the tragic suffering of many children through the wrongdoing of their parents. He believed that this bill would do something to prevent the sins of the fathers descending upon their children, and he gave it support. The bill was then read a second time. On Tuesday the bill was taken in Committee in the Lords. No alterations were made and the proceedings lasted only a few minutes.—*British Medical Journal.*

EXPERIMENTAL PRODUCTION OF CHOLERA.

Sanarelli, (*La Reforma Medica*) refers to a great drawback in our knowledge of the biology of cholera, to wit, our previous inability to produce the disease artificially. The theory is that the vibrio enters the stomach, passes with the aliment into the intestine, in which it multiplies freely and forms a powerful toxin which enters the circulation and causes the picture of cholera. The author showed in newborn rabbits that the vibrio is destroyed in the stomach, so that no living vibrio passes the pylorus. The mode of reaching the intestine is quite different. The bibrio when placed in the rabbit's mouth is absorbed *in situ* into the general circulation and merely elects the intestine as a place to settle, notably at the ileocecal valve, just above or below, in the appendix, etc. The nursing rabbit also voids crtain anaerobes by the intestine which have never passed through the stomach, but like the vibrio enter the intestinal canal by way of the circulation. Experimental cholera in rabbits is virtually a colityphlitis. Sanarelli has, however, produced typical intestinal cholera in nursing rabbits by injecting the vibrio into a vein or beneath the skin; also into a loop of intestine. They do not always multiply at a given point, but pass into the lymph circulation to reappear at a point further down of their own selection. If the mother rabbits have been immunized against cholera all these inoculation experiments give negative results. The serum of newborn rabbits has a slight vibriocidal property which increases so with age that it is impossibel to cause artificial cholera in an adult rabit. The author could find no signs of antagonism or symbiosis between the vibrio and the common intestinal flora, although in the adult animal the latter may confer some protective power. The fact that bacteria taken up in the mouth will reappear after sojourn in the circulation in the region of the ileocecal valve recalls the case of appendicities in man which are consecutive to tonisilitis. The much discussed grippal appendicitis is perhaps of this type. The author has injected coli bacilli into the appendix of adult rabbits after having fed them with a paste of agar containing the vibrio. In twelve hours the rabbit died, after having presented the picture of cholera. Autopsy revealed a severe diffuse enteritis. There were no vibrios in the blood or viscera, but they were always present in the intestine, especially near the valve. Further experiment seemed to show that the colibacillary toxins made it possible for the vibrio to cause a food infection. A culture of living coli bacilli, thrown into a vein, showed an elective action on the intestine and made it possible for the vibrio to proliferate in the latter. A filtrate of a culture of the colon bacillus gave a negative result. In rabbits immunized against the colon bacillus the experiment of feeding with vibrios cultivated on agar, Sanarelli says, gives absolutely negative results—*Medical Record.*

CHRONIC GONORRHEAL URETHRITIS IN THE FEMALE.

L. Bizard and P. Blum (*Presse médicale,* January 22, 1917) believe urethral localization of chronic gonorrhea in the female to be favored by peculiarities in the conformation of the neatus, a markedly lacunar structure, and insufficient treatment during the acute stage. Though inconspicuous, chronic urethral gonorrhea comes next to uterine gonorrhea in frequency. It is met with especially in young girls and nulliparæ, and while tending to remain latent, may show recrudescence as a result of fatigue, repeated coitus, walking or horseback riding, alcoholic indulgence, and menstruation. Though sometimes primary and chronic from the first, it usually occurs in subjects who have already recovered from a primary vulvovaginal goncoccic infection, appearing as a slight greenish yellow oozing upon cotton placed before the neatus. In spite of the brevity of the female urethra, three distinct forms of urethritis may be recognized, viz., those of the canal, the meatal region, and the glandular structures, including Skene's glands. For diagnostic purposes the patient must be examined before micturition and often in the morning upon awakening. The consistency of the urethra should be felt with the finger in the vagina and pressure exerted from behind forwards to express, if possible, a drop of pus from it. Endoscopical examination with a small speculum may show gray, glassy patches of mucosa contrasting with the normal reddish hue elsewhere. Examination for the gonococcus should be carried out repeatedly, preferably in the morning, either a drop of pus or the product obtained by gentle scraping of the membrane with a platinum wire or small blunt edged curette being employed. The treatment consist of massage, irrigations, and applications with a probe. Massage with the finger in the vagina should be mild, especially posteriodly, greater pressure being applied as the meatus is approached. Irrigations may be carried out with Janet's reflux cannula, introduced as far as the vesical neck, or by mere repeated injection of 200 or 300 c. c. of fluid into the bladder. Appropriate solutions include potassium permanganate one in 4,000; mercury oxycyanide, one in 10,000, and copper sulphate, one in 500. Applications with a smooth probe covered tightly with cotton should be made daily, slowly, and gently, to avoid bleeding. The solutions used should be oily, watery solutions preventing the probe from sliding in the canal. Pure ichthyol or a solution of gomenol in oil may be used. Rest should follow the treatments. Internally, diuretics and mineral waters are alone of value. Periurethritis may require the use of a fine pointed galvanocautery or silver nitrate pencil. Strong modifying agents may be injected into Skene's glands.—*New York Medical Journal.*

PERSONAL AND NEWS ITEMS

Since the breaking of diplomatic relations with Germany the membership of the Atlantic Division of the American Red Cross has increased by more than 150,000 members. The total enrollment of this division is now over 310,000, more than one-half of the entire enrollment of the country; and thirty-four new chapters have recently been added.

A $215,000 fund to equip the seven military base hospitals organized in New York City for the American Red Cross was completed on March 30. These hospitals will thus be ready in case of war to serve immediately an army of 300,000 men. In addition to these, the Red Cross is preparing twenty-one other base hospitals throughout the country.

