

THE
Dominion Medical Monthly
... AND ...
Ontario • Medical • Journal

Vol. X.

TORONTO APRIL, 1898.

No. 4.

Original Articles.

No paper published or to be published elsewhere as original, will be accepted in this department.

A FEW THOUGHTS IN REGARD TO SYPHILIS.*

By DR. W. C. HEGGIE, Toronto.

It is with not a little diffidence that I write this paper on a subject so fruitful for discussion ; but it is discussion that is invited, and out of which we may glean new light. It is not my intention to enter into the symptoms, diagnosis, etc., of syphilis, but only to suggest a few ideas in regard to this disease which has been such a curse to humanity and a bug-bear to physicians. It is now several years since this subject became of much interest to me as a study.

In 1885 a patient came to me for treatment with a typical hard chancre, contracted from an undoubtedly syphilitic woman. In six days the sore was healed, but he continued treatment for one year, though from the first month of treatment until the present time he has never had any specific symptoms. He is married, has three healthy children and is a very happy man. One or two cases of that favorable nature made me slightly conceited with my ideas of treatment, but my pride was soon to receive a fall. In 1896 I had a patient with a history of continuous syphilis for two years, he came to me with a large sloughing ulcer, involving two-thirds of the front of right thigh. In spite of treatment his improvement was not satisfactory to me, so I advised him to consult some of the best syphilologists of New York. He did so, but died very soon afterwards. This man, before contracting syphilis, was of a strong robust constitution. His progenitors were clean and with a fine record morally and physically. On inquiry into the history of my first case I found a history of syphilis in his father's parents. In the other benign cases there were histories of previous syphilis in the families. This made me think there might be a lesson learned from these cases, and I watched my next cases with the utmost care, to try and discover if there was not a cause, other than the virulence of the germ, why one person should have a benign case and another a malignant. As a result, to-day I firmly believe that the

*Read by Title at the Ontario Medical Association.

main cause of this difference is in the soil in which the disease is transplanted; and, further, that this is not fertile or fertile, according as immunity has been transmitted or not. Instead of believing fondly in the old dogma, that children are bound to inherit this disease from one or other of their parents, it begins to look to me that many have transmitted to them a resistance to the disease, and that the grandchildren of syphilitics and the children of cured syphilitics are less liable to contract the disease than the offspring of clean ancestors, and if contracted the disease generally runs a benign course.

Before going further, I wish to make myself clear in regard to heredity. Heredity has been a vague term used by the laity, and even professional men, as "transmission from parent to offspring." Used in this way it has been the cause of endless and senseless bickerings. Is it not more scientific to define heredity a little more closely and more exactly, as "transmission from parent to offspring only through the unimpregnated ovum or spermatozoa?" Heredity from the male can only come by way of the spermatozoa. It is equally just that heredity from the female is only through the ovum. After an impregnated ovum has reached the uterus and is undergoing development we are dealing with a new life, and anything then transmitted is contagion pure and simple, just the same as though the mother inoculated the same child after its birth. It seems to me the only fair way of dealing with the question, and it would simplify discussion very much. That we inherit any disease is doubtful, though we may and probably do inherit tendencies. Therefore I do not believe that there is any hereditary syphilis, not that children are not born with syphilis, but that children so born contract the disease from the maternal parts in the usual way, by contact, or through the maternal circulation.

The histories (few and far between) of children born with syphilis, the mother not being a syphilitic, should be looked on with grave suspicion. I have yet to see a case of a child born with syphilis inoculating its own mother, and the careful observers who have examined mothers of syphilitic children without finding any trace of the disease do not prove that they have not the disease. That the secretions from a male during coition may possibly induce syphilis in the female is true, but it is an improbable and unreasonable thing to believe that the spermatozoa itself would inoculate an ovum with syphilis. That children are born of syphilitic parentage who never exhibit any signs of syphilis is a fact; that children are born of similar parentage exhibiting symptoms of impure blood and new tissue formation and yet have not syphilis, is undoubtedly true. Syphilis is not always in an active state and may apparently lie inert for months, only to again break forth in all its virulence. I have mentioned the fact that some people seem to have immunity transmitted to them. I could mention several histories, but the following will do as an example: Mr. G., age 35, has always been healthy and rugged and never suffered from any disease. His mother had been cured of syphilis before marriage. One night he and three others had connection with a syphilitic woman. The others, in the order of connection, numbers one, two and four, contracted syphilis; he, number three, did not. In the three other cases I could find no trace of syphilis in the family history. In 1893 I was consulted by a young healthy man who had always been so, regarding a hard chancre. His father had been a syphilitic before marriage; the mother, apparently contracted the disease. Under mercurials he rapidly improved and, saving slight adenitis and roseola, he has never had any symptoms develop since the first six weeks of treatment. He took treatment for a year and is apparently free from the disease entirely, though for over a year he drank heavily. The question is often asked, What is syphilis? I would define it as a contagious, self-limited disease of an inflammatory nature. There are no

typical stages, as taught by the books. Simply we have a seat of infection, then a general process of inflammation, which may manifest itself in various ways in different subjects and in different parts of the system. This inflammatory process seems to be nature's method of destroying the germs, and if the disease is allowed to run its course nature seems finally to accomplish this result. Then, as a rule, we have as sequelæ the formation of new tissue and destructive changes in the system. This, so long called the third stage of syphilis, should not be regarded as syphilis at all, any more than any other sequel of a disease should be named a stage of that disease. There is no contagion during this period. It will not produce syphilis in another by inoculation and in the vast majority of cases there is no such period if treatment has been conscientiously carried out. The seat of infection we always have, and almost as surely some manifestation of the inflammatory process going on in the system.

In conclusion, I wish to say a few words in regard to treatment. During the last two years it has been my privilege to see a large number of syphilitics daily at the Michigan State House of Correction, where, during that time probably four hundred men have been treated for this disease. My experience has been that in the true syphilitic state mercury is the remedy *par excellence*. In the sequelæ potassi iodidi stands without a rival. Of all the preparations of mercury the bichloride easily takes the lead, especially immediately after infection. I usually begin treatment with one grain of calomel every hour till the bowels are thoroughly flushed, then put the patient on hydrarg. bichl., grain 1-16 to $\frac{1}{4}$ gr. nucis vomicæ M. 10, ext. phytolaccæ, Dec. fl. M. 2, aqua q. s. ad. 2 oz. Mix; to be taken four times daily.

I begin with 1-16 grain bichlorid and increase the dose till I get an apparent effect. I am not afraid of salivation; in fact, continue the remedy until mercurialism begins to develop, when the remedy is stopped and the patient put for a week or more on vegetable alteratives. The emunctories should be kept open and a hot bath given twice a week. Any complications should be treated in the usual way, but in conjunction with the anti-syphilitic treatment. Treatment should be continued for at least six months after all symptoms disappear. I have at present under treatment a man who, two months ago, began taking 1-16 grain bichlorid four times a day. He did not improve satisfactorily, so the dose was increased to $\frac{1}{8}$ grain and again to 3-16 grain, since which time his improvement has been marked. For three weeks he has been kept on the $\frac{3}{4}$ grain daily, and all specific symptoms have cleared up; his general health is much improved and there are no symptoms of salivation. If we get our patients in time and can keep them under control there should be no sequelæ in the great majority of cases. One could get the best results in the sanitarium, where the patients can be watched carefully and a regular life successfully carried out. I prescribe nux vomica because of its nerve tonic properties and the beneficial effect it has, especially on those used to alcoholic beverages. In the after effects of syphilis potassi iodid, in doses gradually increasing from 5 grains to 40 grains three times daily, stands without a rival. I usually prescribe it with nux vomica and any of the vegetable alteratives. Cod Liver Oil is often of marked benefit, as is the biniod or protiod of mercury. Keep up your treatment with occasional intervals for some time after all symptoms have vanished; above all, do not discourage your patients, give them cheering words of comfort; that if they live regular lives and take regular treatment they will probably be freed from the curse. At the same time, be firm in your warning of the danger from contagion.

ANÆSTHESIA AND ANALGESIA.*

By DR. H. H. OLDRIGHT, Toronto.

Regarding the relative efficiency of ether and chloroform, each, he held, had its special advantage. It was hard to say which was used more. In the Tropics, of course, chloroform was largely used. According to Hewitt more depended on the anæsthetist than on the anæsthetic in regard to the safety of the patient. Treves thinks ether is preferable as a general anæsthetic. He holds that no anæsthetic should be used in collapse. Incidentally the reader of the paper referred to the value of whisky as an anæsthetic. The depth of anæsthesia must differ according to the severity of the operation. Dr. Oldright believes that ether is the safer anæsthetic as a rule, but from an wide experience with chloroform during the past six years he is of the opinion that the danger in its administration is overrated. There were times when he had to change to ether where stimulation was required, but in cases where this was not required he had found chloroform most satisfactory. The neurotic, with shallow or irregular breathing, the adynamic and the anæmic do not stand chloroform well. The essayist quoted Lyman, of Chicago, who states that during twenty-eight years from the time of the introduction of chloroform in the Royal Infirmary at Edinburgh there were only two deaths, and during the past ten years there were 36,500, with one death. A long list of such statistics follow: Elser, of Strasburg, had 16,000 with no deaths; Kidd, of London, French army in the Crimea, 30,000 with two deaths; English army in the Crimea, 12,000 with one death; Bardeleben witnessed 30,000 with no deaths, etc. Summing up showed ether 99,255 cases with six deaths (1-16,542); chloroform 492,235 cases and eighty-four deaths (1-5,860).

Speaking of analgesics, Dr. Oldright called attention to the value of eucaïne, which was reported to be much less toxic than cocaine. Ethyl chloride had proven to be a very useful local anæsthetic. In using cocaine the injection should be made before the application of Esmarc's bandage, to allow for the circulation of the drug in the tissues. With ethyl chloride, on the other hand, a prolonged effect was gotten by applying the bandage first, thus preventing the warm blood from thawing the frozen area.

Dr. Oldright recalled two cases of mania following the use of nitrous oxide. Speaking of the effect of chloroform in cases of morphia, Dr. Oldright said he had kept one such patient under fifteen minutes with one drachm (drop method). In the second case the stage of excitement was very marked. The chloroform was discontinued and ether given, owing to irregularity of the heart. The anæsthesia was not deep, although a large amount of the anæsthetic was used. Dr. Oldright then called attention to the anæsthetic action of an Esmarc bandage. Having anæsthetized a patient with chloroform and applied the bandage and tourniquet, the patient was in the most favorable condition to feel the least pain, requiring only the minimum amount of the anæsthetic, thus lessening the risk very materially. Dr. Oldright pointed out that in operations on the trunk it was to be noted during the incision through the skin the patient was stimulated reflexly; at this juncture it was a mistake to use a greater amount of the anæsthetic, for this stimulation soon passes off.

He had seen Senn do a secondary colotomy operation on an old woman without an anæsthetic. It was not necessary therefore to keep the patient as

*Abstract of paper read at the Toronto Medical Society.

deeply under after the incision has been made through the skin. The essayist believes in giving chloroform drop by drop at four or five seconds intervals at first until the patient's fifth nerve becomes accustomed to it gradually lessening the intervals for a time (say five minutes) *cæteris paribus*; then again increasing the length of the intervals as the heart distributes the anæsthetic equally through the body. The effect of the drug could be judged by the tension and rate of the pulse, which should be constantly observed. The sense of sight detects any hyperæmia, cyanosis or palor of the face and chest, also the condition of the pupil. The most important sense is that of hearing, which enables us to judge of the rapidity and depth of the respirations, the character of the same, whether the passages between the posterior nares and the trachea are freely open, also whether there be mucous in the trachea and bronchi.

This collection of mucus in the air passages occurs more frequently with ether even when administered by skilled anæsthetists and with the influence of atropia; with chloroform more rarely. If it is necessary to change from ether to chloroform we must allow for the imperfect elimination due to collection of mucus.

One medical man calls this "being drowned in her own secretions." Suppression of urine may follow the use of an anæsthetic more often with the use of ether, but as to the cause of this disaster we are still in the dark, and, as has been observed, it may be due to septic infection of the kidneys.

Henry M. Lyman, of Chicago, an advocate of ether, says that the risks from ether increase with age on account of the tendency to bronchial catarrh to a degree which is not conspicuous with the more potent agent chloroform, and cites cases of œdema with lingering death from the administration of ether, one of œdema of the lungs and pleural the administration for the operation lasted twenty minutes. Amount used, three ounces; patient returned to consciousness, but died two hours later. Another died four hours after administration. The *post mortem* showed œdema of the brain and lungs. In another case, that of a hard drinker, $\frac{1}{2}$ -drachm chloroform was given; time, $1\frac{1}{2}$ minutes. Patient died a day and a half after operation. Kidneys showed interstitial nephritis.

R. L. Macdonald, M.D., McGill University, in an article in Woods' Reference Handbook of the Medical Sciences on Idiosyncrasy, says that a friend of his experiences a motion of the bowels every time he administers ether. He attributes the fatal effects of inhalation of chloroform in minute doses to this same cause idiosyncrasy. We should at any rate be very cautious and administer at first by the drop method to observe if such an effect be present.

To illustrate this phenomena we may remember the case of Jennie Lind, the prima donna, who would almost faint from the smell of a rose thrown on the stage.

While this may be one immediate cause of serious symptoms there is, another which may be got rid of by the use of purgatives and intestinal antiseptics repeated as required for some days before hand, namely, the depression from stagnant bile, food and toxins.

Silk, King's College Hospital, gives beef tea four hours before anæsthesia (milk digests slowly), or an nutrient enema half hour before. He deprecates morphia.

Gilbert G. Cottom injects spartein sulphate $\frac{1}{6}$ gr. before administration, and finds it an efficient heart stimulant. Caffeine might be used the same way.

Dudley P. Allen finds that the body temperature varies much more under

an anæsthetic heat being lost if the operation is prolonged. We should make the time as short as possible for the sake of the patient and should apply external heat.

Leonard Hill, in a recent article, had very well described the manner and treatment of the ill effects from chloroform administration. He distinguishes two forms of syncope. In the primary stage during struggling there is nervous congestion from holding the breath. The right heart and lungs are loaded with blood and chloroform. The left heart is relatively empty. A deep breath is taken. The left heart is filled with blood and chloroform from the lungs, which is distributed by the coronaries to the heart muscle, first paralyzing it and causes complete loss of arterial tension. In such a case the treatment is to put the patient in the upright position; bleed from the jugular if necessary; exert pressure on the abdomen; employ artificial respiration and give strychnia. Secondary syncope arises from exhaustion. There is gradual loss of arterial tension, causing anæmia of the respiratory centre. Stimulants should be given, the head lowered much, and artificial respiration used.

TREATMENT OF INEBRIATES.

The following recommendations regarding the treatment of inebriates in Ontario were prepared for the Prisoners' Aid Association by Dr. A. M. Rosebrugh, of Toronto, after visiting Canadian and American inebriate institutions and interviewing eminent inebriety specialists.

My recommendations with regard to the treatment of male inebriates are as follows:

1. That we continue the agitation for the establishment in Ontario of a reformatory for inebriates. Even in case a prohibitory law should be adopted in Canada, there will always be a large number of incorrigible drunkards that will require to be secluded for long periods from temptation. Whether said reformatory should be established and maintained wholly by the Government, or partly by the Government and partly by municipalities, may be an open question. In approaching members of the Government on the question, I would suggest that we ask the Government to define its policy with regard to the whole question. If the Government is not prepared to take the initiative, surely it should at least offer some inducement to municipalities and temperance organizations to take such initiative.

In establishing an inebriate reformatory, I would suggest the adoption of the farm colony plan, located where land can be procured cheap, and very plain and inexpensive building erected.

