The Canada Lancet

VOL. LXV. TORONTO, DECEMBER, 1911 No. 4

EDITORIAL

DRS. J. HUGHLINGS JACKSON AND JOSEPH BELL.

The issue of the *British Medical Journal* for 14th October records the deaths of Drs. Jackson and Bell. In the passing of these two very distinguished men the whole world of medicine is vastly poorer by their removal from our midst. We speak with unusual feeling, for we recall the brilliant teaching of both and their unfailing kindness. In our remarks there is something that is intensely personal; for we went around the wards with them on many an occasion. Dr. Bell was a gifted surgeon and clear teacher. His judgment was quick, but sure. He was most resourceful in an emergency, and his dexterity in operating was a marvel to all who saw him. He seemed to be guided by an unerring instinct. It was this great keenness that made Conan Doyle select him as the prototype of Sherlock Holmes. Dr. Bell was a gifted member of a gifted family.

Turning to Dr. Hughlings Jackson we find much difficulty in finding words to express our appreciation of the man. He was of that order that stands out unique and alone. No matter in what age he had come he would have found much to investigate and many unknown conditions to clear up and problems to solve. In medicine he was a true philosopher and problem solver. He was in medicine, as Kepler was in astronomy, a real lawgiver. It is not too much to state that he was one of the most original types of mind that the history of medicine can claim as all her own. As a teacher he was most fascinating, as his words were the words of wisdom sped by the bowstring of truth. We like to think of him in the words of Shakespeare:

> He was a scholar, and a ripe and good one;
> His love sincere, his thoughts immaculate;
> Lofty and sour, to them that loved him not;
> But to those men that sought him, sweet as Summer.

THE FREE DISPENSARY QUESTION.

Dr. C. N. B. Camac, of New York, was the guest of the Toronto Academy of Medicine on the evening of 31st October. He took for his subject the management of the Free Dispensary.

In the first place he condemned the superficial work that was too frequently done in dispensary practice. In many instances a prescription was given for some leading symptom, but no thoroughgoing investigation was held into the patient's condition. He thought that three or four new cases was enough for any one person in a day. It was quite impossible to properly study out twenty and thirty new cases in one day by one practitioner, as he had known in some instances.

He then went into the history of the dispensary and gave some very interesting information on this topic.

He then took up the question of patients who tried to secure free attendance at the dispensary, but who were able to pay. The remedy for this lay in the dispensary employing a visiting nurse, who visited the homes of these patients, and corrected any attempt at imposing on charity.

He also handed out some severe criticism of those doctors who made use of the dispensary improperly to gain practice for themselves. The dispensary might be made to serve this end in various ways. This evil was remedied to a great extent by the visiting nurse, and the system of having social members, who supplied useful information.

The dispensary could be made of the utmost value in detecting disease in its early stages and doing much for the cure of these cases. The hospital too often only got the wrecks to treat when they were past cure.

The dispensary could also be made of much value to the student and the nurse, as a proper selection of cases could be made and used for the purpose of clinical teaching. This phase of the dispensary work had been too much neglected.

It was of the utmost importance that some intelligent person should see the patients and make a working classification of them. This could be done by a trained lay person. The dispensary staff should be large enough to avoid overtaxing any one person. Too many cases led to hurry and careless diagnosis and treatment.

Some dispensaries have adopted with advantage the plan of selecting practitioners throughout the city and assigning certain hours to them. This was good for these practitioners, and it distributed the work. These doctors treated the poor in this way and not at their own offices.

The dispensary must be properly equipped. There must be a laboratory in connection with it, and x-ray apparatus, etc. Patients can be treated much more cheaply in the dispensary than in the wards of the hospital. Experience showed that interne treatment cost about twenty times as much as externe treatment. Those in charge of a dispensary should have staff meetings and study and discuss interesting cases. There should be a record of these cases. Some form of card system ought to be adopted.

Many patients went about from one dispensary to another. This could be prevented by the visiting nurse, and the social member system. The dispensaries could save much money on this class. Of these "drifters" many different diagnosis were made in the several dispensaries, according to the stage at which the saw the case. There should be co-operation among the dispensaries to avoid this evil.

There should be a complete understanding between the staff of the dispensary and the management of the hospital and dispensary. This was of the utmost value in securing good work and proper co-operation between the business side and the professional side of the work.

There should be a small fee charged patients. About 10 per cent. were very poor and could pay nothing. Such a fee should be charged those who afford a little as would meet the expenses of the dispensary, and enable it to treat quite free the destitute poor. Some large hospitals now had a profit from the dispensaries. Drugs, spectacles, crutches, trusses, etc., were supplied at a slight margin of profit.

THE NEW GENERAL HOSPITAL.

Quite recently the information has been given out that this institution will cost for grounds, buildings, and equipment at least $3,250,000. This is a very large sum.