Major Sydney Rowland of the Lister Institute of London is reported to have died in France of cerebrospinal fever on March 6. Major Rowland was engaged in investigating the cause and method of transmission of the disease, which has been very prevalent among the soldiers in the trenches.

Preparations for expert nursing service for an army of 1,000,000 men are being rapidly brought to completion by the American Red Cross. The Red Cross has now enrolled for active service 2,970 nurses and more than 1,000 physicians and surgeons, while Red Cross certificates in elementary hygiene and home care of the sick have been issued to 4,450 women, who will be fitted to act as nurses' aids, making a total nursing personnel of more than 7,000. The organization has also prepared twenty-six base hospitals, each with 500 beds, at a total cost of about $400,000. Twenty of these are completely equipped and ready for service.

Plans have been prepared for a new maternity hospital, to be erected on Longwood avenue, Boston, near the Harvard Medical School. The trustees of the hospital purchased the site about three years ago, and it is expected that the work of construction will be begun next month. The new building will cost about $400,000 and will have twice the capacity of the old building in McLean street.

Dr. Edward W. Ryan, formerly head of the American Hospital in Belgrade, has been requested by the Serbian Government to reorganize the sanitary and relief work north of Salonica. His work will supplement and put on a permanent basis the beginning made by the American Sanitary Commission in fighting the typhus epidemic in Serbia two years ago. The chief ends sought will be sanitation and the providing of a pure water supply for the refugees, and the organization of a war

relief clearing house at Salonica for the distribution of food stuffs and medical supplies.

It is announced that Dr. Hermann M. Biggs, Commissioner of Health of New York State, who has been engaged in investigating the tuberculosis problem among the French armies for the Rockefeller Foundation, has found that the disease has made great inroads among the men in the trenches. He will recommend the immediate institution of relief measures.

Announcement of the completion of the $500,000 fund for the construction of the new St. Luke's Hospital at Tokyo, Japan, was recently made. The Japanese contributed $75,000 of the total sum, and the remainder was raised in the United States. The proposed hospital will replace the present one, which was founded by the Foreign Missionary Society of the Episcopal Church in this country, and under the direction of Dr. Rudolph B. Teusler has achieved a noteworthy position. Dr. Teusler wil lcontinue as director of the new hospital, which will probably be the most complete medical institution in the Far East.

Surgeon-General Sir Benjamin Franklin, K.C.I.E., I.M.S., died suddenly from heart failure on February 17th. He was born in May, 1844, and received his education at University College, London. He took the diploma of M.R.C.S.Eng. in 1867 and that of L.S.A. two years later; in that year he entered the Indian Medical Service. He was civil surgeon at Lucknow from 1878-80, and at Simla from 1881 to 1886. He was surgeon to Lord Elgin, the Viceroy of India, from 1894 to 1899, and had officiated as Inspector-General of Hospitals in Bengal 1897, the North-West Provinces and Dudh 1899, and in the Punjab 1900-01. He was Director-General of the Indian Medical Service and Sanitary Commissioner with the Government of India from December, 1901, to the end of 1905, and acted as British delegate to the International Sanitary Conference in Rome in 1907, and Paris in 1911-12. The honour of C.I.E. was conferred upon him in 1896 and that of K.C.I.E. in 1903.

Dr. Walter H. H. Jessop, the eminent London ophthalmologist, died on 16th February at the age of 64, of pneumonia. He had attained marked distinction in his own specialty.

Colorado has set a new standard in welfare work in industrial camps. Through the influence of the Colorado Fuel & Iron Company the eyes and teeth of school children in its mining camps will be under the care of the company's medical and sanitary experts. A dentist and oculist traveling separately will visit the camps in turn, and it is expected that they will reach each mine about twice a year. In undertaking this work the company will co-operate with its employees and with the public school authorities in the respective communities.

The nineteenth annual meeting of the American Proctological Society will be held in New York City, June 4th and 5th, 1917. An excellent programme has been arranged.

The Medical Council of Ontario has recently passed a resolution placing on record their appreciation of the discovery of Serum Therapy by Dr. (now Sir) James Grant in the County of Carlton General Hospital, Ottawa, in 1861, thus following the Lancet. This may surprise people who believed that the credit was due to Pasteur, Koch and Virchow; but Sir James, in 1863, published his records of three year's research in the London Medical Times and Gazette. He was thus twenty-seven years in advance of anyone. Sir James was born at Inverness in 1831, being descended from the Grants of Corriemony, and in the year following his birth was taken by his parents to Upper Canada, where his father became a doctor. Sir James also took to medicine. He was knighted in 1887 and sat in Parliament (1867-81). His eldest son, Lieut.-Col. J. A. Grant, also a doctor, is now serving with the first Canadian Contingent.

The Annual Meeting of the Alienists and Neurologists will meet under the auspices of the Chicago Medical Society at the Hotel La Salle, Chicago, on 10th, 11th and 12th July, 1917.

There are now about 5,000 invalided Canadian soldiers home for treatment. It is said there are about 15,000 in British hospitals. At the end of March the convalescents numbered 3,913. There were 520 consumptives, and there were 67 insane. The numbers are steadily increasing both here and in Britain.

The Earl of Derby said a short time ago that the British army had lost over 400 doctors in killed and wounded in the battle of the Somme alone, and that the army was much in need of medical men.

At the annual meeting of the Women's College Hospital and Dispensary it was decided to supply the linen for the twenty beds that will be added when the extension to the hospital on Rusholme Road is completed. Plans were also made for a busy summer and autumn if all is carried through that was outlined. The officers for the year were unanimously re-elected for another term—President, Mrs. E. A. Kantel; Rec. Sec., Mrs. W. H. Baker; Cor. Ses., Mrs. J. G. Marshall; Treasurer, Mrs. J L. Trethewey.