2. In addition to this farm colony I would recommend that a small hospital be established in Toronto for inebriates. With such equipment, namely, a city inebriate hospital and a farm colony, the plan of working that, I would suggest, is as follows: An agent of your Association, or a probation officer, would attend the police court daily, and by an arrangement with the Police Department select the most hopeful cases for treatment at the city inebriate hospital. At this hospital alcoholic inebriates would be treated for four or five weeks only. Cases of relapse would be treated according to circumstances. In some cases it might be advisable to give a second treatment, and some even two or more treatments, while others should be sent to the farm colony at once. The farm colony should be used for the reception of the most hopeless class. The sentence to the colony should be indeterminate, and the hopelessly incorrigible should be

permanently detained. This would be at once a kindness to the poor drunkard, and an ultimate saving to the State.

3. Medical treatment at the inebriate hospital should be followed up by the judicious supervision and help of your agent or of a probate officer. By means of these combined agencies, that is, city hospital special treatment and subsequent supervision, in my judgment, from 25 per cent. to 30 per cent. of the class referred to may be saved from a life of drunkenness, and at comparatively small expense—probably not more than \$15.00 or \$20.00 each.

4. The farm colony, in my opinion, should be a strictly Government institution, while the city inebriate hospital might be under municipal control. Like other hospitals, it would be entitled to receive the usual per capita Government grant. One plan would be for the city to establish an inebriate hospital and receive pay patients from other municipalities. Thus, as an example, at Buffalo, N.Y., there is a workhouse erected by Erie County. In this workhouse prisoners from adjacent counties are sent and paid for by said counties, while at Detroit the city workhouse receives pay patients from the Federal Government, and, if I mistake not, from the State of Michigan also.

5. With regard to affording medical treatment to chronic inebriates at the Central Prison, I would say, firstly, that I am strongly of the opinion that this should be done; and, secondly, that it would be a humane thing to afford treatment at the very outset of their imprisonment. In the majority of cases I have no doubt whatever that the crave for stimulants can be removed, and, if so, it would be humane to remove this crave as soon as possible. The treatment would then become an important factor in the reformation of prisoners both before and after their discharge. It would have a good moral effect upon the men, and they would be more amenable to discipline and to the other reformatory influence of the prison. A prisoner craving for alcoholic stimulants is in a state of nervous irritability, and he is more apt to be "out of sorts" with himself, and out of harmony with his environment, than a prisoner not so afflicted. Will power would be increased by this combined medical and disciplinary treatment, and they would regain the power to resist temptation and to say "No," when necessary. I take it for granted, of course, that a helping hand would be extended by your Association to these men upon their discharge, the same as in other deserving cases, viz., work found, tools or money loaned, etc., etc., and that a judicious supervision would be exercised over them for several months thereafter.

6. The treatment should, of course, be made purely voluntary on the part of the prisoner, *i.e.*, nothing like coercion should be used. I would also suggest that the cost of the treatment be charged against the prisoner as a loan, to be returned as soon as he is able to return it, and that, say, \$10.00 be the amount charged for said treatment. Such arrangement, I am persuaded, would have a salutary effect. "Cheaply got, cheaply prized," is a truism that will hold as good here as in other cases.

You are aware, of course, that persistent efforts have been made during the past year to induce the Ontario Government to sanction the introduction of proprietary remedies into our penal institutions for the medical treatment of inebriate prisoners. In addition to my recent visitation of inebriate institutions, and my interviews with specialists in alcoholic inebriety, I have given the whole question very careful study for several months past, and, as a result of this enquiry, I find that I cannot consistently or conscientiously recommend the Government to accede to this request.

In making my recommendation on this question I find that I cannot do better than favor the introduction in the Central Prison of the treatment

formulated and elucidated in the last edition of the text-book on the "Etiology, Pathology and Treatment of Inebriety," by Dr. Norman Kerr. I find that this classical work is universally recognized as the standard authority on the subject of which it treats. I may add that the treatment recommended by Dr. T. D. Crothers, in *Hare's Practice of Medicine* is practically the same as that of Dr. Norman Kerr.

By carrying out the above recommendations there can be no question but that there would be a large number of inebriates reformed, there would be a large saving to the State, and the number to be provided for in the proposed farm colony for men would be very much reduced.

Some might say, "Well, granted that it is desirable that special medical treatment should be given to Central Prison inebriates, why not place the administering of said treatment in the hands of the regular prison surgeon?" In reply to this, I would say that in my judgment special treatment for inebriety would be far more successful when administered by a volunteer benevolent association, such as yours, than by a Government official. The good effect would be largely neutralized, I fear, by constituting it a part of prison routine. Inebriety is a disease of the mind as well as of the body. The will becomes paralyzed, and it is found that for the purpose of attaining the greatest success in treatment, both the intellectual, moral and emotional nature requires to be appealed to. I would suggest, say, once a month that a temperance meeting be held at the prison for the benefit of the prisoners, and after an address or two on temperance that the question of special medical treatment be introduced, and the conditions be fully explained. Before giving application, I would require each man to sign a card containing a formal application for treatment and an agreement to fulfil the conditions, including an agreement to accept the cost of treatment as a loan, to be returned as soon as able to do so.

With regard to the treatment of female inebriates, I would say that I presume that we are all of one mind with regard to the present illogical and ineffective plan of dealing with female habitual drunkards. We all realize the absurdity of sending these unfortunates to jail on thirty or sixty-day sentences. What I would recommend in these cases is as follows: Firstly, in the case of old offenders, to endeavor to bring pressure to bear upon the powers that be, to have these unfortunates sent to the Mercer Reformatory, either on maximum sentences of two years, or on the indeterminate sentence plan. In the interests of society and good morals, many of this class should be permanently secluded from society. This would be a kindness both to the unfortunate inebriate and to the community at large.

Secondly, with regard to young offenders, and perhaps also in the case of the more hopeful among old offenders, I would recommend that temporary accommodation be provided for such in connection with your Home for Girls, and that they be given the benefit of special medical treatment for their crave for strong drink. After about four weeks' treatment, they could be placed in situations on trial. In case of relapse, they should then, according to circumstances, either be given a second treatment, or turned over to the authorities, to be sent for a lengthened period to the Reformatory for Women.

To assist in defraying the necessary expense involved, I think you might confidently appeal both to the W. C. T. U. and also to the City Council.

In addition to these recommendations I would suggest the advisability of opening an inebriate department in all the general hospitals of the Province. To make this a success, however, would involve the appointment of a Government inspector, a medical man who has given the question of the treatment of inebriety a special study.

By carrying out the above recommendations with regard to the treatment of male and female inebriates the cost of treatment would be reduced to a minimum, and the number to be provided for at the Mercer Reformatory for women and on the farm colony for men would be reduced to small proportions.

Clinical Reports.—Cases in Practice.

CASE NO. I.

(From the Case-Book of R. J. DWYER, M.B.)

H. P., admitted to St. Michael's Hospital February 24th, at midnight. She was unconscious, but got history from brother. Aged nineteen. Has always been rather delicate, but never had any illness of note.

Father killed seven years ago by train. Mother died two years ago with apoplectic convulsions. One brother and six sisters living and well; none dead.

Brother says she had complained of headache for three days before admission. She was at service, and went to see Dr. Heggie, of Brampton, who attended her. The day before admission she became very restless and delirious, complained of pain in head and neck. The evening before became unconscious.

CONDITION ON ADMISSION.

Patient is a well-nourished, stout girl, cheeks faintly flushed, but prolabia quite pallid. Dark areola under eyes. Pupils contracted and divergent squint. Neck somewhat rigid. Pulse 56, quick and regular. Soft booming sound at apex; heard just over apex and slightly upward. Systolic in rhythm. Respiration 20, very quiet, but varying in depth; though not distinctly Cheyne Stokes, they suggest it. Inspection shows supra-clavicular spaces well marked, the left slightly more than the right.

Owing to condition of patient, no complete inspection could be made. The percussion note seemed to have a slightly higher pitched resonance over upper left front, *i.e.*, down to the second intercostal. Auscultation did not show anything conclusive, though at times there seemed to be a click, and the strength of sounds varied with the energy of breathing. There was no distinct difference on the two sides. Abdomen concave and slightly hard. No other sign of abnormal condition of any organ. Bladder empty. Knee jerks and plantar reflexes are equally increased.

Patient for the most part lies very quiet, in fact, unusually so, either on the back or the side. On any attempt being made to examine her, or in any way to disturb, she is apt to (though not invariably so) become very noisy, groaning and half opening the eyes, and resisting. These attacks soon subside, however, and she apparently sinks to sleep. At times she has slight starting fits or jerks. Temperature per rectum, 101 $\frac{2}{3}$. Surface quite cold, with goose flesh manifestations.

Diagnosis. Though there has been so short an antecedent history of illness given, I think that she has been ill for some time, and conclude, from the headache, the rigidity of the neck, concave abdomen, slow pulse and increased reflexes, along with eye conditions, that this is a case of meningitis of the base, owing to absence of any other apparent cause such as injury, suppuration, or tubercle. The signs of lung disease are too vague to demand much consideration, and the murmur at apex seems to be due to modification of the normal first sound, not to an adventitious sound.

February 26th.—Patient semi-unconscious, will answer when spoken to, though slowly and haltingly. Cheeks flushed. Very faint yellowish discoloration of skin. Involuntary evacuations since admission. Nurse reports that during night patient cried out several times. Patient quiet to-day, although turning from side to side; is drowsy on being questioned. Keeps her neck very rigid. Complains of pain in head and back of neck. Pulse varies from 78 to 60, and is quite irregular, missing about every third beat. Pupils about normal. For a portion of the day right pupil more dilated than left. She makes requests; but when doctor asks her what she wants she seems to have forgotten the thing she wanted, pointing to her throat as if wanting something to drink. Knee jerks and reflexes still increased.

March 18th.—On the night of last observation she seemed rational for a few minutes, and in a few days she began to have intervals of consciousness, lasting about half an hour or more. During these intervals she would be quite rational, but could not speak distinctly. These intervals gradually lengthened until, on the 11th, she was conscious for over two hours at a time: then she would relapse into semi-consciousness and delirium. These fits of consciousness have gradually lengthened until, yesterday and to-day, she has been conscious practically all day. At the beginning of these lucid intervals she was quite unable to give anything a name. She would seemingly know what it was, but could not remember the title until it was told her, when she would at once recognize it and say it, though in a few minutes after she would forget again. This was true both of persons and objects. This defect of memory did not apply to an event or person, for on being asked if it was so and so or at a certain place she would at once answer correctly, yes or no.

On the 14th, 15th and 16th she was extremely noisy and restless and irritable, striking at the nurse and crying out to go home. These symptoms disappeared after the administration of a copious enema.

Throughout the attack the temperature has nearly always run from 98½ to 99. Last night it went down to 97, and this morning is 98. Up till the 12th, urine and fæces were involuntary, except when she had an enema. To-day she is quite bright and cheerful, though she has considerable difficulty in remembering names of people and places. She remembers things that occurred years ago, but says that her stay here is a blank to her. Tongue is clean, pupils dilated and even, pulse 94 and regular. Tendon reflexes absent and legs seem to be quite atrophied. Slight jaundice still present. She has been picking her nose, causing slight epistaxis.

19th.—Patient seems quite bright to-day, but complains of double vision and difficulty in seeing objects. Is only able to distinguish with difficulty objects as large as one's fingers at a distance of six feet. Says that at times she has headache, which wakes her up if she is sleeping. Right eye slightly convergent. Both optic discs present a somewhat reddish striated appearance with whitish areas, the whole suggesting the "bullet-splash" appearance. Knee jerks absent, pulse and temperature normal. She has a marked flushing of left cheek. This *tache cerebrale* has been a frequent manifestation throughout her illness.

The treatment was begun the day after her admission, by administration of castor oil, and followed by enemas. The bowels were very constipated requiring at first mechanical aid to empty them. Subsequently, she required numerous enemata and cathartics, to keep the bowels acting. Any neglect of these measures caused an aggravation of her symptoms. At times, too, during her illness she had to have morphia in order to quiet her. For the most part she has taken nourishment freely after the first few days.

March 22nd.—Examined by Dr. Rosebrugh. Shows well-marked optic

neuritis, especially in the left eye. In every other respect the patient is much improved. Her memory is very much better, and she says that is constantly improving. She looks much better and brighter. Temperature, $97\frac{3}{4}$; respiration, 20; pulse, 92. Knee jerks absent, and legs seem to be much atrophied. Speech slightly drawling. (Patient still under observation.)

CASE NO. 2.

Jeremiah Duggan, aged fifty-eight, born in Canada. Occupation, teamster in woods and sawmills. Married; three children.

Family history. Parents both living and in good health. Four brothers and two sisters living. Three sisters dead; one, aged eighteen, died of typhoid; two died when children.

Previous history. Has always had good health, with the exception of an attack of typhoid fever about fifteen years ago.

Present illness. About eleven years ago he fell on a log, and struck on his abdomen. That evening he had a passage of blood from the bowel. He was unable to work for four days, and then resumed work as a teamster. Three years after, when he had begun to do heavy work, he had a second passage of blood, which was so severe that he had to leave his work. He then secured a job at the street-car stables. About nine months later he had a third severe hæmorrhage, which laid him up in bed for about four months. This was at the hospital. The hæmorrhage continued during four days' time, and was accompanied by an obstinate diarrhœa. During his stay at the hospital he had phlebitis in both legs. About a year after he had another hæmorrhage. He was at this time working at the stables, and had been for four or five months. This time the hæmorrhage lasted about two or three days, and was again accompanied by diarrhœa, and laid him up for about three months. He went to work, and continued for about three weeks, when he hurt his leg, for which he went to the hospital. While there the last attack came on, and lasted about two days, and was accompanied by diarrhœa. The diarrhœa came on first at the second attack, and has accompanied each attack. It comes on after the attack, and continues without any intermission, except under treatment. When it is stopped, he bloats up, and his head aches until diarrhœa recurs. The number of stools varies from ten to twelve a day at the time of hæmorrhage, and three or four during the intervals.

He first began to get pale and weak after the second hæmorrhage. The anæmia would be as bad or worse than at present at each hæmorrhage. He is also much weakened at each attack. He says that between the attacks he gets somewhat better as regards anæmia and strength, but he says that he has never been restored to his original health. He has noticed some little swelling under the eyes at intervals of a year or so. He has also noticed that he has been much more thirsty than before illness; and that the urine has for some time been increased in amount and is very clear.

Present Condition.—The patient is a well-nourished man, being rather stout. He says, however, that he is thinner than he was. The sclerotics are of a slightly yellowish hue on the most exposed surface, but on the corneal portion they are a little paler. The complexion is markedly anæmic and somewhat muddy. The surface of the body shows a number of milk-white spots, which are slightly elevated. They are more abundant on the arms and hands than on the rest of the body. There is a cicatrix of an incised wound on the wrist, which has become very white. The lower end of the right tibia is covered with a mottled scar, the result of an ulcer which he had six years ago.

Circulatory System.—The pulse is 64, full, soft and regular, but not absolutely compressible. No thickening of the radial. The apex beat is displaced to a point almost five and a half inches from the mid-sternum, and two and three-quarter inches below the nipple. There is a systolic murmur heard with greatest intensity about one-half an inch above and external to this point. The murmur—a soft one—is heard over the area of circle about two inches in diameter. There is a slight creaking roughness heard just at the upper border of the fourth left costal cartilage at its junction with the sternum. This is systolic in rhythm. The second is also accentuated. There is also a bruit heard over the base of the heart.

Microscopic Examination of the Blood.—Red corpuscles 1,800,000 per c.m. There were present poikilocytes, megalocytes and pale corpuscles. No excess of white cells.

The urine contained little or no albumen, although numerous examinations were made.

The patient died about three years later.

Lesions of chronic nephritis were found. The kidney was of the large, white variety.

CASE NO. 3.

(Under Dr. MacMAHON. History taken by a Student.)