The number of beds, we learn, will be about 600. There are numerous lecture rooms and laboratories; and these things come high. These subsidiary buildings and the nurses' home are necessary, but they do not furnish accommodation for beds. One wonders where the money goes, but try to build a hospital and the discovery will soon be made.

The Western Hospital is erecting two pavilions for patients, and a centre building for administration and offices. These buildings will accommodate 150 patients, and will cost about $180,000. A separate heating plant is being installed at a cost of about $15,000. When this hospital is completed there will be accommodation for 350 beds. The total cost, including the nurses' home, will be about $450,000.

It should be mentioned that St. Michael's Hospital is also erecting a fine addition.

In this way the hospital accommodation of Toronto will be vastly improved. The city is growing so rapidly that by the time these buildings are completed there will still be further need for more hospital buildings.

It does not require much of a prophetic eye to see that the time is not very far distant when there must be a new hospital located somewhere in the eastern portion of the city.

THE SEX PROBLEM.

It was under this heading that the newspapers spoke of some lectures delivered a short time ago in Toronto by Prof. Winfield S. Hall, who lectures on physiology in the North-Western University Medical Faculty of Chicago. Dr. Hall is an author on physiological subjects of repute. What he might have to say should receive attention.

If there be any truth in the old sayings, "Knowledge is power" and "Truth is mighty and must prevail," good should come of Dr. W. S. Hall's plain and candid talks to young men and women. There is something, however, in the old saying that it is not always the lack of knowledge, but the not living up to what we have that causes so much trouble. There are few who may not be aware of the main facts regarding the sex problem, but too many pay no heed to what they know.

We have on several occasions expressed our views on the enormous ravages of the venereal diseases. It is with a view to the suppression of some of this evil that societies have been formed in many countries to spread information upon these topics. These societies have done much good, and much more may be expected from them.

But this work should not be left to the sporadic efforts of well-meaning persons and societies. We have contended that in the more advanced classes in our schools, and to the young men and women attending our colleges, some system of imparting proper information should be given. This could be done without cost to the public, and greatly to its advantage. Some knowledge would be better than much vice and disease.

RACE DETERIORATION.

It must be admitted that one of the effects of civilization is the deterioration of a certain percentage of the people. The causes for this have been worked pretty thoroughly by students of social economy.

One of these causes is the growth of cities and the large numbers now living in slum districts, as compared with the open air of a country life. In the large cities of the world this congestion has become extreme in many places.

Another cause is the high pressure of modern life. The terrible strain on the nervous system is sending many to the asylums, others to prison, and making many prematurely old, with hard arteries. "Why should you be anxious over much, why should you die before your time?" This is an old question. The answer is to hand if one cares to look for it.

But the "modern" diseases are responsible for no small share of the degeneration complained of by writers. Syphilis and gonorrhoea have sowed a plentiful crop of tares among the wheat. The number of persons who are physical and mental wrecks and degenerates through the influence of venereal diseases is very great.

Thn we have to give full weight to the drugging and intemperance that one finds prevalent. The evil effects of drink and drugs are terrible. Something must be done to lessen the evils of drink. In Britain every man, woman, and child consumes on an average each year stimulants to the value of $20.

Unfortunate marriages are the cause of a good deal of degeneration. There ought to be legal provision that would restrain the marriage of such as are likely to produce degenerates.

The army of degenerates is becoming a fearful burden on those who are doing the useful toil of the country.

BIRTHS, MARRIAGES AND DEATHS IN ONTARIO.

The Government report for the year 1909 is to hand. It contains much valuable information. The estimated population is given at 2,233,264. The births for the year were 54,465, the marriages were 22,366, and the deaths were 32,628.

The birth-rate was 24.4 per 1,000 of the population. The marriage-rate was 10 per 1,000, and the death-rate was 14.6 per 1,000. As a means of encouraging the increase in births reference is made to the plan adopted in New Zealand of paying the cost attendant upon the birth of a child in the homes of the needy. It is contended that more care should be given to the care of the native-born children, and to the increasing of the birth-rate, rather than to so much expenditures on the inducing of a foreign population to come to the country.

On the matter of infant mortality the report states that a little over 22 per cent. of all the deaths were of infants under one year of age. One out of every eight born died during the first year of life. The total number of infant deaths under one year to the total number of births, 52,629, gives a death-rate per 1,000 births of 132. This is certainly high for a province such as Ontario. The infant death-rate under five years to the total deaths is 27 per cent. In Quebec the rate was as high as 47 per cent. for infants under five years.

The deaths from typhoid fever were 669, and from tuberculosis 2,380. The total from these diseases was 3,049. This would give about 10,000 ill with typhoid fever, and about a similar number with tuberculosis. This would in the value of lives lost and in the value of time lost through sickness and other expenses give a loss of at least $12,000,000 on these two diseases.