Dr. G. R. Reid, 192 Bloor street west, has given up his practice and enlisted in a Highland regiment, recruiting at Kingston. Dr. Reid has been practising in Toronto during the past eight years, and is well known as an X-ray expert. He was born in Kingston, where his parents still reside, and was graduated in medicine from Queen's University.

Brant House at Burlington Beach has been taken over by the Military Hospitals Commission for use as a convalescent hospital, and will

be set aside primarily for Hamilton soldiers, S. A. Armstrong, a director of the Commission, stated recently. Brant Hospital will accommodate acout 300 men, and it is expected that it will be pretty well filled by the summer. Expansion in the accommodation at the Quebec discharge depot was undertaken early this week, when the leading officials of the Commission visited the ancient capital.

Lieut.-Col. J. A. Roberts, of Toronto, commanding the Connaught Hospital at Cliveden, formerly in the Mediterranean service, will now take command of a new hospital at Basingstoke, which will ultimately have 2,000 beds.

Lieut.-Col. W. L. Watt, of Winnipeg, a D.M.S. of the London area, will go to Cliveden and Lieut.-Col. J. McComb will success him. Lieut. Col. McComb held this position previously, but resigned as a protest to Col. Bruce's report.

After serving with the Belgian army in Flanders since the first month of the war, Dr. Frederic Nicholai, son of the general director of the Department of Sciences and Arts, of Belgium, has returned to Toronto. Dr. Nicholai served with the motor transport section of the Belgian army until March, 1916, when he went to Shorncliffe and joined the Canadian Army Service Corps. His health failed, and for a time he was under treatment in an English hospital. He has not heard of his family, who were in Brussels when war was declared.

Lieut. J. Spence Reid, B.A., son of Dr. J. B. Reid, of Tillsonburg, has been mentioned in despatches for conspicuous gallantry.

The Russian Provisional Government has decided to abolish the death penalty, says a Reuter despatch from Petrograd recently. Penal servitude for life or for a term of years will be substituted for the death penalty in cases where such a penalty is prescribed by the penal code or by military law.

Six hospital ships have been torpedoed or mined by the Central Powers since the beginning of the war. Thomas MacNamara, Financial Secretary of the Admiralty, stated in the Common recently. In consequence 247 lives had been lost and 73 persons injured.

A woman has been discovered in New York City who had typhoid fever 49 years ago, and is still a carrier of the germs. Her son is thought to have been recently infected by her. The woman is now 76 years of age, and is the oldest typhoid fever carrier known.

Hon. Robert Rogers, Minister of Public Works, has cabled to Sir William Hearst, Premier of Ontario, congratulations regarding the magnificent hospital organization at Orpington. He had visited the hospital and found it second to none in modern appliances, cleanliness and neatness. He added that every additional bed will be required.

In an atempt to reduce the number of days of treatment given free to patients committed to the Kitchener-Waterloo Hospital by the city authorities, Mayor Gross adopted the plan of specifying the number of days on the commitment forms. The hospital board objected to this method and Mayor Gross has finally been notified that no further "specified time" commitments would be accepted by the hospital authorities.

A Canadian Army Dental Corps has now been definitely organized under Col. J. A. Armstrong, with 250 officers and 500 of other ranks. The headquarters of the new corps will be London, England. A disease hitherto unknown to dentists is now being treated by them. It is termed trench mouth, and it is a product of camp life, and the subject of special research work.

Dr. N. D. Kyle, who has had much experience with anaesthetics, states that chloroform is as safe as ether, especially in army surgery. He speaks highly of stovaine as a spinal anaesthetic.

It is rumored that Dr. Hastings, M. O. H. for Toronto, will discontinue the plan of half time doctors and dentists in the health work of the public schools.

On 10th April the Council and the Board of Trade and many of the leading citizens of Penetanguishene assembled at a banquet held at the Georgian Bay House to say farewell to Drs. P. H. Spohn and A. H. Spohn. The former, after 48 years of active service in the medical profession, is retiring and intends taking up his residence in Toronto within a few weeks. His son, Dr. A. H. Spohn, who has been associated with him for 11 years, leaves for New York, where he intends specializing in children's diseases. A complete outfitted club bag was presented to Dr. Howard, and a purse of gold to the senior doctor.

Several physicians of London, Ontario, were fined recently for infringing the Temperance Act by issuing too many orders for alcoholic stimulants.

It has been stated that Col. F. W. Marlow may be given some important position oversease in a short time in the C.A.M.C. No one merits it more than Colonel Marlow.

Dr. James K. Newcombe died in England, 19th March. He lived and practised in Toronto many years ago. He graduated from Victoria University in 1860.

Col. George Rennie, M.D., of Hamilton, who has been overseas for some time, has been appointed Medical Director at Shorncliffe.

Col. Shillington, of Ottawa, has been given the command of Kitchener Hospital at Cliveden.

Col. Perry G. Goldsmith, Toronto, serving overseas, has been made president of the Officers' Standing Medical Board.

Dr. R. D. Rankin and R. H. Turnbull, both captains, have retired from the Army Medical Service on account of ill-health.

Dr. J. O. Orr, who has been for many years the general manager of the Toronto Exhibition, was elected a life member of that Association.

Dr. Benjamin Hawke was a passenger on the Laconia, which was torpedoed, but escaped. He formerly practised in Toronto.

Col. G. L. F. Foster, M.D., has been appointed Director of Medical Services in England, with rank of Surgeon-General.