Mr. C. S., admitted December 14th, 1897. Height, five feet nine inches; weight 178; has weighed 203; lately weighed 164 pounds; has gained. Appearance—Well nourished; florid. Family history—Father living; mother died last spring, age 61, from inflammatory rheumatism, said to be followed by blood poisoning. Brothers—one, healthy. Sisters—five; one died, a child a year old; the others healthy. Private history—Never in bed except for typhoid fever nine years ago. Recovered perfectly. Six weeks in bed. Born and raised on farm. Has worked and travelled in British Columbia. Lived and worked outside. Travelled from age of nineteen. Has worked on the railroad overseeing men; and for the last six years in the electric works in Toronto. Present illness—Last August began to notice shortness of breath when going upstairs or walking fast. This difficulty increased. Saw a doctor, and after a short course of treatment thought he was cured, and took no more medicine. Had a slight cough, but could not raise anything up. Thought it was asthma. Could get on quite well in daytime. In the evening about seven or eight o'clock until about midnight suffered very much from asthma. Never had these attacks in the day. The shortness of breath then got much worse. Damp days seemed to increase it. Now expectorates a great deal. Expectoration greenish yellow in color, and some thick lumps mixed with mucus.

Examination of sputum—Muco-purulent; hard and viscid "lumps;" very tough; had to be cut with scissors in order to mount. Chlorides and sulphates abundant. Many squamous epithelial scales seen, and a large number of mucous strands, and pus corpuscles elongated in shape. Tubercle bacilli not present. Respiration—34 to 20 per minute; lungs normal; some cough. Circulatory system—Pulse 112-84. When patient first entered hospital the pulse was very hard and of high tension. After rest and administration of nitroglycerin, the pulse improved, becoming much softer, but rather weak. Vessels thick walled, evidence of arterial sclerosis. Pulse now fairly compressible. There is epigastric pulsation. Heart is enlarged. Heaving observed over extensive surface. Cardiac apex diffuse, and extends beyond nipple line. Impulse is felt faintly in nipple line in

fifth interspace. Stronger impulse felt in epigastric region. Percussion—Dulness commences at lower border of third rib to left. Extends half an inch beyond nipple line, and extends also to the right of the sternum about half an inch beyond its border. Auscultation—First sound slightly prolonged near margin of sternum and fourth interspace (and there is the least suspicion of a murmur). Faint, soft blowing systolic murmur. Pulmonary second sound accentuated. Digestive system—Tongue brownish—slightly indented at sides. Eyes clean, slightly tremulous. Appetite not so good since early summer. Bowels regular. Very unpleasant sour taste in mouth constantly, especially in morning. Nervous system—Has had headaches in temples occasionally; has not slept well; could not lie down. Sleeps except when troubled by asthma. No distressing dreams. No twitching. Never moves when not troubled with asthma. Cutaneous system—Skin cool and smooth; no rashes; temperature 97.4° to 99° F. Urinary system—Urine, color light amber. A little lighter than normal. Cloudy, strings and flakes observed. S. G 1018. Reaction sharply acid. Earthy phosphates about normal. Alkali phosphates about normal. Albumen present as shown by boiling; nitric acid test and picric acid test. No sugar present.

Microscopical examination—A large number of hyaline and granular casts, both broad and also long and narrow; some coiled. Leucocytes and fat globules are adherent to these. Pus cells seen. Many very large epithelial cells from bladder seen, and also from urethra. Not many renal cells made out. No red blood cells seen. No crystals (centrifuge was used). Eyes—Not clear; somewhat bloodshot. Marks of powder—for twelve years—in the left eye and upper eyelid. Sight good; reads easily. Since he has been in hospital his eyes "feel weak." Reflex to light good, also accommodation. Hearing good; other senses normal. Temporal artery tortuous and hard, thick walled. Diagnosis—Interstitial nephritis; cardiac hypertrophy; arterial sclerosis. Diet—Milk, buttermilk, fruit, vegetable; nitrogenous food excluded altogether. Progress—Dyspnoea much relieved; patient sleeps well.

CASE NO. 4.—COLOSTOMY FOR CARCINOMA OF THE RECTUM.*

[SYNOPSIS OF REMARKS BY THE SECRETARY.]

In presenting the patient Dr. Bruce said: The case I have to report tonight is one of some interest in that it is one of carcinoma of the rectum in a young man 27 years of age.

The history of the case is briefly as follows: He dates the commencement of his present trouble to December, 1896. Says he first noticed some difficulty with the movements of his bowels, requiring to take opening medicines oftener than before. Had some slight pain, which he referred to the rectal region. This went on with very little inconvenience until about April, 1897, when the pain became more troublesome. There was a slight discharge, but no blood. The constipation became marked, five or six days elapsing, unless he resorted to aperients. He went on in this way until August, when he was examined under an anæsthetic. A small growth could be felt in the rectum about two inches from the anus. On inspection it

* Case in practice reported by Dr. Herbert Bruce, at the Toronto Medical Society with exhibition of the patient.

appeared papillomatous. A portion was removed for microscopic examination, and found to be a simple adenoma. He then consulted another doctor and was again examined under an anæsthetic. An annular stricture of the rectum could be felt, commencing an inch and a half from the anus. The index finger, with difficulty, would pass through the opening. It was movable laterally, and very slightly from before backwards. It was decided to remove the growth by perineal section. An attempt was made, but it was found to involve the urethra anteriorly. So the operation was discontinued, and the parts simply brought together again. This was about the end of November. Early in January the growth had so increased that the tip of the little finger would barely enter the stricture. A colotomy was advised and performed, the patient making a good recovery. To-day he walked fourteen miles. There is a slight mucous discharge from the rectum, but no blood. The patient appears to be in good health. Eats and sleeps well. He wears a receptacle for the pouting gut. It consists of a hollowed metallic plate about three inches in diameter, into which a similarly shaped rubber pad fits. This is held in position by a belt and perineal band. The rubber pad may be changed and thoroughly cleaned. A bit of folder gauze is placed next the ostium.

Dr. Bruce, in describing the technique said, that he had followed the plan recommended by Greig Smith. After incising through the abdomen and withdrawing the gut a glass rod is passed through the meso-colon to hold the intestine forward. After passing the rod through, some care should be taken to cover this knuckle of bowel. Photographs were exhibited which showed how this was done with a little ring of gauze placed around to act as a scaffold to hold the plaster (intedigitating strips of which were used) high enough to prevent pressure on the bowel. After three days, adhesions having taken place, the bowel was opened. Greig Smith, Dr. Bruce said, emphasized the necessity of securing a good grip of the muscles so as to get as good an approximation with the bowel as possible in order to get a good sphincter. By passing the finger into the artificial anus it was seen that there was good sphincteric action. In going through the abdominal wall it was wise to merely separate the fibres of the internal oblique. The incision generally preferred is a vertical one, commencing about one inch above the anterior superior spine, and slightly internal to it, carried in a line with the fibres of the internal oblique. In the secondary operation the vertical incision through the bowel is preferable to the transverse one.

Reports of Societies

TORONTO MEDICAL SOCIETY.

The regular meeting was held in the Council Chamber on the 17th of March—President Dr. MacMahon in the chair.

Dr. W. J. Wilson reported some cases in practice. The first was the case of a male patient, aged 45, who consulted him complaining of pain at the base of the tongue. At one time he had a small abscess there which was opened. No trace of this could be seen. He had two decayed teeth. These were removed, but the pain still persisted. Later the patient consulted another doctor who suggested that the disease might be cancer, which frightened the patient. He sought for other advice, one saying cancer might be growing, another that it was present and advising that the tongue be removed. But the case is the same yet; there is nothing to be seen or felt.

The second case was that of an old lady, aged 70, without teeth. There was a similar condition of the fore part of the tongue. No treatment gave relief.

The third case (a similar one) was that of a woman aged 30, pale and anæmic. Under tonic treatment she improved for a time. The question was, what was the diagnosis? Dr. Wilson thought it was some neurosis.

Dr. Graham suggested that it might be neuritis of the gustatory nerve.

Dr. R. A. Reeve presented a girl suffering from lamellar cataract. A well-defined opacity of the centres of the lenses, surrounded by an orange ring, could be noted. The patient had had sufficient vision to carry on her studies at school. One authority states that the majority of these cases are the subjects of convulsions. But the more probable theory is that the imperfect development of the lens is due to some centric lesion which is also responsible for the con-

vulsions. Dr. Reeve says he has often seen lamellar cataract in patients who never had convulsions. It did occur however in subjects who had that peculiar malformation of the teeth found in rickets. It was hoped that the opacification would not extend to the cortex of the lens. If the opacity extended throughout the lens iridectomy or the needling operation would be required to restore the vision.

SEBORRHŒIC ECZEMA.

Dr. Graham Chambers read a paper with this title. The essayist reverted to the researches of Unna on pityriasis capitis, seborrhœa sicca of Hebra, the seborrhœa corporis of Duhring, the lichen annulatus serpigmosis of Erasmus Wilson, and certain forms of rosaceæ, eczema and psoriasis, who found that they were not only closely allied clinically but pathologically. In more recent researches he had discovered a flask-shaped bacillus and a mulberry coccus were present in all these affections. He, therefore, groups the whole of them under the head of seborrhœic eczema, which may be defined to be an infectious catarrhal inflammation of the skin, occurring on any part of the body but having a preference for certain parts. Its preference is for the scalp, where it may remain for years. The lesions are generally scaly or crusty, but may become moist.

The signs the disease presented in different parts of the body were described by the reader of the paper. Pathologically it was a dermatitis. The inflammatory exudate is principally situated in the papillæ and around the hair follicles; but in the more severe types it affects the whole cutis. Various bacteria have been found among the exudations, one a microbacillus, inoculations of which on healthy skin has produced eczema-

tous patches. Dr. Chambers then gave a description of the regional varieties of the disease.

Dr. J. E. Graham in discussion said he thought Unna had gone too far, including conditions which do not properly belong to seborrhœic eczema, as, for instance, the ordinary dandruff. Formerly it was taught that there was no inflammation in dandruff, simply an increase of sebum with changed characters. If there is any inflammation it is very slight, indeed. It would seem hardly proper to class with this cases where there was very severe inflammation, exudation, vesiculation, etc. It was important to remember that there were parasitic eczemas, however, for the treatment of them materially differed from that of the ordinary eczema.

Dr. Powell, in referring to the treatment of eczema of the scalp by resorcin, recommended that it should be prescribed in the form of a lotion. The strength should be two drachms to four ounces of equal parts of alcohol, glycerin and water.

Dr. Primrose reported the case of a patient who had a lupus-like growth on the face, which he thought might be seborrhœic eczema.

Dr. N. A. Powell made some remarks on the selection of suitable tubercular patients for sanitarium treatment. He said there were certain cases where a diagnosis of tuberculosis could be made out, although there might be an absence of physical thoracic signs. It would be unfortunate to send a case considered to be such, though not really so, for sanitarium treatment. He would further advise patients with distinct laryngeal ulceration not to go. It would also be wrong to send the too far advanced cases. Dr. Powell compared the elevation of the Gravenhurst sanitarium with that of others on the continent, and spoke of the good results which are being obtained in Muskoka already. It was important that medical men should exercise caution in recom-

mending certain phthisical patients to go there.

Dr. J. E. Graham reported having visited the Muskoka sanitarium recently. He was pleased with the good work which was being done. He had seen a number of tubercular sanitariums in America and Europe, but none was equal to this one. He had examined some twenty-five patients. They were rather below the average so far as the disease was concerned, and unfavorable cases. All except four or five were improving. These were recommended to leave. One patient had gained forty-two pounds. The majority had gained from fifteen to thirty-five pounds. He emphasized Dr. Powell's statement that only selected cases should be sent to the sanitarium. Dr. Powell had spoken of doubtful cases; in such a North Carolina man had recommended, in the absence of physical signs, that the temperature be noted every three hours. Speaking of severe cases, Dr. Graham said he had known of some where the temperature was high which had done well under sanitarium treatment.

Dr. F. Starr and Dr. W. J. Wilson also made some brief remarks on the question.

The Society then adjourned.

The next regular meeting was held on the 24th of March, 1898.

Dr. T. F. MacMahon occupied the chair.

MEMBRANOUS RHINITIS.

Dr. Price-Brown reported a case of this disease occurring in a young woman.

On tilting up the face, one could see in the left nostril a large white patch of cartilage-like membrane filling the whole of the cavity, and apparently adherent to the septum. It had been noticed by the patient for about two weeks. On removal, it left a more or less abraded surface. There were no indications of diphtheria. Such cases are very rare. He had seen only one case like it.

Dr. Brown considered trauma might have something to do with the cause of the trouble.

Dr. W. J. Wilson, who examined the specimen under the microscope, reported that the membrane was made up of fibrin and leucocytes. There had been no bacteriological examination made.

Dr. Machell reported having seen a similar case in the nose, after the use of the galvano-cautery.

Dr. MacMahon reported having seen membrane form in the nose of an infant suffering from coryza. The child was not ill. Bacteriological examination showed the presence of the Klebs-Löffler bacillus. He was suspicious of diphtheria in all such membranous deposits in the nose and throat, and thought that at least in one of Dr. Brown's cases diphtheria was present.

Dr. Brown, in replying, said he had seen cases where formation of pseudo-membrane had taken place on surfaces where the galvano-cautery was used. He did not think either the two cases reported were diphtheritic.

Dr. J. T. Duncan gave a description of the ophthalmic hospitals of London and Philadelphia. He first described the work done at Moorefield's (the Royal Ophthalmic Hospital), referring to the immense amount of work done there, the ophthalmologists in charge, and their method of conducting their clinics, and the opportunities for students. Dr. Duncan then gave an account of ophthalmic practice in Philadelphia.

Dr. H. H. Oldright had a paper on "Anæsthesia and Analgesia." He called attention to the effect of climate on anæsthetic administration. He quoted Hewitt, who says the safety of administration depends more on the anæsthesist than on the anæsthetic; and Treves, who says ether is preferable as a general anæsthetic. Dr. Oldright believes the danger of chloroform is over-rated. He called attention to those classes of patients that take chloroform

badly. He quoted a large number of statistics, which seemed to show that chloroform was comparatively safe. His summing up showed that in 99,255 cases of ether administration there were 6 deaths, or 1 in 16,542; while in 492,235 cases of chloroform administration there were 84 deaths, or 1 in 5,860. Dr. Oldright then drew attention to the use of eucaïne, cocaine, ethyl chloride and other local anæsthetics.

Dr. MacMahon, in speaking of the unreliability of statistics stated that comparisons could not be made between that class of cases where operations were short (as in eye work) with that in which the operations were prolonged. He believed that many less deaths would occur if surgeons had a good training in administering anæsthetics; they would not be so fault-finding with the anæsthetist if the patient strained a little. From the anæsthetist's standpoint, Dr. MacMahon holds that ether is the safer anæsthetic. If a patient is to undergo a very severe operation, there was no doubt there was a very much better chance for the patient to come out alive if ether was administered. His own practice was, if the anæsthetic worked badly, to change. He always watched the pulse closely. Of late he had used the nitrous oxide. It had many advantages. An important point to consider was the mental condition of the patient. Too often surgeons forgot this. Another point to remember was to keep up the body heat.

Dr. Price-Brown said that in thirty years' experience he had not had a death from anæsthesia. He thought chloroform was preferable. He did not think it was possible for eucaïne to supplant cocaine. In the using of cocaine in nose and throat work he always made it a point to watch for the first sign of syncope. If he observed pallor of the lips he immediately lowered the head of the patient before continuing.

Dr. W. J. Wilson referred to a case

in which syncope supervened during the administration of the anæsthetic. The man whom he was assisting was in favor of standing the patient upright, while he considered the patient should have been inverted. He thought experiments on animals were not to be relied on in forming conclusions as to the effect of drugs on man. There was something peculiar in the heart-beat of the lower animals. It was well known that if a horse was kept on his back he would die. He recalled a case of hysterical mania following the use of cocaine in the extraction of a tooth. In tooth extraction he preferred having the anæsthetic administered to the full surgical extent. Personally he did not dislike the inhalation of ether.