The deaths from cancer numbered 1,597. There is a tendency to increase in the number of deaths from this disease.

THE ONTARIO MEDICAL COUNCIL.

There are some points in the annual announcement for this year to which we wish to call attention. We hope the members of the profession will give the transactions of the Medical Council close scrutiny.

On page 121 we find that the receipts for the year amounted to $21,652.17. By turning to page 123 we find that the total disbursements were $23,752.28. This shows that the expenditures for the year exceeded the income by $2,100.11. Of this sum only $700 went to a card system. All the rest was on current expenditures for the year. This is a most unhealthy condition of affairs, and demands retrenchment. In other words, the council began the year with $16,168.27 in the bank and ended the year with only $14,068.16.

The assets of the medical profession of Ontario are as follows, according to the announcement of 1910, page 134:

Cash invested	$25,250 00
Invested in property	18,053 75
Cash on hand (1911)	14,068 16
Total	$57,371 91

By turning to page 236 of the announcement for 1907 we find that the cash balance on hand was $64,841.44. It will be seen that the assets are now $7,469.53 less than they were four years ago. The only offset to

this shrinkage is that the property now held by the Medical Council may have advanced some in value. This does not in the least affect the statement that the assets have depreciated by the above named sum. If the assets had not depreciated the Medical Council would be all the better off by the advance in value of the property. Had the expenditures only equalled the revenue there would to-day be on hand $64,841.44. To this might be added that gain in value of the property, said to be about $7,000, as estimated on page 134 of the announcement for 1910. This would give a grand total of assets of $71,841.44, as against $64,371.91, including the supposed increase in value.

The Medical Council must give this matter its very careful attention. This habit of running behind at the rate of about $2,000 a year must cease.

There are other points in the announcement of this year which we propose taking up, but enough for the present.

ROWDYISM AMONG STUDENTS.

In our last issue we spoke plainly against rowdyism among students. In a large aggregation of young men, collected from almost every corner of the earth, there will always be the cheap bravado, the foolish swaggerer, the empty head that, like other empty things, makes most noise.

It is not much use to hope for too much from these. One may advise them, but the advice is to a great extent wasted. But they can in a very large measure be controlled. One of these ways is for the student body to say "no" to such conduct, and say as Macbeth did of medicine: "Throw physic to the dogs; I'll none of it." When the students as a body make up their minds that they will not have this sort of thing in their midst, it will to a very large measure cease.

But the authorities of the university should act. Any student who disgraces his college should be told to quit his bad habits or quit the college. This would end the matter in short order. The loss of such a student would be similar to the loss of a rotten potato out of a pit. It would have the wholesome effect of preventing the tainting of others. With Tennyson's "In Memoriam":

> And thus he bore without abuse
> The grand old name of gentleman.

LOSS FROM TYPHOID FEVER AND TUBERCULOSIS.

Experts have paid much attention to the actual money loss arising from these two diseases in the United States. Placing Canada on the same basis per population, our loss in lives and sickness from typhoid fever would be about $30,000,000 annually, and the loss from tuberculosis would be about $40,000,000. This gives a grand total of $70,000,000 as the loss in money from two causes largely preventable.

But some may say that these diseases cannot be prevented. These persons will tell us that there are typhoid fever carriers and consumption carriers. This is quite true; but we can do much to render these people harmless, and so in the end eliminate these diseases. Typhoid fever is a dirt disease, mainly due to drinking polluted water. Tuberculosis is mainly due to insanitary housing. It is quite true that the homes of the wealthy are not exempt from the inroads of tuberculosis, but the feeding grounds for the disease are the slum parts and insanitary districts of our cities. From these the disease spreads.

In the case of typhoid fever the following table proves very conclusively what may be done:

THE ANNUAL DEATH RATE FROM TYPHOID FEVER PER MILLION OF THE POPULATION.

	Average 1901-1904.	Average 1905-1908.	Per Cent. of Decrease.
Spain	459	362	21
U. S. (Reg. Area)	332	288	13
Italy	358	283	20
Austria	198	156	21
Servia	808	147	81
Belgium	175	122	30
Ireland	134	91	32
England and Wales	118	80	31
Scotland	122	74	38
Netherlands	87	72	16
Prussia	91	61	32
German Empire	75	53	29
Switzerland	65	46	28

If one turns to tuberculosis a fall in the death rate is also noted. This shows what can be done. The proper disposal of manure, garbage, refuse, old paper, old clothes, kitchen waste, and sewage is the keynote to much of the progress of the future.