Col. J. A. Roberts, formerly in charge of the University of Toronto Hospital at Saloniki, is now in command of the Hospital at Cliveden. Col. W. B. Hendry has succeeded Col. Roberts at Saloniki.

Col. A. E. Ross, M.D., M.P.P., of Kingston, has been made Director of Medical Services with the Canadian forces in France.

Surgeon-General Jones will be in Canada for some time taking charge of military medical affairs. He will be especially employed as a medical examiner.

Col. J. T. Fotherham will arrive in Toronto at an early date, but it is not yet known what special duties will be assigned to him.

It is reliably stated that Dr. Beland, former Postmaster-General of Canada, for two years has been confined in a room worse than any prison cell. This sounds well for the "culture" of which the Germans made such a boast.

At 123 Isabella street, on Thursday, April 5, Catharine Sophia, widow of the late George Pringle, M.D.

Mr. J. A. Vanderburgh, a third year medical student, and son of Dr. J. F. Vanderburgh, of Meritton, Ont., died 15th April.

A copy of Grace Hospital Bulletin has come to hand. This hospital does credit to Detroit, which has always had a brilliant group of medical scientists and practitioners. The articles in the issue for April are all excellent.

The United States Department of Agriculture announces a successful vaccine against anthrax. The animal is given on one side a dose of ten c. c. of antianthrax serum and immediately afterwards an injection on the other side of one c. c. of spore vaccine. This confers immunity.

The Red Cross work is going ahead in the United States by leaps and bounds. The various cities are raising large sums. Doctors and nurses are volunteering in large numbers and hospitals everywhere are offering their facilities for military purposes.

The College of Physicians and Surgeons, New York, has received from Mrs. Clara L. McMurtry, in memory of her son, Dr. Charles Wood McMurtry, formerly an instructor in the college, the entire furnishings of Dr. McMurtry's personal library, valued at $7,000. There has also

been received from Professor Frederic S. Lee about 600 volumes from his personal library, valued at $3,000.

The American Red Cross Society announces the organization of a national supply service in the principal cities of the United States which will have charge of the forwarding and distributing of all gifts and comforts for American troops and American military hospitals.

Dr. S. S. Goldwater is chairman of a committee on hospitals appointed by Mayor Mitchell, of New York, for the purpose of organizing for national defense the city's hospital and medical facilities. Preliminary steps have already been taken to mobilize the resources of all the municipal hospitals.

A committee composed of one hundred representative citizens of the State of Massachusetts is being organized to co-operate with the Harvard Commission on Infantile Paralysis, the State Board of Health, local health boards, and physicians generally, in a State wide campaign against infantile paralysis. This committee will endeavor to raise $150,000 to carry on the work.

During the year 1916 there were 167 cases of typhoid fever among the troops of the Canadian Expeditionary Forces. This is remarkable, and due very largely to innoculation. There are about 450,000 men in the Canadian force. In the Spanish-American war there were 20,000 cases of typhoid fever among 107,000 soldiers.

Dr. Thomas J. Bourque, of Richibucto, New Brunswick, has been made a Senator of the Federal Parliament at Ottawa.

During the past the past year there were treated in the Montreal General Hospital 8,520 cases. The death rate was 3.5 per cent.

The Manitoba Government has been asked for a grant of $50,000 for an addition to the Winnipeg hospital for the care of nervous and temporarily insane patients.

In Lethbridge, Alta., during 1916 there were 125 cases of typhoid fever, of which 97 arose in the city.

The Vancouver General Hospital for 1916 cared for 8,000 patients. The daily cost was $2.01, and there was a deficit of $55,301. The death rate was 5.6 per cent., but 101 deaths occurred within 48 hours after admission.

Mr. Robert Bickerdike, M.P., of Montreal, has again introduced his bill to do away with capital punishment. He may not carry the House with him, yet he is right. There are better uses to put murderers to than hanging them. Make them work to keep their families or dependents, and if they have none, then work for the state. Canada should take a leaf out of the book of New Russia in this matter.

The cost of grain and the trend towards temperance in Britain has

reduced the amount of absolute alcohol from 92,000,000 in 1913 to 73,000,000 in 1916, and convictions in 40 districts from 159,000 to 77,000.

OBITUARY

SIMON JOHN TUNSTALL, M.D., B.A.

Dr. Tunstall died in Vancouver, B.C. He was born in Ste. Anne de Bellevue, Quebec. He graduated from the University of McGill in 1875. He practised for a short time at Papineauville, Que., then in Kamloops, B.C. In 1892 he settled in Vancouver.

FRANCIS J. HOGAN, M.D.

Dr. F. J. Hogan died of pneumonia at his home in St. John, N.B. He graduated in Arts at the University of St. Francis Xavier, and in Medicine from Harvard in 1908. He enjoyed a large practice and took a keen interest in medical societies.

C. T. ALLEN, M.D.

Dr. Allen, of Dorchester, New Brunswick, died suddenly at the age of thirty-four years. He leaves a widow and three children. He was a very popular practioner.

JOSEPH ANDREWS, M.D.

Dr. Andrews died in St. John, New Brunswick. He graduated from Harvard. He was in his 74th year.

EDGAR D. HARRISON, M.D.

Dr. Harrison died at Madoc, Ontario. He was born in Glenora, Ontario, in 1866. He graduated from Queen's University in 1891. He had a large practice, and was much esteemed.

A. D. McCRIMMON, M.D.

Dr. McCrimmon died at Ripley, Ontario, where he carried on his practicef or a long time. He was 82 years of age, was born in Glengarry County, and graduated from McGill in 1869. His wife and seven children survive.

CHARLES AULT, M.D.