Dr. Carveth, after referring to the case in the management of which Dr. Wilson and he had differed, asked the essayist's opinion of the new anæsthetic composed of ether, chloroform and benzoline.

Dr. William Oldright asked whether the ninety thousand cases in the U. S. army were all chloroform cases or not. All the deaths due to ether did not appear at the time. In some patients it did harm to purge them the night before. It was better to use an enema. He asked the essayist how he would distinguish between the two sorts of syncope. The immunity of lying-in women to chloroform and ether was quite remarkable.

Dr. Machell held that one reason why chloroform was so safe in obstetrical cases was because the patients were willing and anxious to take the drug. Dr. Machell says he prefers chloroform generally, although he had more patients do badly under chloroform than under ether. He admitted in those cases that did badly under chloroform he was often careless, and thought this was generally the case where there were accidents. Shock, fright and an unwillingness to take the anæsthetic were predisposing causes in death from chloroform.

He would like the essayist to say in what cases he would give the one drug and which the other.

Dr. Dixon reported two cases in which the new anæsthetic had been administered. In the first the patient took the compound very satisfactorily, but the second poorly, possibly on account of the inexperience of the anæsthetist, it being his first attempt with the new drug.

Dr. Wm. Graham reported having seen three deaths from chloroform. He briefly described the history in each case.

Dr. A. Macdonald said he had a preference for chloroform. He believed that the greater number of deaths took place during the earlier stages of the administration. He believed the plan of employing the drop method as to allow the patient to become used to the drug was better than the Edinburgh plan of pouring the drug on in quantity. Dr. Macdonald reported having used chloroform in two cases of pregnancy where mitral disease was present with no untoward result.

Dr. J. N. Elliott Brown gave it as his opinion that the danger from chloroform had not been over-rated. Of course, given carefully as he knew the essayist gave it, the danger was reduced to a minimum. But it was often given in too large quantities, and as a result accident after accident was reported. Not so with ether. Seldom in comparison did one read an account of death from ether. A proof of its safety was seen in the adoption of it as the general anæsthetic in the hospitals of London, New York, and in Toronto as well. Wallers' experiments went to show how much more deadly chloroform was in the protoplasm of nerve tissue than was ether.

On motion of Dr. Brown, seconded by Dr. Webster, the discussion of the paper was postponed.

The Society then adjourned.

**BRITISH MEDICAL ASSO-
CIATION.—SIXTY-SIXTH
ANNUAL MEETING.**

The sixty-sixth annual meeting of the British Medical Association will be held at Edinburgh, on Tuesday, Wednesday, Thursday, and Friday, July 26th, 27th, 28th, 29th, 1898.

Pres't.-Elect: Sir Thomas Grainger Stewart, K.C.B., M.D., LL.D., F.R.S.E., Professor of Practice of Medicine and Clinical Medicine in the University of Edinburgh; Physician-in-Ordinary to Her Majesty the Queen for Scotland, Edinburgh.

President of the Council: Robert Saundby, M.D., LL.D., F.R.C.P., Physician to the General Hospital, Birmingham.

Treasurer: Charles Parsons, M.D., Dover.

An Address in Medicine will be delivered by Thomas Richard Fraser, M.D., LL.D., F.R.S. Lond., Professor of Materia Medica and Clinical Medicine in the University of Edinburgh.

An Address in Surgery will be delivered by Thomas Annandale, F.R.C.S. Edin., F.R.C.S. Eng., F.R.S.E., Surgeon to the Edinburgh Royal Infirmary, Regius Professor of Clinical Surgery, University, Edinburgh.

An Address in Psychological Medicine will be delivered by Sir John Batty Tuke, M.D., D.Sc., Pres. R.C.P. Edin., Lecturer on Insanity, School of Medicine of the Royal Colleges, Edinburgh.

The scientific business of the meeting will be conducted in sixteen sections.

**THE AMERICAN MEDICAL
ASSOCIATION.**

**SECTION ON MATERIA MEDICA AND
THERAPEUTICS.**

The following papers and discussions have been promised for the meeting at Denver, Col., June 7-10, 1898:

"Yellow Fever: Its Etiology and

Treatment." Discussion by Surgeon-General George M. Sternberg, M.D., of Washington, D. C.; Prof. John Guitéras, M.D., of Philadelphia; Sollace Mitchell, M.D., of Jacksonville, Fla.; T. S. Scales, M.D., of Mobile, Ala.; G. B. Thornton, M.D., of Memphis, Tenn.; H. M. Bracken, M.D., of Minneapolis, Minn.; P. E. Archinard, M.D., of New Orleans, La.; Prof. William H. Welch, M.D., of Baltimore, Md.; Captain R. S. Woodson, M.D., Assistant Surgeon United States Army, of Port McPherson, Ga.; Prof. William Pepper, M.D., LL.D., of Philadelphia, Pa.

"Aims of Modern Treatment of Tuberculosis." By Prof. Edwin Klebs, M.D., of Chicago. Discussion by Charles Denison, M.D., of Denver, Col.; Prof. William Pepper, M.D., LL.D., of Philadelphia, Pa.; Prof. William H. Welch, M.D., of Baltimore, Md.; Prof. William E. Hughes, M.D., of Philadelphia, Pa.

"Serum-therapy of Tuberculosis." By Prof. S. O. L. Potter, M.D., of San Francisco, Cal. Discussion by Prof. James M. Anders, M.D., of Philadelphia, Pa.; C. C. Fischer, M.D., of St. Louis, Mo.

"The Therapeutics of Pulmonary Phthisis." By Paul Paquin, M.D., of St. Louis, Mo.

"The Practical Value of Artificial Serum in Medical Cases." By P. C. Remondino, M.D., of San Diego, Cal.

"The Present Status of Serum-therapy." By George W. Cox, M.D., of Chicago, Ill.

"Biological Activity of the Antitoxins." By Prof. Joseph McFarland, M.D., of Philadelphia, Pa.

"Glandular Extracts." By Prof. Isaac Ott, M.D., of Easton, Pa.

"The Use of Remedies in Diseases of the Heart and Blood-vessels." By T. Lauder Brunton, M.D., D.Sc., F.R.S., of London.

"The Mescal Button." By Prof. D. W. Prentiss, M.D., of Washington, D.C., and E. P. Morgan, M.D.

"The Modern Intestinal Antisept-

tics and Astringents." By William Frankhauser, M.D., of New York. Discussion by Boardman Reed, M.D., of Philadelphia, Pa.

"A New Non-amylaceous Flour for Diabetics and Dyspeptics." By N. S. Davis, Jr., A.M., M.D., LL.D., of Chicago, Ill.

"The Solution of Ethyl Nitrite." By D. J. Leech, M.D., of Manchester, Eng.

"A Contribution to the Effects of Coffee in Excess." By Prof. William Pepper, M.D., LL.D., of Philadelphia, Pa.

"The Treatment of Insomnia." By Robert T. Edes, M.D., of Jamaica Plain, Mass.

"Are there Therapeutic Principles?" By Solomon Solis-Cohen, M.D., of Philadelphia, Pa.

"To What Extent is Typhoid Fever Favorably Modified in Its Course, Duration, Termination or Sequelæ by the Administration of Drugs." By Frank Woodbury, M.D., of Philadelphia, Pa.

"Strychnine." By J. N. Upshur, M.D., of Richmond, Va. Discussion by Prof. J. H. Musser, M.D., of Philadelphia, Pa.; Walter M. Pyle, A.M., M.D., of Philadelphia, Pa.

"Methods of Teaching Materia Medica and Therapeutics." By Prof. G. H. Rohé, M.D., of Baltimore, Md.

"The Study of Materia Medica and Therapeutics." By H. M. Bracken, M.D., of Minneapolis, Minn.

"A Contribution to the Pharmacology of Cannabis Indica." By C. R. Marshall, M.A., M.B., Pharmacological Laboratory, Downing College, Cambridge, England.

"The Place of Hydrochloric Acid in the Treatment of Diseases of the Stomach." By Boardman Reed, M.D., of Philadelphia, Pa.

"The Continuous Use of Digitaline in the Vasomotor and Cardiac Lesions of Senility." By Henry Beates, Jr., M.D., of Philadelphia, Pa.

"Home Remedies *Versus* Patent Medicines." By Prof. Adolph Koenig, M.D., of Pittsburgh, Pa.

"Opium in Bacterial Diseases." By J. P. Farnsworth, M.D., of Clinton, Ia.

"The Great Therapeutic Importance of a Rational Adaptation of Cathartic Remedies to the Physiological Functions of the Gastro-intestinal System." By E. D. McDaniels, M.D., LL.D., of Mobile, Ala. Discussion by Prof. John M. Dunham, A.M., M.D., of Columbus, O.

"A Recognition of Temperament: a Factor to the Selection of Remedies, and their Dosage in Disease." By J. E. Moses, M.D., of Kansas City, Mo.

"On Some Preparations of the National Formulary." By C. Lewis Diehl, Ph.G., of Louisville, Ky.

"The Use of Stimulants in Acute Diseases." By E. B. Hershey, M.D., of Denver, Col.

"Codeina." By A. K. Minich, M.D., of Philadelphia, Pa.

"Therapeutics of Idiopathic Epilepsy." By Prof. J. N. Barnhill, A.M., M.D., of Columbus, O.

"The Use of Drugs in Diseases of the Uterus." By Prof. John M. Dunham, A.M., M.D., of Columbus, O.

"Why the Pharmacopœial Preparations Should be Prescribed and Used by the Profession." By Leon L. Solomon, M.D., of Louisville, Ky.

"The Use of Electricity by the General Practitioner." By Caleb Brown, M.D., of Sac City, Ia.

"The Relation of Pharmacal Legislation to Pharmacal Education." By Willis G. Gregory, Ph.G., of Buffalo, N.Y.

"The Uric-Acid Diathesis: Its Cause and Maladies Resulting from it. Is it a Cause or an Effect of Bright's Disease of the Kidneys?" By H. V. Sweringen, M.D., of Fort Wayne, Ind.

"The Sulphocarbolates." By Prof. William F. Waugh, M.D., of Chicago, Ill.

"Incompatibles." By E. A. Rudiman, Ph.M., M.D., of Nashville, Tenn.

"Fraudulent Claims--The Remedy."
By C. C. Fite, M.D., of New York.

"The Selection of Diuretics and Lithontriptics in Diseases of the Urinary Tract." By Ernest L. Stephens, M.D., of Fort Worth, Texas.

"Life History of the Bacillus Tuberculosis in its relation to the treatment by Tuberculin." By Robert Reyburn, M.D., of Washington, D.C.

"The Chemistry of the Albuminates." By F. E. Stewart, M.D., of New York.

The following have also promised papers, subjects to be announced very soon, together with the day assigned for each discussion and paper:—

Dr. R. S. Woodson, U. S. A., of Fort McPherson, Ga. Dr. Dudley W. Buxton, of London, Eng. Prof. I. E. Atkinson, of Baltimore, Md. Prof. George F. Butler, M.D., of Chicago, Ill. Prof. Joseph P. Remington, of Philadelphia, Pa. Prof. Ernest B. Sangree, A.M., M.D., of Nashville, Tenn. Dr. L. A. Sayre, of Lawrence, Kas. Dr. T. M. Balliet, of Philadelphia, Pa.

The chairman will be pleased to receive and place upon the programme subjects for discussion and papers. John V. Shoemaker, M.D., chairman, 1519 Walnut St., Philadelphia, Pa.

CODE OF MEDICAL ETHICS.

The Code of Ethics sanctioned and adopted by the Ontario Medical Association.

Article I.—Of the duties of Physicians to their Patients.

1. A physician should not only be ever ready to obey the calls of the sick, but his mind ought also to be imbued with the greatness of his mission, and the responsibility he habitually incurs in its discharge. These obligations are the more deep and enduring because there is no tribunal other than his own consci-

ence to adjudge penalties for carelessness or neglect. Physicians should, therefore, minister to the sick with due impressions of the importance of their office; reflecting that the ease, the health, and the lives of those committed to their charge depend on their skill, attention, and fidelity. They should study, also, in their department, so to unite tenderness with firmness, and condescension with authority, as to inspire the minds of their patients with gratitude, respect and confidence.

2. Every case committed to the charge of a physician should be treated with attention, steadiness and humanity. Reasonable indulgence should be granted to the mental imbecility and caprices of the sick. Secrecy and delicacy, when required by peculiar circumstances, should be strictly observed; and the familiar and confidential intercourse to which physicians are admitted in their professional visits should be used with discretion and with the most scrupulous regard to fidelity and honor. The obligation of secrecy extends beyond the period of professional services;—none of the privacies of personal and domestic life, no infirmity of disposition or flaw of character observed during professional attendance, should ever be divulged by the physician except when he is imperatively required to do so. The force and necessity of this obligation are indeed so great that professional men have, under certain circumstances, been protected in their observance of secrecy by courts of justice.

3. Frequent visits to the sick are in general requisite, since they enable the physician to arrive at a more perfect knowledge of the disease—to meet promptly every change which may occur, and also tend to preserve the confidence of the patient. But unnecessary visits are to be avoided, as they give useless anxiety to the patient, tend to diminish the authority of the physician, and render him

liable to be suspected of interested motives.

4. A physician should not be forward to make gloomy prognostications because they savor of empiricism, by magnifying the importance of his services in the treatment or cure of the disease. But he should not fail, on proper occasions, to give to the friends of the patient timely notice of danger when it really occurs; and even to the patient himself, if absolutely necessary. This office, however, is so peculiarly alarming when executed by him that it ought to be declined whenever it can be assigned to any other person of sufficient judgment and delicacy. For the physician should be the minister of hope and comfort to the sick; that, by such cordials to the drooping spirit, he may smooth the bed of death, revive expiring life, and counteract the depressing influence of those maladies which often disturb the tranquillity of the most resigned in their last moments. The life of a sick person can be shortened, not only by the acts, but also by the words or the manner of a physician. It is, therefore, a sacred duty to guard himself carefully in this respect, and to avoid all things which have a tendency to discourage the patient and to depress his spirits.

5. A physician ought not to abandon a patient because the case is deemed incurable; for his attendance may continue to be highly useful to the patient and comforting to the relatives around him, even in the last period of a fatal malady, by alleviating pain and other symptoms, and by soothing mental anguish. To decline attendance, under such circumstances, would be sacrificing to fanciful delicacy and mistaken liberality that moral duty which is independent of, and far superior to, all pecuniary consideration.

6. Consultations should be promoted in difficult or protracted cases, as they give rise to confidence, energy, and more enlarged views in practice.

7. The opportunity which a physician not infrequently enjoys of promoting and strengthening the good resolutions of his patients, suffering under the consequences of vicious conduct, ought never to be neglected. His counsels, or even remonstrances, will give satisfaction, not offence, if they be proffered with politeness and evince a genuine love of virtue, accompanied by a sincere interest in the welfare of the person to whom they are addressed.

Article II.—Of the duties of Physicians to each other, and to the Profession at large.

SECTION I.—DUTIES FOR THE SUPPORT OF PROFESSIONAL CHARACTER.—1. Every individual on entering the profession, as he becomes thereby entitled to all its privileges and immunities, incurs an obligation to exert his best abilities to maintain its dignity and honor, to exalt its standing, and to extend the bounds of its usefulness. He should, therefore, observe strictly such laws as are instituted for the government of its members;—should avoid all contumelious and sarcastic remarks relative to the faculty as a body; and while, by unwearied diligence, he resorts to every honorable means of enriching the science, he should entertain a due respect for his seniors, who have, by their labors, brought it to the elevated condition in which he finds it.