Dr. Ault died in Montreal. He was born at Aultsville, Ontario, in 1833, and graduated from McGill in 1855. He practised for some time in Richmond, Quebec. In later years he gave all his time to business.

JOHN L. DAVISON, M.D., M.R.C.S.

Born in 1853, Dr. Davison was the youngest son of John and Jane Davison, who came to Canada about 1815 from County Antrim, Ireland, and settled at Odessa, Frontenac county. As a buy he attended the public school at Yarker; afterwards he studied at the Newburgh Grammar School. He was a teacher in the Provincial Model School, Toronto, for ten years, during which time he graduated in arts in 1880 in the University of Toronto. He then studied medicine in Trinity Medical College, where he graduated in 1884, afterwards pursuing post-graduate studies in Edinburgh and London, where he took M.R.C.S. qualifications.

Returning to Canada, Dr. Davison began practice in Toronto, and from the beginning his native ability, high accomplishments, shrewd clinical judgment, broad common sense, transparent honesty and kindliness insured his rapid rise to a foremoest position in his calling. In 1885 he was appointed Professor of Pathology in the Women's Medical College, and the following year Professor of Materia Medica and Therapeutics in Trinity Medical College. In academic circles he was considered a brilliant lecturer. Appointed visiting phyisician to the Toronto General Hospital in 1887, he relinquished this post in 1901 in order to facilitate what was considered would be a satisfactory reorganization of the staff of the hospital, and was appointed to the consulting staff. On the federation of Trinity with the University of Toronto in 1902 he became Professor of Clinical Medicine in the latter institution. For many years he was editor of The Canada Lancet.

On the organization of the Imperial Life Assurance Company he wasappointed Medical Referee; later also he became a Consulting Referee to the Manufacturers' Life. He was an ideal family physician, of wide knowledge, talented, kind, attractive in manner and presence, absolutely and always a gentleman.

NEWTON N. COLTER, M.D.

Dr. Newton N. Colter, who retired on April 1 from the position of Postoffice Inspector for New Brunswick, died on 8th April at his home

in Fredericton of pneumonia, after two days' illness. He was seventy-one years old. In 1891 Dr. Colter was elected M.P. for Carleton County as a Liberal, and re-elected at a bye-election. He was defeated in 1896 by the late F. H. Hale.

THOMAS SPARKS, M.D.

Dr. Thomas Sparks, one of St. Marys most prominent residents, died at his home there April 10th, after a lingering illness. He formerly practised medicine at Lakeside, Ont., where he built up a large practice. He moved to town about twenty-five years ago, where he continued his practice until about five years ago, since which time he has lived retired. His wife and the following family survive: Dr. G. Lindsay Sparks of London, who has enlisted with the Medical Corps for overseas service; Mrs. Prof. John Baird of Worcester University, Boston;; Mrs. F. McPherson, Vamillon; Miss Isabel of Toronto, and Miss Mamie, at home.

DRS. HAMILL AND STEWART.

Two physicians, Dr. Hamill, of Assiniboia, and Dr. Stewart, recently of the 249th Battalion, died at Weyburn within two hours of each other under circumstances which point strongly to poisoning. Local medical men were called to the Royal Hotel at noon on Saturday, where Dr. Hamill was found in a precarious condition. He lived only a short time afterwards. Two hours later a similar call was made for Dr. Stewart, and he also died suddenly.

Dr. Charlton, Provincial Bacteriologist, was brought down from Regina, but as the body of Dr. Hamill had been embalmed he could do nothing in his case. He, however, secured the stomach of Dr. Stewart and took it to Regina for examination. Dr. Hamill, who was practising at Assiniboia, brought a patient into Weyburn last week. He was about 32 years of age and leaves a widow. Dr. Stewart, who formerly practised at East End, left there some time ago to join the 249th Battalion as medical officer, but a short time ago severed his connection with the battalion.

BOOK REVIEWS

INTERNATIONAL CLINICS.

A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Obstetrics, Gyneacology, Orthopaedics, Pathology, Dermatology, Ophthalmology, Hygiene, and other topics of interest to students and practioners. Edited by H. R. M. Landis, M.D., and C. H. Mayo, M.D. Vol. I, of 7th Series, 1917. Philadelphia and London: J. B. Lippincott. Canada: Mr. C. A. Roberts, Montreal. Price per year, $9.

This volume maintains the standard of all that have preceded it, and sets a high model for all that are to follow. It contains articles on Treatment, Medicine, Dermatology, Psychiatry, Public Health, and Surgery. The volume is well illustrated. We can heartily recommend this volume. There is a carefully prepared summary of the progress of medicine during the year 1916.

EMERGENCY SURGERY.

By John W. Sluss, A.M., M.D., F.A.C.S., Associate Professor of Surgery, Indiana University School of Medicine; Ex-Superintendent, Indianapolis City Hospital; Surgeon to the City Hospital. Fourth Edition, revised and enlarged, with 685 illustrations, some of which are printed in colors. Philadelphia: P. Blakiston's Son & Company, 1012 Walnut Street. Price, in limp leather, $4 net.

There are few books that afford the reviewer more pleasure to read and recommend than this work by Dr. Sluss. It is a superior compend of emergency surgery, and such a book as should be in the possession of every practitioner. Here one finds in brief and clear form what should be done in those cases that call for prompt action. It is a relief to the practitioner to find that in such cases he did what such a work as this advises as the correct procedure.

DREAMS.

What They Are and What They Mean, by J. W. Wickwar, member of the Norbury Literary Society. Published by J. W. Wickwar, 81 Kilmartin Avenue, Norbury, London, E.W. Price, 1 shilling.