2. There is no profession from the members of which greater purity of character and a higher standard of moral excellence is required than the medical; and to attain such eminence is a duty every physician owes alike to his profession and to his patients. It is due to the latter, as without it he cannot command their respect and confidence, and to both because no scientific attainments can compensate for the want of correct moral principles. It is also incumbent upon the faculty to be temperate in all things, for the practice of physic requires the unremitting exercise of a clear and

vigorous understanding; and on emergencies, for which no professional man should be unprepared, a steady hand, an acute eye, and an unclouded head may be essential to the well-being, and even to the life, of a fellow-creature.

3. It is derogatory to the dignity of the profession to resort to public advertisements, or private cards, or handbills, inviting the attention of individuals affected with particular diseases, or diseases of special organs, publicly offering advice and medicine to the poor gratis, or promising radical cures; or to publish cases and operations in the public prints, or suffer such publications to be made; to invite laymen to be present as spectators at operations, to boast of cures and remedies, to present certificates of skill and success to the general public, or to perform any other similar act. It is further highly improper for medical men to display their names outside public charities, c. public buildings; also that the posting of bills or circulating of dodgers under any circumstances be prohibited. These are the ordinary practices of empirics, and are highly reprehensible in a regular physician. In case, however, of a physician or surgeon commencing the practice of his profession, or removing to another locality, a simple announcement by an unobtrusive card in the public prints is unobjectionable. Also, that specialists come under the same rules regarding advertising as general practitioners.

4. Equally derogatory to professional character is it for a physician to hold a patent for any surgical instrument or medicine; or to dispense a secret nostrum, whether it be the composition or exclusive property of himself or of others. For if such nostrum be of real efficacy, any concealment regarding it is inconsistent with beneficence and professional liberality; and if mystery alone give it value and importance, such craft implies either disgraceful ignorance

or fraudulent avarice. It is also reprehensible for physicians to give certificates attesting the efficacy of patent or secret or proprietary medicines.

SECTION 2.—PROFESSIONAL SERVICES OF PHYSICIANS TO EACH OTHER.—1. All practitioners of medicine, their wives, and their children while under the paternal care, are entitled to the gratuitous services of any one or more of the faculty residing near them, whose assistance may be desired. A physician afflicted with disease is usually an incompetent judge of his own case; and the natural anxiety and solicitude which he experiences at the sickness of a wife, a child, or anyone who, by the ties of consanguinity, is rendered peculiarly dear to him, tend to obscure his judgment, and produce timidity and irresolution in his practice. Under such circumstances medical men are peculiarly dependent upon each other, and kind offices and professional aid should always be cheerfully and gratuitously afforded. Visits ought not, however, to be obtruded officiously; as such unmasked civility may give rise to embarrassment, or interfere with that choice on which confidence depends. But if a member of the profession, whose circumstances are affluent, request attendance, and an honorarium be offered, it need not be declined; for no pecuniary obligations ought to be imposed which the party receiving it would not wish to incur.

Article III.—Of the duties of Physicians as respects vicarious offices.

1. When a member of the profession shall officiate for another he shall receive regular fees for such attendance, subject to any arrangement which may exist between them.

Article IV.—Of the duties of Physicians in regard to consultations.

1. A regular medical education furnishes the only presumptive evi-

dence of professional abilities and acquirements, and ought to be the only acknowledged right of an individual to the exercise and honors of his profession. Nevertheless, as in consultations the good of the patient is the sole object in view, and this is often dependent on personal confidence, no intelligent regular practitioner who has a license to practice from some medical board of known and acknowledged respectability, recognized by this Association, and who is in good moral and professional standing in the place in which he resides, should be fastidiously excluded from fellowship, or his aid refused in consultation, when it is requested by the patient. But no one can be considered as a regular practitioner or a fit associate in consultation whose practice is based upon an exclusive dogma, to the rejection of the accumulated experience of the profession, and of the aids actually furnished by anatomy, physiology, pathology, and organic chemistry. No member or members of this Association shall be permitted to meet in consultation or take charge of any case conjointly with anyone who publicly announces himself as an Allopath, a Homœopath, an Eclectic, an Electro-Therapeutist, Physico-Medicalist, or by any such distinctive title which would limit him to a particular line of treatment, to the exclusion of all others.

2. In consultations no rivalry or jealousy should be indulged; candor, probity, and all due respect, should be exercised towards the physician having charge of the case.

3. In consultations the attending physician should be the first to propose the necessary questions to the sick; after which the consulting physician should have the opportunity to make such further enquiries of the patient as may be necessary to satisfy him of the true character of the case. Both physicians should then retire to a private place for deliberation; and the one first in attendance should

communicate the directions agreed upon to the patient or his friends, as well as any opinion which it may be thought proper to express. But no statement or discussion of it should take place before the patient or his friends, except in the presence of all the faculty attending, and by their common consent; and no opinions or prognostications should be delivered which are not the result of previous deliberation and concurrence.

4. In consultations the physician in attendance should deliver his opinion first; and when there are several consulting, they should deliver their opinions in the order in which they have been called in. No decision, however, should restrain the attending physician from making such variations in the mode of treatment as any subsequent unexpected change in the character of the case may demand. But such variation, and the reason for it, ought to be carefully detailed at the next meeting for consultation. The same privilege also belongs to the consulting physician if he is sent for in an emergency when the regular attendant is out of the way, and similar explanations must be made by him at the next consultation.

5. The utmost punctuality should be observed in the visits of physicians when they are to hold consultation together, and this is generally practicable, for society has been considerate enough to allow the plea of a professional engagement to take precedence of all others, and to be an ample reason for the relinquishment of any present occupation. But as professional engagements may sometimes interfere, and delay one of the parties, the physician who first arrives should wait for his associate a reasonable period, after which the consultation should be considered as postponed to a new appointment. If it be the attending physician who is present, he will of course see the patient and prescribe; but if it be the consulting one, he should retire,

except in case of emergency, or when he has been called from a considerable distance, in which latter case he may examine the patient and give his opinion in writing, and under seal, to be delivered to his associate.

6. All discussions in consultations should be held as secret and confidential. In case one or more of the participants in a consultation cannot agree with the others in reference to any important point, either in the diagnosis of the disease or the future treatment of the patient, such difference of opinion shall be forthwith communicated by the attending physician to the patient or his responsible friends, in order that they may decide whose opinion and advice they shall accept and act upon.

7. As circumstances sometimes occur to render a special consultation desirable, when the continued attendance of two physicians might be objectionable to the patient, the member of the faculty whose assistance is required in such cases should sedulously guard against all future unsolicited attendance. As such consultations require an extraordinary portion both of time and attention, at least a double honorarium may reasonably be expected.

8. A physician who is called upon to consult should observe the most honorable and scrupulous regard for the character and standing of the practitioner in attendance; the practice of the latter, if necessary, should be justified as far as it can be consistently with a conscientious regard for truth, and no hint or insinuation should be thrown out which could impair the confidence reposed in him, or affect his reputation. The consulting physician should also carefully refrain from any of those extraordinary attentions or assiduities which are too often practised by the dishonest for the base purpose of gaining applause, or ingratiating themselves into the favor of families and individuals.

Article V.—Duties of Physicians in cases of interference.

1. A physician, in his intercourse with a patient under the care of another practitioner, should reserve the strictest caution and reserve. No meddling inquiries should be made—no disingenuous hints given relative to the nature and treatment of his disorder; nor any course of conduct pursued that may directly or indirectly tend to diminish the trust reposed in the physician employed.

2. The same circumspection and reserve should be observed when, from motives of business or friendship, a physician is prompted to visit an individual who is under the direction of another practitioner. Indeed, such visits should be avoided, except under peculiar circumstances; and when they are made, no particular inquiries should be instituted relative to the nature of the disease, or the remedies employed, but the topics of conversation should be as foreign to the case as circumstances will admit.

3. A physician ought not to take charge of or prescribe for a patient who has recently been under the care of another member of the faculty in the same illness, except in cases of sudden emergency or in consultation with the physician previously in attendance, or when the latter has relinquished the case, or been regularly notified that his services are no longer desired. Under such circumstances no unjust or illiberal insinuation should be thrown out in relation to the conduct or practice previously pursued, which should be justified as far as candor and regard for truth and probity will permit.

4. When a physician is called to an urgent case, because the family attendant is not at hand, he ought, unless his assistance in consultation be desired, to resign the care of the patient to the latter immediately on his arrival.

5. It often happens in cases of sudden illness, or of recent accidents

and injuries, owing to the alarm and anxiety of friends, that a number of physicians are simultaneously sent for. Under these circumstances, courtesy should assign the patient to the first who arrives (unless the patient or some responsible friends express a preference for another), who should select from those present any additional assistance that he may deem necessary. In all such cases, however, the practitioner who officiates should request the family physician, if there be one, to be called, and, unless his further attendance be requested, should resign the case to the latter on his arrival.

6. When a physician is called to the patient of another practitioner, in consequence of the sickness or absence of the latter, he ought, on the return or recovery of the regular attendant and with the consent of the patient, to surrender the case.

[The expression "patient of another practitioner," is understood to mean a patient who may have been under the charge of another practitioner at the time of the attack of sickness, or departure from home of the latter, or who may have called for his attendance during his absence or sickness, or in any other manner given it to be understood that he regarded the said physician as his regular medical attendant.]

7. A physician, when visiting a sick person in the country may be desired to see a neighboring patient who is under the regular direction of another physician, in consequence of some sudden change or aggravation of symptoms. The conduct to be pursued on such an occasion is to give advice adapted to present circumstances; to interfere no further than is absolutely necessary with the general plan of treatment; to assume no future directions unless it be expressly desired; and, in that case, to request an immediate consultation with the practitioner previously employed.

8. A physician should not give

advice gratis to the well-to-do, either in private or hospital practice, because his doing so is an injury to his professional brethren. The office of a physician can never be supported as an exclusively beneficent one; and it is defrauding, in some degree, the common funds for his support, when fees are dispensed with which might justly be claimed.

9. When a physician who has been engaged to attend a case of midwifery is absent, and another is sent for, if delivery is accomplished during the attendance of the latter, he is entitled to the fee, but should resign the patient to the practitioner first engaged.

Article VI.—Of differences between Physicians.

1. Diversity of opinion and opposition of interest may, in the medical as in other professions, sometimes occasion controversy and even contention. Whenever such cases unfortunately occur, and cannot be immediately terminated, they should be referred to the arbitration of a sufficient number of physicians or a *court-medical*.

2. A peculiar reserve must be maintained by physicians towards the public, in regard to professional matters, and as there exists numerous points in medical ethics and etiquette through which the feelings of medical men may be painfully assailed in their intercourse with each other, and which cannot be understood or appreciated by general society, neither the subject-matter of such differences nor the adjudication of the arbitrators should be made public, as publicity in a case of this nature may be personally injurious to the individuals concerned, and can hardly fail to bring discredit on the faculty.

Article VII.—Of pecuniary acknowledgments.

Some general rules should be adopted by the faculty, in every town or district, relative to *pecuniary ac-*

knowledgments from their patients; and it should be deemed a point of honor to adhere to these rules with as much uniformity as varying circumstances will admit. With regard to club practice, physicians should be remunerated in proportion to the work done at regular tariff rates.

*Article VIII.—Of the duties of the
Profession to the Public.*

1. As good citizens, it is the duty of physicians to be ever vigilant for the welfare of the community, and to bear their part in sustaining its institutions and burdens; they should also be ever ready to give counsel to the public in relation to matters especially appertaining to their profession, as on subjects of medical police, public hygiene, and legal medicine. It is their province to enlighten the public in regard to quarantine regulations—the location, arrangement, and dietaries of hospitals, asylums, schools, prisons and similar institutions—in relation to the medical police of towns, as drainage, ventilation, etc.—and in regard to measures for the prevention of epidemic and contagious diseases; and when pestilence prevails, it is their duty to face the danger, and to continue their labors for the alleviation of the suffering, even at the jeopardy of their own lives.

2. Medical men should also be always ready, when called on by the legally constituted authorities, to enlighten coroners' inquests and courts of justice, on subjects strictly medical—such as involve questions relating to sanity, legitimacy, murder by poisons or other violent means, and in regard to various other questions embraced in the science of Medical Jurisprudence. But in these cases, and especially where they are required to make a *post-mortem* examination, it is just, in consequence of the time,

labor, and skill required, and the responsibility and risk they incur, that the public should award them a proper honorarium.

3. There is no profession by the members of which eleemosynary services are more liberally dispensed than the medical, but justice requires that some limits should be placed to the performance of such good offices. Poverty, professional brotherhood, and certain of the public duties referred to in the first section of this article, should always be recognized as presenting valid claims for gratuitous services; but neither societies for mutual benefit, for the insurance of lives or for analogous purposes, nor any profession or occupation, can be admitted to possess such privilege. Nor can it be justly expected of physicians to furnish certificates of inability to serve on juries, to perform militia duty, or to testify to the state of health of persons wishing to insure their lives, obtain pensions, or the like, without a pecuniary acknowledgment. But to individuals in indigent circumstances such professional services should always be cheerfully and freely accorded.

4. It is the duty of physicians who are frequent witnesses of the enormities committed by quackery, and the injury to health and even destruction of life caused by the use of quack medicines, to enlighten the public on these subjects, to expose the injuries sustained by the unwary from the devices and pretensions of artful empirics and impostors. Physicians ought to use all the influence which they may possess, as professors in colleges of pharmacy, and by exercising their option in regard to the shops to which their prescriptions shall be sent, to discourage druggists and apothecaries from vending quack or secret medicines, or from being in any way engaged in their manufacture and sale.

Special Selections

THE TREATMENT OF ACUTE GENERAL PERITONITIS ORIGINATING IN THE VERMIFORM APPENDIX, WITH ILLUSTRATIVE CASES.*

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The observations of surgeons and pathologists during the last ten years have conclusively proved that the various diseases recognized clinically under the names of typhlitis, perityphlitis, and certain forms of peritonitis all have their origin in certain morbid conditions of the vermiform appendix. According to the nature and degree of the primary lesion in the appendix and the nature and extent of the secondary results to which it gives rise, the clinical picture presents many varieties, the recognition and treatment of which have given rise to much discussion. Of these varieties the most severe and fatal is that in which disease of the appendix gives rise to acute general peritonitis, and the object of the present paper is to make a few remarks on the treatment of cases of this kind.

It was in these cases that *post-mortem* examination first clearly revealed the importance of the appendix as a pathological agent. As it was often found to be perforated by a foreign body or small *faecal* concretion, this was naturally regarded as the origin of the mischief. The exact part played by foreign bodies and concretions is even now by no means clear; but it is certain that general peritonitis may have its origin in an appen-

dix which contains no solid body and in which no perforation exists; it is certain also that in all cases the peritonitis is due to the invasion of the peritoneal sac by micro-organisms derived from the interior of the appendix, whether they escape from it through an actual perforation or penetrate its intact but damaged wall.

With regard to the distinction between local and general peritonitis it is difficult logically to draw a hard and fast line, for even in the worst and most fatal cases the inflammation is hardly ever universal; but for practical purposes the case may be termed general when pus or septic fluid is found in the pelvic pouch, in both flanks, and among the small intestines as high as the navel, and when the inflammation is nowhere limited by firm adhesions. Such a condition, even when the upper part of the belly and the peritoneum covering the stomach, liver and spleen is not obviously affected, is almost always fatal, and gives rise to a clinical picture quite distinct from that of a localized peritoneal abscess however large. Moreover it demands a different and much more energetic treatment.

Acute general peritonitis, thus defined, may arise in several ways, each way presenting somewhat different clinical history and symptoms. The first and most characteristic may be called the acute fulminating variety. Pathologically this consists of a very acute septic invasion, spreading with such rapidity that the greater part of the peritoneum is involved in twenty-four or thirty-six hours, and in which the virulence of the micro-organism is so great, or the resistance of the tissues so feeble, that the inflammation is not limited by the formation of durable adhesions among the surrounding intestines. The absence of the power of resistance is also shown by the tardy formation of pus, for even

*Read before the Birmingham and Midland Counties Branch of the British Medical Association.

on the third or fourth day the abdomen may be found to contain little pus, but an abundance of turbid, stinking serum. Clinically, this type of acute appendicitis presents a familiar picture, in which a quite sudden onset of acute abdominal pains, rapidly followed by vomiting, distension, constipation, and collapse with abdominal facies, form the chief features. If nothing is done death occurs with all the familiar features of general peritonitis from the seventh to the tenth day. The history and symptoms of such a case, together with the actual state of the appendix forty hours from the onset of the illness, are well illustrated by the following case, which occurred recently in my practice.

Case 1.—On the night of August 21st, 1897, a man aged 30, went to bed feeling quite well. After a somewhat disturbed sleep he woke at 6 a.m., with a severe gnawing pain in the right iliac region of the abdomen. He took a little brandy and a quarter of an hour later vomited. The pain continued during the day, and he vomited two or three times; the bowels also acted once. The pain having become more severe he took aperient pills and some salts, but vomited both back without effect. After this the stomach rejected everything soon after it was taken. About thirty-six hours after the first onset of pain I saw him in consultation with his medical attendant. He had then a typical abdominal facies, a quick, full pulse, a temperature of 101° , and a somewhat distended and rigid abdomen, with considerable tenderness, but no swelling in the region of the cæcum. I had no hesitation in diagnosing acute appendicitis and on opening the abdomen a few hours later found acute general peritonitis of the lower abdomen on both sides, with about a pint of turbid inodorous fluid with flakes of lymph. The appendix was swollen to the size of a man's forefinger, intensely injected, and its tip covered with recent

lymph. After removal it was laid open and found to be filled tightly with dark recent blood clot adherent to a much swollen and injected mucous membrane. The operation was borne well, and the subsequent progress of the first four days appeared most satisfactory. Vomiting ceased, food was retained, the bowels acted, all distension and tenderness disappeared, and the normal respiratory movement of the abdomen was restored. The temperature, however, remained between 100° and 101° . On the fifth day he became maniacal, incessantly talking nonsense, and refusing food. These symptoms grew worse; he had no sleep, rapidly emaciated, and died exhausted on the eighth day without any return of abdominal symptoms. No *post-mortem* examination was permitted.

The above case is a good example of the acute fulminating variety. Another variety is that which follows the bursting of a localized abscess around the appendix by some mechanical cause, such as a blow or strain. In many cases there is a distinct history of this kind, and I have known a case in which the history and symptoms appeared to point clearly to rupture of the intestine, prove to be one of acute general peritonitis supervening on old quiescent mischief in the appendix. In the following case, although there is no history of a blow or strain, the fact that a localized swelling in the right iliac region was detected on the third day of the illness, and that on the following day the patient had a sudden attack of agonizing pain followed by general collapse makes it probable that a localized abscess had suddenly burst into the general peritoneal cavity. The history is as follows:

Case 2.—On January 4th, 1897, a healthy boy of 14 felt poorly, and was given two aperient pills by his mother. The following day he was purged, and vomited, and complained of pain in the belly of sudden onset. On the third day the doctor in attend-

ance found a swelling in the right iliac region. The next day, after a sudden agonizing pain followed by collapse, a consultation was held, and a few hours later I opened the abdomen and found a quart or more of turbid, semipurulent, very offensive fluid in the general abdominal cavity. There was acute general peritonitis on both sides as high as the navel. On separating some adhesions round the appendix a collection of more purulent fluid escaped. The appendix, which contained a concretion, but was not perforated, was removed, and the lad, after passing through a condition of prolonged and dangerous collapse, eventually made a good recovery.

There is one more variety of acute general peritonitis originating in the appendix. In this variety the onset is less acute and the early symptoms less severe. In fact, clinically, it appears to be an ordinary case of what used to be called typhlitis. There is little pain, moderate fever, a tender swelling in the right iliac region, and constipation, but no vomiting after the first day; but the swelling, instead of gradually disappearing, or coming to the surface in the form of a localized abscess, becomes lost in increasing general distension, which begins in the lower part of the abdomen and then spreads upwards. These symptoms point to a gradual spreading of peritonitis beyond the area to which it was at first confined by intestinal adhesions. The general symptoms do not quickly become alarming, and cases of this kind may last a fortnight or more before death occurs, as it invariably does unless relief is given by operation. The following is the history of such a case:

Case 3.—On July 16th, 1897, a boy aged 11, apparently in good health, fell from a wall. During the whole of the following week he complained frequently of pains in the belly. On July 22nd, as the pain was worse and he began to vomit and to pass slimy, offensive motions, a doctor was summoned. Under small doses

of morphine he at first greatly improved, but on July 27th, eleven days after the fall from which he dated the first symptoms, he seemed worse, and I saw him in consultation. The boy was slightly flushed, but had a perfectly tranquil expression. Just before my arrival he had got out of bed and passed a normal motion. The mouth was dry; the abdomen showed slight general distension, and marked rigidity and tenderness, the latter chiefly on the left side, to which most of the pain had also been referred. There was no localized swelling in the right iliac region, and no tenderness of McBurney's point. *Per rectum* there was a tense, elastic swelling in the recto-vesical pouch. The diagnosis hesitated between general peritonitis arising from the appendix, and intussusception only partially strangulated. On opening the abdomen, a large quantity of stinking pus was found in the pelvis and in both flanks. The appendix was perforated, and a small concretion which had escaped from it was found in the pelvic pouch. The appendix and a large piece of infiltrated omentum were removed. The boy made an excellent recovery, and is now quite well.

These three cases were all treated on the same plan, which I will now describe. In the first place the operation from start to finish was carried out with strict antiseptic precautions. It would hardly be necessary to mention this but for the fact that some surgeons, once satisfied of the existence of pus or stinking fluid, appear to permit themselves considerable laxity in the details of asepsis, thinking that in the presence of unlimited quantities of septic organisms the introduction of a few additional ones is a matter of no great consequence. In the case of abdominal suppuration this is certainly a mistake, for in many cases of this kind only the bacillus coli is present, and the introduction of staphylococci or streptococci may be a fatal complication.

Certainly the presence of the former in the peritoneal cavity does not necessarily prevent the primary union of the parietal wound, and if suppuration occur in this, a mixed infection, original or added by the surgeon, may be suspected.

The abdomen was in each case opened by a median hypogastric incision. Without this it is impossible either to cleanse the left flank or to drain the pelvis. On the other hand, it is not difficult to reach and resect the appendix, and complete the operation through a median incision, as was done in two or three cases which I have quoted. In the other I found it necessary to make a second incision over the cæcum in order to remove the appendix, although I was able to find and examine it through the median incision.

With regard to the method of removing the appendix, I believe the quickest and best way is to make a circular incision round it, about an inch from the cæcum, and, after stripping the peritoneum and subserous layer back to the cæcum like the sleeve of a coat, . . . ligature the denuded appendix close to the cæcum with fine silk. The appendix having then been removed and the ends of the ligature cut short, the peritoneal sleeve is drawn down and ligatured over the stump. The meso-appendix and its vessels are ligatured with a separate ligature.

The removal of the appendix I consider to be an essential part of the treatment of cases of general peritonitis. In the case of a localized abscess it is generally held, and I believe rightly, to be unwise to disturb adhesions more than necessary for fear of generalizing the infection. For the same reason it is not advisable to make a prolonged search for the appendix, after opening and draining a localized abscess, and it is certain that leaving it in such cases is no bar to recovery. In general

peritonitis, on the other hand, the only chance of averting a fatal result is to remove the focus of infection and as much of the toxic products as possible. In other words, the appendix must be removed, and all intestinal adhesions thoroughly separated in order to liberate and remove the collections of pus and lymph among the coils. In all my cases I found and removed large quantities of pus or semipurulent fluid, not only from the neighborhood of the cæcum, but from the pelvis and the left flank.

The abdomen was cleansed in all cases by means of sponges on holders without the use of irrigation, which I have discarded. It is quite impossible either by sponges or by irrigation to remove all septic matter from the abdomen, and experience has shown it to be unnecessary. If the greater part be removed, together with the infective focus, the peritoneum can deal with the remainder, even when this is considerable. The great objection to irrigation is the danger of carrying septic matter into the upper part of the abdomen, which, as we have seen, generally remains free even in the worst cases.

After cleansing the abdomen as thoroughly as possible, the wound was sutured, and a large glass tube passed to the bottom of the pelvis. In one case a gauze drain was also passed through the lateral incision down to the stump of the appendix, but I believe it was unnecessary. Very little fluid came away through the tube, except in the third case, which was left in for two to four days, and then replaced by a small rubber one. I am not sure that in cases of operation within thirty-six to forty-eight hours of the onset of peritonitis, like the first case, it would not be better to close the abdominal wound and dispense with drainage. This has been done successfully, but I have not yet ventured to do so.—*Brit. Medical Journal.*

THE TREATMENT OF THE PUERPERIUM.

In the *British Medical Journal* of October 23rd, 1897, Dr. A. H. Wright gives us a view of the methods and results reached in the lying-in wards of the Toronto General Hospital. He tells us that before vaginal examinations the hands are washed for four minutes in hot water, using soap and a nail-brush; the nails are cleaned with a penknife; and then the hands are washed for two minutes in hot bichloride solution (1 to 2000), using a nail-brush again. The hands are then immersed in hot bichloride solution (1 to 1000) immediately before making an examination, and carbolyzed vaseline is used for a lubricant when required (generally not used). They use an ordinary minute-glass, such as is found in a kitchen for cooking eggs, to govern the time the hands are cleaned. The glass is attached to the wall near the delivery bed. It is reversible, and takes six minutes to empty from one side to the other. There are on the glass notches to indicate three and four minutes. At the same time the accoucheur takes off his ordinary coat and puts on a clean white apron. The best apron is one that goes around the body, with sleeves which go to the elbows. Both hands and fore arms are bare.

The instruments, forceps, etc., are kept in a boiling solution of carbonate of sodium one-per-cent. for ten minutes before and after they are used. Glass or rubber catheters are employed, and half a pint of a solution of carbonate of soda is passed through the catheter after it is used, and it is then placed in a bichloride solution, 1 : 1000.

After labor the vulva is washed with a warm soda solution, then with a bichloride solution, then a powder composed of boric acid and acetanilid is freely applied, and then the vulva is covered with a thin layer of absor-

bent cotton which has been taken from a bichloride solution. Over this is placed a sterilized absorbent pad.

The patient is prepared for the delivery table by the matron or nurse in accordance with fixed rules, which however are not printed. During labor the vulva is covered with a bichloride pad.

The printed rules and the homely cooking minute-glass were not popular at first. The resident assistants sometimes ignored them or obeyed the directions in a half-hearted way. The two years, from 1891 to 1893, were a transitional period, during which the rules did little or no good. The results were certainly discouraging, as a death from septicemia occurred in each of these years. Since November, 1893, their results have been better, as they had five hundred deliveries without a death from any cause. Excepting in two cases, to which the writer refers again, the patients have gone out well, so far as they can be at that time. In no single instance since November, 1893, has a patient, transferred to another part of the hospital, died of pneumonia or any such disease. It happens that most of those women who died during the nine years were transferred to the General Hospital during illness, but these deaths are included in this record.

Before giving any further particulars as to mortality or morbidity the writer refers to certain details relating to matters which have given much anxious thought. In his private practice he had not used the vaginal douche either before, during or after labor as routine practice for fifteen years. When he first commenced work at the hospital eleven years ago, he found certain members of the staff using the vaginal or uterine douche to a considerable extent. This has gradually become less common, until it has almost gone out of fashion. For sometime a vaginal douche was given immediately before and after labor, and an intra-uterine

douche was given when the temperature went up. During the last two years no douche has been given either before or after labor unless there seemed to be some special indication for it. When there is evidence of a foul condition of the interior of the uterus, causing sapremia, or something worse, the intra-uterine douche is sometimes used. The "rinsing" curette with the douche is employed occasionally. His own preference is to have the patient anesthetized, introduce his hand into the vagina, clean out the interior of the uterus with his finger-tips, and then wash out with a 1-per-cent. solution of creolin.

The use of the forceps is discouraged. No resident assistant is allowed to apply the forceps without permission of the medical superintendent or a member of the visiting staff. They have a forceps delivery about once in twenty cases. The patient is generally placed on her back and delivery accomplished by the resident assistant. The forceps used is either the Elliott or the Simpson axis traction. Chloroform or ether is sometimes administered.

Catheterization is considered an evil. The nurse is expected to get along without it. They want no catheter epidemics. They have had no cases of cystitis due to the use of the catheter in 1,250 cases recorded. The catheter is used about once in fifty cases (not including catheterizing before operative procedures or in cases of eclampsia). The bedpan is in certain cases placed under the patient and left there for some time, the nurse going to another part of the ward. It frequently happens that the patient is unable to micturate while the nurse is watching her, but does so after she is left alone. The last resource is to administer a copious enema, after which the urine generally comes while the bowels are being evacuated.

The placenta is generally expressed by the modified Crédé, or what is commonly known in Canada as the

Dublin, method. The uterus is watched for fifteen minutes with the left hand over the fundus. Efforts are then made to squeeze the placenta out by grasping the fundus with thumb and fingers of one hand, or sometimes with two hands. This can generally be better accomplished with the patient on her back. If the placenta cannot be expelled in thirty to forty-five minutes, the hand is introduced into the vagina or uterus and the placenta is extracted. The operator is again expected to thoroughly cleanse his hand before such introduction. In the cases under his care a douche is not administered after such procedure unless some bad symptoms appear.

In the whole number of cases reported only one instance of mastitis with suppuration occurred; and in this patient it was thought that mastitis existed before labor. The nipples are carefully watched, and if they become sore are washed after the child nurses with a carbolic solution (1 to 40), after which the following is applied, as recommended first by Hirst, of Philadelphia: Castor oil and bismuth subnitrate, equal parts. If the breasts become uncomfortable or painful from distention a binder is carefully applied. They use what is generally known in New York as the "Murphy binder," or the Snively modification of the same. They are now introducing the Y-bandage (Boston Lying-in Hospital), which has been very satisfactory to the writer in private practice in certain cases. Where they wish to prevent the secretion of milk—as, for instance, when the babe is still-born—they depend entirely on the Murphy binder, which is applied rather tightly, generally the day following labor.

Morphine administered hypodermically subdues most quickly the excitability of the nerve centres in convulsions.

Chloral hydrate is the best remedy to prevent recurrence of convulsions after they are to some extent brought

under control. It is also sometimes useful as a preventive remedy when the symptoms of toxemia are severe and convulsive seizures are feared, but have not yet appeared. Wright sometimes combines the two remedies for severe convulsions giving the morphine hypodermically and the chloral by enema. Chloral sometimes has a good effect on the convulsions, but its administration has frequently disappointed him. There is no doubt that bleeding in properly selected cases has a good effect. We neglect it too much in these modern days. The writer has had but little experience with veratrum viride, and where he has seen it administered has not been favorably impressed with the results. He only mentions pilocarpine to give it an unqualified condemnation, as he considers it both uncertain and dangerous.

The author has not space to discuss the important subject of the induction of abortion or premature labor. He objects strongly to the former (except in extreme cases), and he does not hurriedly resort to the latter. In the five hundred patients to which he has specially referred there were twenty-one cases of toxemia, with five of eclampsia. They induced premature labor twice, and assisted labor by digital dilatation of the cervix and the use of forceps in three instances.

RELATION OF SOME FORMS OF CONSTIPATION TO DEGENERACY.