The subject of dreams is both deeply interesting and difficult of solution. Many writers have written books on them together with their interpretations and causation, and each has his own theory to expound. Mr. Wickwar's book deals with almost all kinds of dreams, and all this in a masterly manner and with lucidity. A section on "The New Meaning of Dreams" is added, and we are pleased to read how ably the writer has explained the very common but puzzling question of "What can the dreams mean?" It is interesting from cover to cover, and does not contain the "piffle" usually to be found in most books on the subject. Our readers interested in the psychical problem will find it of great help, and we commend it to them.

TRANSACTIONS UROLOGICAL ASSOCIATION.

Transactions of the American Urological Association. Fifteenth Annual Meeting at St. Louis, Missouri, April 17, 18 and 19, 1916. Publication Committee: Richard F. O'Neil, George G. Smith, Edward L. Young, jr. Printed for the Association at Riverdale Press, Brookline, Mass., 1917.

Few associations have sprung more rapidly into a higher standing

than this one, and one reason is apparent. It has always published its transactions in an attractive form, and well edited. Any association of a learned character that hopes to attain to an influential position publishes it proceedings. There are very few societies, indeed, if there be any, that can boast of better work done than this one; and this good work is embodied in an enduring form. The articles, the illustrations, the paper, the press work, and the binding are all most creditable to the association and the publication committee.

MISCELLANEOUS

PRESENTATION OF SOME RARE BOOKS AND A HISTORIC CANE, 3RD APRIL, 1917.

By John Ferguson, M.D., President of the Academy of Medicine.

On this occasion I wish to present to the Toronto Academy of Medicine four very rare and interesting books, and a cane of unique historical value.

1. The first book is "An Essay on Diseases Incidental to Europeans in Hot Climates, with the Method of Preventing their Fatal Consequences," by James Lind, M.D., F.R.S., Ed., Fellow of the Royal Society of Medicine at Paris, and of the Royal College of Physicians at Edinburgh and Copenhagen, late physician to the Royal Hospital at Haslar, near Portsmouth; to which is added An Appendix Concerning Intermittent Fevers, and A Simple and Easy Way to Render Sea Water Fresh, and to Prevent a Scarcity of Provisions in Long Voyages at Sea. The Fourth Edition, London. Printed for J. Murray, 32 Fleet Street, 1788." This is a most interesting volume, and one of the very early ones on tropical diseases. The author has an excellent style, and his descriptions of the diseases mentioned are very clear. He gives an account of the diseases met with in the East and West Indies, in Africa, in North America, etc. It is worthy of note how he reasons about the causation, and sets aside very logically most of the causes that had been advanced. He does not, however, mention a *contagium vivum*, nor the spread by insects.

2. The second volume bears this title: "Cheselden's Plates of the Human Bones Correctly Reduced from the Original Figures; Accompanied with Concise Explanations for the Use of Students. Edinburgh: Printed for W. McWilliam and P. Brown, Nicolson street; Ogles, Duncan, and Cochran; and T. Underwood, London, 1816." These plates, thirteen in number and beautiful copper plate reproductions of the originals by

Cheselden. As a specimen of the art in book-making of one hundred years ago it is quite instructive. We think if students of to-day had this book for their text they would regard themselves as in luck on account of its simplicity and brevity.

3. The third one is on chemistry and once belonged to Dr. W. T. Stuart, of Toronto, and his autograph is on a front page. The book is described as "Familiar Letters on Chemistry and Its Relation to Commerce, Physiology and Agriculture, by Justus Liebig, M.D., Ph.D., F.R.S., Professor of Chemistry in the University of Giessen. Edited by John Gardner, M.D., member of the Chemical Society. Third Edition. London: Printed for Taylor and Walton, Upper Gower street, 1845." These letters read like good fiction, because they are the work of a literary artist, who at the same time was a close observer of natural phenomena. In speaking of the coal deposits found in England he says: "May this expectation be realized! and may her excellent population be thus redeemed from poverty and misery!" This is quite different from what the German scientist of to-day would wish for the people of England.

4. The fourth book contains two parts. The first is "Phyhiological Essays Containing an Inquiry into the Causes which Promote the Circulation of the Fluids in the very Small Vessels of Animals; and Observations on the Sensibility and Irritability of the Parts of Men, by Robert Whytt, M.D., F.R.S., F.R.C.P., and Professor of Medicine in the University of Edinburgh, 1755." The second part of the book is "An Essay on Dropsy and its Different Species, by Donald Munro, M.D. London: Printed for D. Wilson, and T. Durham, at Plato's Head, in the Strand, 1755." Both of these parts are well worth studying. It is interesting what clear and advanced views Dr. Whytt had on the circulation through the capillaries; and Dr. Munro on the varieties of dropsy and their treatment.

These four books will prove attractive additions to the list of rare volumes now in the Library of the Academy.

The cane which I present was the gift of King George IV. in 1830 to Benjamin Collins Brodie. It passed into the possession of his nephew, Mr. James A. Brodie, a druggist, who lived and died in Toronto. Mr. Brodie stated that the cane originally had an ivory head, that the present head had been put on by some one, but that the ebony shaft was genuine. He gave the cane to me, and I have pleasure in depositing it among the rare books and portraits now in the possession of the Academy. It will prove one more attractive addition to our medical archives. A Latin writer once said *ex rebus antiquis eruditio oriatur*, "from ancient things may culture come."

ONTARIO HEALTH OFFICERS' ASSOCIATION.

Sixth Annual Conference at Toronto, May 29th and 30th, 1917.

TUESDAY—10.00 A.M.

Registration of members.

11.00 A.M.

"How to Control Venereal Disease"—Gordon Bates, Toronto.

Discussion opened by Drs. C. H. Hair, C. E. Trow, B. P. Watson.

This important subject, as well as all others upon the programme, is open for the free discussion of all members and visitors.

(Symposium on "Infantile Paralysis")

"Poliomyelities"—H. W. Hill, London.

"Clinical Studies of Infantile Paralysis"—W. J. Durocher, Windsor; G. R. Cruickshank, Windsor.

"Some Clinical Forms"—F. T. Green, Stoney Creek.

"The Health Officer and the Immigrant"—J. D. Page, Quebec.

Appointment of Nomination Committee.

Committee on Papers and Arrangements.

2.00 P.M.

President's Address—A. J. Macauley, Brockville.

"Safeguarding the Health of Infants and Young Children"—Prof. C. A. Winslow, Yale Medical School.

Address of Welcome—T. L. Church, Mayor, Toronto.

Address—Hon. W. D. MacPherson, K.C., Provincial Secretary.

"The Value of Public Health Nursing in the Control of Infant Mortality"—Chas. J. Hastings, Toronto.

"The Public Health Nurse"—J. F. Hanley, Almonte; Martin Powers, Rockland.

"The Adrenals"—F. D. Canfield, Ingersoll.

"Rest and Sleep as Factors in Disease Prevention"—Adam H. Wright, Toronto.

Note.—On account of their large number,papers are strictly limited to 10 minutes; discussion to 5 minutes.

WEDNESDAY—10.00 A.M.

General Session—Lecture Room.

"Sex Hygiene"—N. W. Woods, Bayfield.

"Mendelism"—J. A. Roberts, Hamilton.

"Mental Defectives"—Helen MacMurchy, Toronto.

"Tuberculosis—How Handled in London"—D. R. Craig, Queen Alexandria Sanitorium.

"Tuberculosis—Relation of M. O. H. Thereto"—A. R. Hanks, Blenheim.

"The Public School as a Place of Instruction in Practical Sanitation"—J. E. Jenner, Kingsville.

"Public School, Cleanliness and Architecture in Relation to Public Health"—M. E. Bruce Cooke, Picton.

Section on Public Administration —North Lecture Room.

"Difficulties of a Municipal Medical Officer of Health"—J. H. Bull, Holland Centre; D. D. Macdonald, Alexandria.

"Difficulties of a Rural Medical Officer of Health"—D. A. Kidd, Trenton; F. H. Mitchell, Delaware Township.

"How to Secure the Support of the Taxpayer in Public Health"—Adam Thomson, Waterloo Township, Galt.

"Trying to Educate the Public"—H. Logan, Niagara Falls.

"Is the Public Health Act Getting Results?"—A. Nichol, Sebringville.

"Relationship of the District Officer of Health to the Medical Officer of Health and the Municipality"—G. F. Richardson, Sprucedale.

"Public Health to the Average Town, Ways and Means of Conducting"—C. A. Patterson, Forest.

"Practical Points in Enforcement of the Regulations and Dfficulties of the Medical Officer of Health"—H. Ross, Clifford.

"Some Experiences of a Rural Medical Officer of Health in Enforcing the Public Health Act"—W. Doan, Harrietsville.

"Some Rambling Thoughts of a Medical Officer of Health"—F. King, St. Catharines.

2.00 P.M.

Section on Epidemiology—North Lecture Room.

Election of Officers.

"Measles"—"Complications and Treatment of"—"Scarlet Fever"—"Observations On"—J. C. Hutchinson, Haldimand Township.

"Diphtheria and Diphtheria Carriers"—A. H. Speers, Burlington.

"True Variola and the Varioloid Forms of Smallpox"—J. P. Boyle, Casselman.

"Disinfection Following Communicable Diseases"—R. K. Anderson, Milton.

"Disinfection, Effective Methods of and Reasons Therefor"—James Campbell, Tottenham.

"Can Quarantine Regulations be Improved?"—V. A. Hart, Barrie.

"Difficulties in Prevention and Control of Communicable Diseases in Towns"—J. H. Howell, Welland.

"Public Health and Communicable Diseases"—W. R. Mason, Parry Sound.

"Communicable Diseases in Rural Municipalities"—Jas. McC. Potts, Stirling.

"Meningitis"—"Influenzal Type"—C. Morrow, Metcalfe.

"Typhoid Fever, in Rural Communities"—S. F. Miller, S. Woodslee.

The Question Drawer—Members desiring information upon any public health subject, the Act or Regulations, will please forward questions in writing by May 20th.—J. W. S. McCullough, J. G. Fitzgerald.

Delegates will please purchase one-way tickets and secure Standard Certificates at place of starting. This is important, as the reduction in return fare will depend upon the number of certificates presented.

The Eastern Canadian Passenger Association, covering points east of Port Arthur, has agreed to give reduced rate under certificate plan for this meeting, good going May ..... to June ....., returning June ..... Special agent to validate tickets will be present both days of meeting. Every Medical Officer of Health delegate will please register and deposite certificate on arrival.

Section 42 of the Public Health Act requires that every Medical Officer of Health in the Province shall attend the meeting.

The Ontario Medical Association meets in the Mining Building, University of Toronto, beginning on the afternoon of Wednesday, May 30th.

A. J. MACAULEY,
President.
J. W. S. MCCULLOUGH,
Secretary.

THE ACADEMY OF MEDICINE, TORONTO.

The Academy of Medicine has closed its session. The reports of all the sections show substantial progress. The library department of the Academy had the best year in its history. The Academy has assets now of over $50,000 and no liabilities.