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Stigmata of degeneration are seen so frequently upon so many organs of the human anatomy that there is justification of the supposition that almost every organ may be sometimes affected. Such stigmata upon the ear, palate, or jaw are so conspi-

cuous and so easily examined that they have naturally attracted closer attention than those affecting the internal organs; but there is reason to believe that the alimentary tract comes in for its share of these marks of degeneracy. There is no good physiological reason why the ear, for example, should be selected by nature, rather than the liver, as the organ upon which to stamp her mark of degeneracy; and, while at present there may be little positive evidence that such stigmata are often found in the liver, there is certainly little evidence that would negative such a supposition.

The study of the known stigmata is so comparatively new that the subject has not yet been threshed over and over, as has almost every disorder of the internal organs. The result is that there is a tendency to account for a malformed palate with the single word "Degeneracy," while some obscure disorder of the alimentary tract, which may be just as much an effect of degeneration, is christened as an "itis," so many forms of which have been handed down for generations in medical literature. For it is much easier to adapt almost every obscure disease to one of the multitudinous "isms," or to call it an "itis," than to trace through obscure ancestral lines and intricate paternal and maternal anatomical anomalies in search of proof of degeneracy, with little prospect of sufficient requital in the end.

The condition of chronic constipation so frequently found existing among classes of well-recognized degenerates seems sometimes to be a congenial defect; but this condition is seen also in cases that are apparently free from the marks of degeneration. In such obscure cases, however, a careful examination will sometimes reveal other conditions which point to degeneracy. In institutions for the treatment of abnormal mental conditions—that is, for insanity, idiocy and epilepsy—chronic

constipation is a universal complaint, and cathartics and laxatives play an important part in the medical treatment given in such institutions. And while large numbers of the inmates of these institutions show characteristic maxillary, palatal or other recognized stigmata of degeneracy, there is usually no organic disease detectable in the organs of the alimentary tract. As far as can be ascertained, the liver, pancreas, spleen, kidneys and all the intestinal glands are, organically at least in a normal condition. Of course functionally some of them must be abnormal, and between this condition and mental abnormality there is apparently some connection, since they so frequently exist together.

Occasionally, however, cases are seen in which there are no mental abnormality and no conspicuous stigmata of degeneration, but in which a chronic constipation has existed from childhood and which cannot be accounted for except as a congenital defect. If a thorough examination is made in such cases it is often surprising to find how many stigmata do really exist, and how narrow an escape from degeneracy some most intelligent and "well-balanced" people have had. A careful examination of ancestral records, when they exist, often throws a new light upon an otherwise obscure picture, as in the following cases of two brothers. These two brothers were men of exceptional intelligence, and also of unusual size and muscular development. Instinctively of a scholarly bent, they were also athletes as well, and apparently as nearly normal men, mentally and physically, as are found in any walk of life. But both of them were troubled with a tendency to constipation which had existed since their earliest recollection. Even when in the pink of condition as college athletes this tendency still asserted itself, necessitating the constant use of mild laxatives. It was this anomalous condition which led to a careful

examination for stigmata of degeneration and a search of the ancestral records. In both brothers I found a slight but significant anomaly in the upper maxilla. The older brother had a supernumerary tooth in the upper jaw, there being two instead of one lateral incisor on the left side; but the tooth alignment was so perfect that even intelligent dentists had failed to notice the extra incisor. The central incisors were perhaps an eighth of an inch to the right of the median line, but straight, and the entire arch and all of the teeth were beautifully formed. In the upper jaw of the younger brother I found that the first bicuspid on either side was absent. It was apparently from defective dentition, there being no spaces for them, the hard palate showing corresponding constriction. The alignment, however, was almost perfect.

On examining the ancestral records, which fortunately were unusually complete, some significant data were found. The father had been a professional man, who came from a long line of cultured professional men. He was a man of considerable ability, but lacking in the push and stamina which characterize men of a vigorous race. In stature he was rather above the average, but he was of poor muscular development. He was apparently one of those men so frequently seen in aristocratic lineages, who, while not degenerates themselves, are close to the border line, and whose children are likely to be degenerate unless intermarriage with some vigorous and less ancient line acts as an extenuating factor. In this instance the marriage had been a most fortunate one. His wife, a highly intelligent and unusually vigorous woman, came from a race of hardy Scotch Highlanders, who, three generations before, had immigrated into one of the frontier territories of America and there produced a race as vigorous as the original stock. With few exceptions the members of this family had been

of unusual muscular development and energy. From this union of degenerate aristocracy and vigorous Highland stock came the two brothers, partaking of the refined tastes of the paternal branch, and having combined with it the athletic vigor of the maternal branch. In going over the ancestral records of both branches of the family, I found that the father's mother (who, like her husband, was descended from a long line of highly cultured ancestry) had a peculiarity in jaw formation. The upper jaw was much constricted, with absence of several teeth and marked irregularity of the others. The lower jaw was either actually protrusive, or apparently so from the undeveloped condition of the upper. Her mother had had a supernumerary incisor tooth almost identical with the condition spoken of in the tooth formation of the older brother, except that the upper jaw was not fully developed, the alignment of the teeth being imperfect on account of this constriction.

The chronic constipation so persistent in both brothers seemed to be due largely to a lack of "tone" in the alimentary tract; and by careful observation a peculiarity of the muscular systems was discovered which might be regarded as akin to the intestinal inertia. By careful comparison with other athletes, both in and out of training, it was found that the muscular systems of both brothers tended to lose "tone" when not in training very much more rapidly than is customary with ordinary athletes. They were able to get into "condition" in an unusually short time, and when trained showed unusually strong and active muscular systems; but the muscular "tone" left them rapidly when not in training. This apparently paradoxical condition of the muscular system was perhaps due to the inherited disposition of both paternal and maternal ancestry, the characteristics of the muscular Highland stock predominating during activity, and the more æsthetic lineage, being represented at other times.

In this connection it should not be forgotten that victims of inebriety often give a history of chronic constipation which existed long before they became addicted to the use of alcohol; and there is almost invariably a neurotic taint in the direct ancestry of such cases. And it is often found that the progeny of such inebriates have a tendency to constipation, even when not having a strong tendency to inebriety. The inference which may be drawn from such cases is that there is some congenial defect, which may perhaps be a manifestation of the same force that produces a morel ear or a deformed palate, but is exerted on the muscular and glandular systems instead of the osseous or fibrous structures.—*Medical Record.*

WASHING THE BLOOD IN ACUTE URÆMIA.

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Uræmia is a condition dependent upon the retention in the blood of waste products that should be cast out by the kidneys. When the accumulation of these toxic products has been very rapid, the nerve centres are excited into explosions of nervous energy which are clinically manifested by convulsions. No emergency of general practice needs to be more promptly met, and in none has the therapeutical handling hitherto been more unsatisfactory. Failure to relieve acute uræmia has been partly due to the former belief that it was invariably the result of a single cause, whereas it is now known that the poisons producing the condition are many, and that these may be produced by widely differing causes. This has been demonstrated by the careful work of Bouchard, and, in our own country, of Christian A. Herter. The object of this brief paper is not to discuss theories, but to point out a measure of value when the condition

of acute uræmia confronts us. And here we must discriminate between the acute nephritis with resulting uræmia which occurs as a part of an acute infectious disease and which depends upon the infecting agent, and the acute exacerbation of uræmia occurring in the course of chronic nephritis. These latter cases are frequent in the city life and in hospital practice, and to them is especially applicable the procedure herein advocated. The patients may present the usual premonitory symptoms of Bright's disease, or, without warning, convulsions may determine the occasion of the physician's first contact with the case. The convulsions may be followed by coma, or, instead of coma, violent and active delirium may occur between successive attacks of convulsions. Many cases are mistaken for epilepsy, and in all the differentiation requires careful study. The study is important, because the prognosis in acute uræmia depends upon the ease and rapidity with which the toxic principles may be eliminated by the system. In this elimination all the excretory organs must take part, but the amount that can be carried out through the skin and bowels by the action of drugs, hot air, and hot packs is so small as to render dependence on these channels unsafe in the face of impending repetition of convulsions. Chloroform usually controls the convulsions, but is disastrous to the patient. Morphine hypodermatically was warmly commended by the late Dr. Loomis and, under the influence of his teachings, largely used, but it is a treacherous drug in cirrhotic kidneys, and small doses will sometimes have a poisonous effect. Exacerbations of acute uræmia occurring in the course of chronic nephritis often happen when the patient feels unusually well and has indulged freely in flesh meat or alcohol, thus adding an acute toxæmia to the already existing blood deterioration. In these cases, blood letting to the extent of one or two

pints followed by the injection of decinormal saline solution directly into the blood current, or into the subcutaneous tissues, or, when sterilization of apparatus cannot be depended upon, into the rectum, will give rapid and striking benefit. In the fourth medical division of Bellevue Hospital and in the Gouverneur Hospital, this is now the routine procedure, and it seems to the writer to be a marked advance over the older methods. It is simple, rational, and efficient, but is not applicable to old exhausted subjects in the terminal stage of chronic nephritis. Recent medical literature bears abundant testimony to its efficacy. Professor Albert Robin is cited, in the Paris letter to the *Medical Record*, January 15, 1898, page 103, as having treated cases with good results. The Philadelphia *Medical Journal* of January 8, 1898, has an editorial observation on page 57 commending it.

John Van Rensselaer, in a paper before a medical society of Washington, D.C., called attention to the value of venesection and saline infusion in cases treated at the New York House of Relief.

Hughes and Carter, in their Boylston prize essay for 1893, make a study of uræmia and state that free venesection cannot be too highly recommended, as either an abortive or a curative measure in grave uræmia. They further state that even a pronouncedly weak pulse will in no wise forbid its employment, as they have repeatedly seen the pulse strengthen while the blood was flowing. They also urge strongly that the bleeding be supplemented by transfusion of a decinormal saline solution.

J. W. Hoff has had uniformly good results, in fifty years' practice, from venesection in eclampsia, as well as in other diseases.

F. W. Todd commends Hoff's paper, and adds a successful case of puerperal eclampsia in a moribund woman.

C. A. Murray believes that there is no other rational treatment for puerperal eclampsia.

Richardiere, in two cases of uræmia, removed blood and introduced double the quantity of Hayem's artificial serum with good results.

A. Albu has very often seen the symptoms of acute uræmia disappear after blood letting, but cautions against its use in old cases of contracted kidneys with coexisting asthenia.

Nothnagel, on the other hand, thinks that little can be accomplished by it except when the arterial pressure is very high.

T. H. Thompson says that, although almost universally mentioned in text-books, blood letting in uræmia is rarely resorted to by the modern practitioner. Thompson cites a case in which he believes that it saved a man's life.

F. O. Yost accords venesection high rank as a means of removing the cause of the attack.

D. L. Beckingsale records the sensible conviction that the progress of medicine does not depend solely on discoveries in bacteriology, toxins, and chemical therapeutics, but also on culling from the experience of the illustrious dead and assimilating all that is worthy and reliable. He hopes that blood letting will reassert its proper position as a remedial agent.

T. K. Clarke does not remember to have lost a case of puerperal eclampsia since he began to treat that condition by venesection.

William M. Holladay says that in that dreadful disease, puerperal eclampsia, blood letting is a remedy by no means to be despised. He has treated eight cases and saved eight mothers and six children.

George C. Law, makes a plea for venesection, which he believes to be the most prompt and efficacious remedy at our command in puerperal and uræmic convulsions. He deplors that therapeutic pessimism which considers it a mark of a weak intellect

to believe in anything our forefathers held to be true, before the days when the schizomycetes and microbes began to hold sway.—*N. Y. Medical Record.*

THE MODERATE USE OF ALCOHOLIC BEVERAGES.

The question as to what extent the indulgence in alcoholic beverages is injurious, to what extent they may be indulged in with impunity, and to what degree they may even be beneficial, is of much importance to the welfare of the human race. The modern method of determining such matters by laborious statistical investigation is by many looked upon as a most reliable procedure, although this expedient of endeavoring to conclusively decide this question, is not, it must be admitted, a faultless one. As generalization in most things leads to errors, so, too, in an attempt to decide the degree of injuriousness or, perchance, healthfulness of alcoholic beverages, generalization does not hold out any hopes for the realization of satisfactory results. Individualization is necessary, in a high degree, where the possible benefits or injuriousness of a moderate indulgence in alcoholic beverages are to be weighed and considered. The question of the healthfulness, innocuousness, or injuriousness of a moderate use of alcoholic beverages is pre-eminently a hygienic and medical question—a question, in other words, of preventive as well as curative medicine. It is, at the same time, a question of social and economic importance and deserves, in a high measure, the attention of every good citizen. It is a problem that must finally be settled by unbiased, well-balanced, and well-educated scientific minds, who are thoroughly conversant with all the factors that may play a role in the matter.

A few years ago statistics, having a bearing upon this problem, which had been gathered in England, were

published in the English medical journals. They were to determine the relative longevity of total abstainers, moderate drinkers, and excessive drinkers. According to these statistics the average age of moderate drinkers exceeded that of the total abstainer, while the excessive drinkers, as might be expected, attained the fewest number of years. A flaw in these statistics could readily be recognized, in the fact that among the total abstainers must have been many who abstained from alcohol on account of invalidism or infirmity of some kind, whether such infirmity may have been due to a previous over-indulgence or other causes. On the other hand, there may have been some who were using alcoholic beverages in moderation on account of their invalidism. In order to avoid all sources of error, therefore, these points, and probably others, would need careful consideration in gathering trustworthy statistical material.

Struempell, who is, we believe, a total abstainer, has by careful statistical investigation arrived at the conclusion that the average daily consumption of, approximately, over one and a half pints of beer causes pathological changes in the liver and kidneys which may lead to cirrhosis and chronic nephritis. The injuriousness of even moderate indulgence in alcoholic beverages to psychopathic and some neurotic individuals is a well recognized fact. Nevertheless, their indication in some affections, phthisis, for instance, is equally well recognized. As far as the individual is concerned, the interdiction as well as a moderate allowance of alcoholic stimulants must be left to the discretion of competent medical advisers. Alcohol is a stimulant which, like all other stimulants, must be used with discretion; but its tissue saving qualities in fevers, as well as wasting diseases that are unaccompanied by fever, are well known and have been scientifically demonstrated. The possible disadvantage of a retardation of the

process of digestion which, from a purely chemical standpoint, is ascribed to the use of alcoholic stimulants during meals is, no doubt, abundantly overbalanced by its alleviation in many cases of a temporary nervous exhaustion or irritability, whereby it often becomes possible to digest a meal which, without any alcoholic stimulation, would be impossible. All such arguments point toward the necessity of careful individualization. Boix, in his book on the "Liver of Dyspeptics," found in his experiments upon animal that poisonous products of digestion, viz., acetic butyric, valerianic, stearic, margaric, oleic and palmitic acids, and the toxins of the bacillus coli, which cause, according to Boix, cirrhosis of the liver in rabbits when mixed with their food, are, in a measure, made innocuous if they are administered in conjunction with a certain amount of alcohol. To what extent these experimental results may be confirmed must be left to future research and observation. They serve to again remind one, however, that fanaticism and one-sided views may be detrimental to truth and the best interests of the human race. Climate and occupation are among the factors that, besides other indications and contraindications may have some bearing in determining, whether, in a given case, alcohol in some form may be permitted or must be prohibited.

Neither the individual who, from sentiment, seeing friends or members of his family ruined by alcoholic over-indulgence, becomes a prohibitionist, nor the religious fanatic, can be a proper guide in this question, which can only be determined by the exact research and observation of unbiased and analytical minds. Whether a moderate amount of alcohol may be beneficial or injurious, however, it will, in all probability, never be possible to determine satisfactorily in a general way. Each case must be considered separately. It is a matter which will always have

to be left to the discrimination of the unbiased, well-informed medical adviser.—*Medical Review.*

MEDICAL MEN AS INSPECTORS OF SCHOOLS.

The appointment as one of Her Majesty's Inspectors of Schools of Dr. Eichholz, a gentleman possessing medical and scientific as well as literary qualifications, would seem to be a new departure in the Education Department. The inspectorial staff, which consists of upwards of a hundred gentlemen of undoubted standing in the world of letters, will be none the worse for an admixture of the scientific element, especially when that scientific element brings in a practical knowledge of the health conditions of child life. There are frequent points of contact between the domain of education and that of hygiene, and an intelligent adjustment of the one to the other cannot fail to be of service to the rising generation. This principle has already been acknowledged by some School Boards. A knowledge of medical subjects is becoming each year more and more necessary for those whose duty it is to inspect the work of local school authorities. There are many points of importance in education which would naturally come within the ken of the inspector with medical training, but would not be so obvious to others. We may mention, as examples, such matters as the physical indications of injurious schooling, the judicious selection of physical exercises for different classes of children in elementary schools, the health conditions of pupil teachers, and the measures to be taken for the discrimination and suitable treatment of children abnormal as regards sight or hearing, or physically or mentally defective. With regard to the last-named class, the necessity for medi-

cal diagnosis has been recognized by a Departmental Committee. In relation to the duties of inspection of resident institutions, such as those established under the provisions of the Blind and Deaf Act, 1893, as well as those recommended by the Committee on Defective and Epileptic Children, in which not only the teaching arrangements but those of a domestic character (including the feeding of the children) come within the purview of the Education Department, the value of a medical element in the inspectorate would be very great. While local school authorities ought to be made responsible for obtaining the necessary medical advice on such matters, it seems essential that the supervising authority should also be furnished with the means of seeing that such duties are properly provided for and carried out. In another class of cases public health questions come much into relation with school management, and from time to time discussions crop up as to the part played by elementary schools in the spread of infectious disease, and local education and sanitary authorities are now and again in disagreement as to structural arrangements alleged to affect the health of school children. For all these reasons it seems to us important that the Education Department should have at its command officials of medical training, whether in its staff of inspectors, which are its eyes, or in the central bureau, which is its central nervous system. It seems strange, indeed, that a great department like that of Education should be forced to borrow medical opinions when required from another Government Board, more especially as it owes much of its organization to a member of the medical profession, the late Sir James Kay-Shuttleworth, in his capacity of Secretary to the Committee of Council on Education.—*Brit. Med. Jour.*

THE HEALTH RESORTS OF CANADA.

In health resorts, no less than in rich mineral deposits, Canada has been singularly blessed; and while the returns from the latter are attracting most attention at present, a time will come when the Canadian summer resorts will be a very important source of revenue to the country. Not only does this apply to the Arcadian spots which may eventually be patronized by wealth and fashion, but also to those wilder regions which satisfy the needs of the sportsman.

The *waldeliebe* will always be a strong instinct in the Anglo-Saxon race, and to the thickly populated republic immediately south of us, Canada must always be what Scotland has for more than a century been to England, a cool and bracing retreat during the heat of the summer months. This is a very considerable advantage, and to the medical profession especially, the development of our rugged northland in this way will be attended with results the most gratifying.

But the first step towards popularizing Canada rests with the frontier cities. In this way Montreal has already done a great deal, and all summer long that city wears a bright gala aspect which pleases from the start. Its sumptuous hotels are crowded with wealthy American and English tourists, many of whom are led to spend the summer in some of the picturesque resorts upon the lower St. Lawrence.

Toronto seems to have maintained a somewhat different policy. There is not a single modern hotel in the city; and while the modest hostelries which we have may suit the needs of commercial travellers, they are not what the wealthy touring public are accustomed to. One step has been taken in making the visitors' lot tolerable, by allowing the cars to run on Sunday, but much is still left to be desired, and the Toronto Sunday

is still the derision of the American newspapers, and could hardly be more rigorous under the old blue laws of the Puritans.

The disgraceful condition of the streets is another defect which the stranger within our gates cannot forgive. The general impression upon the newcomer is of a place far gone in decay. The air of shiftlessness and neglect is everywhere present. No wonder, therefore, that so few find Toronto attractive, and prefer Montreal with its gala dress, going away without ever knowing what a grand region for sport and recreation stretches northward from Muskoka to the shores of Georgian Bay.

TONICS AND STIMULANTS.

A certain amount of discrimination should, we think, be used in the use of tonics, and especially in neurotic cases where the reserve power is probably very limited. It has been proved already that constant alcoholic stimulation is hardly a wise proceeding, and in cases of this sort often leads to dipsomania. In a similar manner the patient's habit of using some powerful "nerve tonic" to help him through with his work eventually produces a condition of the nervous system quite as perilous as that produced by the unwise use of alcohol. A great many such tonics have been exploited in the last year or so. Some of these are probably worse in their ultimate effect than others, but all, we feel assured, should be used with much caution and even with a certain amount of doubt. The preparations of strychnine, by reason of their disagreeable taste, have been in a measure superseded by phosphatic syrups, extracts of kola, sweet preparations of malt, and a multitude of medicinal wines. These are all excellent tonics, and when given under medical supervision will be found very useful, but the indiscriminate use of these by the laity ought, we

think, to be discouraged, as the "tonic habit" leads to conditions quite as disastrous as the drink habit, and undermines the flimsy structure of the nervous and degenerate, who, we hardly need add, are the chief consumers of these preparations.

THE TREATMENT OF INEBRIATES.

We are glad to be able to present to our readers this month a copy of the practical recommendations of Dr. Rosebrugh regarding the treatment in Ontario of alcoholic inebriates. These recommendations may be summarized as follows: 1. The establishment, by the Ontario Government, of an industrial reformatory for the more hopeless or incorrigible class of habitual drunkards. The farm-colony plan is recommended with cheap buildings, and the indeterminate system of sentences adopted. 2. The establishment in Toronto of an hospital for the treatment of the more hopeful class of inebriates, where a course of three or four weeks' treatment would be given. 3. The introduction of special medical treatment for the relief of dipsomania among the inmates of the Central Prison, Toronto. 4. The adoption of the probation system for the supervision of incipient drunkards at large on suspended sentences. 5. A cottage home in Toronto for the care and medical treatment of the more hopeful class of female drunkards. 6. Sentencing the more hopeless class (the gaol class) of chronic female drunkards to the Mercer Reformatory on the maximum sentence of two years.

Dr. Rosebrugh suggests also the practicability of the establishment of an inebriate department in the general hospitals throughout the Province. To make this a success, however, would involve—as the doctor points out—the appointment by the

Government of a medical man as inspector, who had given the medical treatment of inebriety a special study.

These recommendations, we must say, strike us most favorably. If chronic inebriety can be successfully treated in local general hospitals, even in twenty per cent. of the cases, this would be a very economical arrangement. The question is a most important one, and we doubt not these recommendations will receive proper recognition by the powers that be.

MEDICAL MEN IN THE KLONDIKE.

In the large immigration into the Klondike many medical men have joined, a large proportion of whom are on the "long trail." It may not be generally known that for that wilderness special qualifications are necessary. The entry for physicians, without British qualifications, is through the examination of the Northwest Territories or of those provinces with which medical reciprocity is in force—British Columbia and Manitoba (we believe) and the payment of \$50.00.

THE BICYCLE AGAIN.

With the era of cheap wheels and their almost universal use arises the question, Are there not some from whom it should be prohibited? We refer particularly to the young and the delicate. Half grown boys and girls are surely not benefited by its use. The ape-like posture, too, affected by so many male riders, and evidently encouraged by manufacturers, can hardly be beneficial to a growing youth.

In Toronto, moreover, the circumstances are most unfavorable for riding, and even where this form of

exercise might be indicated upon general sanitary considerations, one must hesitate before advising it in Toronto. In no country village in Canada can streets be found in a condition as bad as that in which many streets in Toronto are permanently maintained. The dangers for a nervous person are very great furthermore, for most of one's riding must of necessity be taken upon the way-strip between the tracks, with electric cars and an endless succession of traffic teams upon both sides. Such a nervous strain is very undesirable.

PEPTO-MANGAN, GUDE.—By reference to our advertisement page it will be seen that the Breitenbach Co. have had the usual troubles with lying representatives of substitution. The clause in their contract is definite enough for anything, and it is much to be regretted that it is not copied into all similar agreements in this country. The preparation of Dr. Gude is a truly neutral peptonate of iron and manganese, in fact the only neutral preparation of this character. It is thoroughly reliable, and we believe cannot be excelled where an iron preparation is indicated.

Physician's Library.

The Year-Book of Treatment for 1898. A Critical Review for Practitioners of Medicine and Surgery. Crown octavo, 488 pages. Cloth, \$1.50. Philadelphia and New York: Lea Brothers & Co., 1898.

No medical practitioner, either general or special, can afford to be without this book, the value of which far exceeds its very modest price, for it furnishes a critical and trustworthy epitome of a year's progress, in all branches of practical medicine. That it has performed this service acceptably is evident from the demand which has rendered necessary the publication of fourteen consecutive annual issues, and it may be truly said that the possessor of the series enjoys the advantage of a connected view of medical advance, always fresh and brought up to the latest date by each new volume. The entire domain of practical medicine is thus annually covered in a series of twenty-five chapters, each being assigned to a recognized authority who gives in full detail all that is new, tried and true, with a critical statement of the comparative value and applicability of the various drugs, formulæ and methods of treatment.

Twentieth Century Practice. By Leading Authorities of Europe and America. Edited by THOMAS L. STEDMAN, M.D. In Twenty Volumes. Volume XIII., Infectious Diseases. New York: William Wood & Company, 1898.

The contributors to this volume are Brouardel, Comby, Ernst, Hart, Solomon Smith, Victor Vaughan, and Dawson Williams. This is one of the most scientific volumes of this fine publication. The subject of Ptomaines, Toxins, and Leucomaines is discussed by Vaughan. Although this author's reputation as an author on bacterial poisons is to some extent discredited by certain critics, owing to the large number of "irons he has in the fire," yet after one has read this exhaustive disquisition on the subject of so much importance in modern medicine, he cannot but feel that the subject has been treated in a masterly fashion. We have been particularly edified on the reading of Ernst's article on Infection and Immunity. The present position upon these two points is well summarized. Under the first head after a definition of the term, he discusses the various causal elements of infection. In dis-

cussing these points he refers (1) to the experiments which have led up to our present ideas upon infection, and the methods by which it may occur; (2) to the question of natural and acquired immunity. Medical men interested in sanitation will find the subject of Water-borne Diseases by the late Ernest Hart and Solomon C. Smith, of particular interest, especially the articles on typhoid fever, cholera and malaria. Dr. Dawson Williams, Editor of the *British Medical Journal*, contributes a good article on Incubation and Infectiousness in Acute Specific Diseases. We have been much edified by the elaborate paper on Smallpox by John W. Moore, of Dublin. Several excellent photographs of the lesions of the confluent type appear. Speaking of the *causa causans* of smallpox, the writer says that the bacteriology of variola is yet incomplete and unsettled. He refers to the work of several observers. A

coccus has been found by Cohn, a rod-shaped bacillus by Klein, and a bacillus found by Bay. Brouardel writes on vaccinia and Comby one on mumps.

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A Compendium of Insanity. By JOHN B. CHAPIN. Illustrated. Philadelphia: W. B. Saunders, 1898.

We have long held that the handbook on insanity would be a most useful book for the general practitioner who first and often comes into contact with victims of mental disease, a work, besides, which would be of use to the final student who now, in Canada at least, is expected to know something of the subject; and, also, to the lawyer, whose notions of medical psychology are often so hazy. This book supplies the want. The print is large, the paper good and matter well presented. The pictures are interesting.

Miscellaneous

A SIMPLE REGIMEN FOR OBESE PERSONS.—Dr. Cathell reports that he has had more than ordinary success during several years with a plan of treatment outlined below. In his view obesity is due to one or more of the following causes: Congenitally small lungs with a defective oxygenating capacity; eating excessively of all kinds of food; want of lung-expanding exercise; using alcoholic drinks to excess. Many of the drugs which have a known fat-reducing power exert an injurious action on the other tissues of the body, and if used persistently for any length of time or in efficient doses become dangerous to health. While the various obesity cures are so rigorous that few carry them out conscientiously, the treatment of the author is very simple. The patient has only to drink after each meal a glass of the artificial Kissingen water to be found at drug stores and soda-water fountains, and

on the succeeding day a glass of artificial Vichy water also half an hour after each meal. This is to be continued week after week until the patient comes down to a normal degree of stoutness, and the waters are then discontinued. While taking the waters the person should keep a weekly record of his weight, always using the same scales and wearing the same clothing, and should also, for his own satisfaction, record his chest, waist and hip measurements. If the loss in weight exceeds two pounds a week, the amount of each water should be made smaller; and if the loss has not equalled two pounds a week, a few teaspoonsful of lemon juice should be added to each glass of the Kissingen water to increase its acidity, and a teaspoonful of aromatic spirits of ammonia to the Vichy to increase its alkalinity. The diet should be light and contain only small amounts of fat, starch, sugar, and

alcohol. Moderate outdoor exercise should be included in the day's programme. The mode of action of these waters taken in the manner described, is not clear, but their efficiency is too well established to admit of doubt.—*Maryland Med. Jour.*

A MEDICAL MAN HONORED.—Dr. Alexander Hill has been elected to the honorable position of Vice-Chancellor of Cambridge University. This is the first time in history, says the *Lancet*, that the highest executive office of one of the two leading English universities has befallen a medical man. John Caius, who, like Dr. Hill, was a student of St. Bartholomew's Hospital, ruled over the College, which he refounded and endowed, from 1559 to 1573, but he did not fill the office of Vice-Chancellor. John Harvey was appointed Warden of Merton College, Oxford, in 1644, but lost his office six months later on the fall of Charles I. Of other medical men, if any, who have filled headships of colleges there is, we believe, no record, Dr. Alexander Hill's mastership of Downing alone excepted. Of late years medicine has made great advances at the universities, and we must look upon the election of Dr. Hill not only to the mastership of Downing, but to the Vice-Chancellorship of the University, as a proof of the increasing influence of our profession at Cambridge, and also as one of many recent indications that medicine is rapidly stepping into a position of equality with the sister professions of theology and law. Dr. Hill holds the office of Lecturer in Advanced Anatomy to the University. He was for some time Hunterian Professor of the Royal College of Surgeons of England. He is the author of many papers on the anatomy and physiology of the nervous system, the translator of Obersteiner's "Central Nervous Organs," and the author of the "Physiologist's Note Book," and other

works. Last year he succeeded Sir William Broadbent as President of the Neurological Society, and it is as a neurologist that he is chiefly known to the profession.—*Jour. of the Amer. Med. Assn.*

SLAUGHTER-HOUSE ORDINANCES IN EARLY ENGLAND.—In Richard II.'s time we find an act for "the punishment of them which cause corruption near a city or great town to corrupt the air" (12 Rich. II., C. 13, A.D. 1388), the preamble of which notes that so much filth "be cast and put in ditches and other waters, and also within many other places . . . that the air is greatly corrupt and infect and many maladies and diseases do daily happen." A century later we find an act under the heading "Butchers shall kill no beasts within any walled town or Cambridge" (4 Henry VII., C. 3, A.D. 1487). The preamble of this speaks of the "Corruptions engendered by reason of the slaughter of beasts and the scalding of swine," the "unclean and corrupt and putrified waters," and adds "that in few noble cities and towns, or none within Christendom, the common slaughter-house of beasts should be kept within the walls of the same, lest it might engender sickness unto the destruction of the people." It was nearly four hundred years later when the 317 slaughter-houses scattered promiscuously in New York city below Eightieth Street, were driven out, and the work concentrated in clean abattoirs outside. When London was to be rebuilt after the great fire, a law was passed for "the cleansing and scouring of vaults, sinks and common sewers" (19 Ch. II., C. 3, A.D. 1667), and in 1670 another was passed for the better paving and cleansing of the sewers and streets in and about the city of London.—*Jour. of the Amer. Med. Assn.*