The officers for the ensuing year are: President, Dr. D. J. Gibb Wishart; vice-president, Dr. A. Primrose; hon. secretary, Dr. J. H. Elliott; hon, treasurer, Dr. J. H. McConnell; immediate past president, Dr. John Ferguson; chairman of the Medical Section, Dr. G. W. Ross; of the Surgical Section, Dr. W. A. Cerswell; of the Ophthalmological Section, Dr. F. C. Trebilcock; of the Paediatric Section, Dr. George Smith; of Pathology, Dr. F. W. Rolph; of State Medicine, Dr. Gordon Bates. The elected members of the Council are: Drs. B. P. Watson, W. Goldie, W. A. Young, J. G. Fitzgerald, H. B. Anderson, A. H. Perfect, C. P. Lusk, and F. N. G. Starr.

Apart from the strictly professional work of the Academy, it ren-

dered great services to the profession through the efforts it put forth in securing proper consideration for the profession in the matter of the Workmen's Compensation Act, the subject of venereal diseases, and before the Medical Commissioner. In these directions the Academy rendered excellent services. There is a bright future ahead of it, and all bespeak for Dr. Wishart a successful year.

INFECTIOUS DISEASES.

During the month of March there were two deaths in Toronto from measles as compared with five in March, 1916, although there were 714 cases of measles during the month and only 184 cases during the month of March a year ago. Fully sixty per cent. of the cases in the present epidemic of measles are what is known as the "German" variety.

Deaths from communicable diseases reported during the month were as follows:

	Mar. 1917	Mar. 1916	Feb. 1917
Smallpox	0	0	0
Scarlet fever	1	3	1
Diphtheria	12	8	1
Measles	2	5	0
Whooping cough	3	4	0
Typhoid fever	0	2	2
Tuberculosis	26	40	36
Spinal meningitis	1	4	2

Comunicable diseases reported to the Department of Health were as follows:

	Mar. 1917	Mar. 1916	Feb. 1917
Diphtheria	99	95	102
Diphtheria	4	4	5
Typhoid	5	3	4
Scarlet fever	38	87	42
Measles	714	184	332
Smallpox	4	0	2
Tuberculosis	101	40	77
Chickenpox	78	34	63
Whooping cough	30	53	4
Mumps	53	4	26
Spinal meningitis	1	3	3
Infantile paralysis	0	0	1
Erysipelas	11	6	5

THE INFLUENCE OF WAR ON SEX.

The theory—or superstition—that there are more male babies born in wartime than during times of peace may be the belief of many people, but it does not seem to hold good in Toronto, despite the fact that Canada is at war. True it is that the proportion for 1915 and 1916 shows a slight increase over the preceding years. But the year 1909 shows exactly the same proportion as the year 1915, while in the year 1905, the proportion is larger than either 1915 or 1916.

The figures for Toronto for the last twelve years are as follows:—

Year.	Males.	Females.	No. of Males per 1,000 Females.
1916	6,535	5,963	1,096
1915	6,678	6,128	1,090
1914	7,188	6,761	1,063
1913	7,043	6,679	1,055
1912	5,616	5,344	1,051
1911	5,229	4,817	1,086
1010	4,381	4,608	957
1909	4,093	3,755	1,090
1908	4,132	3,806	1,086
1907	3,429	3,251	1,055
1906	3,079	2,906	1,060
1905	3,082	2,744	1,123

Although there are more boys than girls born as a rule, it seems to be true, nevertheless, that the female population of a country is greater, showing that more girl babies survive, and women as a rule live longer than men.

A despatch from London gives figures to show that since the war broke out there was an increase in the number of male children born, but the proportion given is not even as high on the average as in Toronto. The highest ratio for any quarter in 1916, in England, was 1,051.

MEDICAL PREPARATIONS

PREPARE THE BABIES FOR HOT WEATHER.

During the month of June it is not a bad plan for the physician to take mental "stock" of the babies under his care, especially such as are

bottle-fed, with the general idea of recommending such treatment as will tone up and vitalize those whose nutrition may be below par, so that they may enter thetrying summer months in the best possible condition to ward off or withstand the depressing influence of extreme heat or the prostrating effects of the diarrheal disorders of the heated term.

Careful attention to feeding is, of course, a sine qua non and the details of the infant's nourishment should be carefully investigated and regulated. But this is not all. Many bottle-fed babies are below standard from a hematologic standpoint. The marasmic anemic baby deserves special attention in the way of building up and restoring a circulating fluid whic his deficient in red cells and hemoglobin. In the entire Materia Medica there can be found no direct hematic quite as suitable for infants and young children as Pepto-Mangan (Gude). In addition to its distinctly pleasant taste, this hemic tonic is entirely devoid of irritant properties and never disturbs the digestion of the most feeble infant. Being free from astringent action, it does not induce constipation. A few weeks' treatment with appropriate doses of Pepto-Mangan very frequently establishes sufficient resisting power to enable the baby to pass through th hot summer without serious trouble, gastro-intestinal or otherwise.

THE ELEMENT OF UNCERTAINTY.

In the treatment of disease the element of uncertainty with special reference to individual idiosyncrasy, must always be considered, but the element of uncertainty as to the therapeutic action of a remedy can be eliminated providing ordinary care is exercised in selecting drugs or rmedies which are not inert and have proven their efficiency.

For over 50 years, Hayden's Viburnum Compound has maintained its reputation as therapeutically efficient in the treatment of Dysmenorrhea, Menorrhagia, Post-partum Pains, Puerperal Convulsions and in pain resulting from spasmodic contraction.

It is a well known anti-spasmodic and as it contains no narcotics nor habit forming drugs, no disagreeable after effects is the result of its administration.

Given in teaspoonful doses, administered in boiling water, it will not disappoint you, thus eliminating the element of uncertainty, and as it is not a secret remedy, but a carefully compounded and ethical pharmaceutical, it will render most satisfactory results in those conditions wherein especially indicated.