Keep the water and milk supplies clean and free from infection. Do away with the feeding and breeding grounds of the fly. The fly has

been shown to carry germs of both tuberculosis and typhoid fever. The lesson then is to prevent the breeding of flies, and to dispose of the infected matter from tuberculosis and typhoid fever patients in such a manner that flies cannot get at it.

SALVARSAN IN PERNICIOUS ANAEMIA.

At a recent meeting of the Toronto Academy of Medicina, Dr. W. B. Thistle reported two cases of pernicious anaemia which he had treated by injections of salvarsan.

One of the cases had had a number of severe relapses. The blood condition had become very low. Four injections of salvarsan were given in the muscles. In the second case there were given also four injections. This case also improved very decidedly.

Dr. Thistle was very careful not to draw too sweeping conclusions from these two cases, but thought the improvement was of such a character as to show some connection. He referred to the cases that had been reported by Dr. Bramwell.

By Dr. Thistle and those who took part in the discussion the opinion was expressed that the treatment was well worthy of further trial. It may turn out that the arsenic in salvarsan has some specific action in the disease, especially if it should ultimately be proved that the disease is due to a living organism.

TACHYCARDIA IN CHILDREN.

In discussing the causes of tachycardia in children, E. Cautley (*Med. Press*, April 26, 1911) says that rheumatic fever is so rare before the fourth year of life that its possible occurrence in babies can be practically ignored. At this period of life we must seek for some toxic cause of tachycardia, if fever be no longer present, not forgetting the possibility of pulmonary tuberculosis. In older children the most important causative factor, one apt to be overlooked in children because its occurrence is unsuspected, is a mycarditis or true degenerative change of the myocardium, resulting from fever or toxemia. Primarily, myocardial disease is due to toxins; secondarily, it ensues on cloudy swelling or inflammation. Cloudy swelling is not strictly inflammatory. It occurs in high fever and in the toxemia of infective diseases, notably rheumatic affections, diphtheria and typhoid fever, although there may be comparatively little pyrexia. It may end in a variable degree of fatty degeneration.—*Am. Jour. of Obs. and Dis. of Women and Children*, Oct., 1911.

ORIGINAL CONTRIBUTIONS.

HETEROPHORIA AND HEADACHES.*

By G. STERLING RYERSON, M.D.C.M., L.R.C.P., Edin.
Professor of Ophthalmology and Otology in the Medical Faculty of the University of Toronto.

ONE symptom in the whole range of clinical medicine causes more annoyance to the patient and is a greater source of worry to the practitioner than persistent headache. Almost every organ of the body in turn is accused of being the offender, but the liver and the uterus have to take the greater part of the blame and are maltreated and punished accordingly, very often with little benefit to the patient. After months of treatment of these unfortunate organs, he or she is sent to the ophthalmologist, if in the meantime the patient has not taken the matter into his or her own hands and consulted an optometrist, who successfully sells several pairs of glasses. As is well known, astigmatism and other refractive errors are frequent causes of headaches, but muscular unbalance plays an important part in causation. It may be said axiomically that refractive headache is mostly frnotal, uterine headache bregmatic, and heterophoric headache occipital.

In heterophoria the headache is accompanied by other symptoms—reflex or neurotic character, presenting a symptom—complex, which may simulate grave organic disease, such as pain between the shoulder blades, nausea and vomiting, dizziness, confusion of vision, confusion of mind, and fear of accident in a crowded thoroughfare. Use of the eyes on railroad trains, street cars, or in shopping, render these symptoms acute. Restlessness is commonly marked, especially in children. Stevens and others have held that migraine, chorea and epilepsy result from heterophoria, and there is good reason to believe that these opinions are in some cases well founded. The following cases will illustrate the conditions produced by heterophoria: A boy aged 11 years was brought to me in February last, complaining of almost constant headache and of confusion of vision and mind. He said he lost the line when reading in his book and on the blackboard, so that he was always making mistakes, and is considered a very dull boy, and was quite discouraged in consequence. He was very restless in school and was constantly reprimanded for not sitting still. The pain he complains of was at the back of his head. He had an occasional twitching of the alæ nasi, and his parents noticed that when he chews his head is jerked upwards, backwards, and to the right. Examination showed right hyperphoria 4 degrees and hyperopia. After wearing his correction for a time without relief of the symptoms, partial tenotomy of the right superior rectus was done. A

* Read at the Ontario Medical Association this 31st May and 1st June.

month later jerking of the head had greatly diminished, and at present has almost disappeared. His headache is relieved and he is able to follow the lines in his book without difficulty.

Case II. This case illustrates the benefit to be derived from partial tenotomy of the external recti in exophoria, both for near and distance: Mr. S., aged 30, had constant headache, referred to the occiput, confusion in reading, and difficulty in fixing his eyes. He always came home from the theatre with a headache. Examination showed a small amount of hyperopic astigmatism which was corrected under homatropine, but without much benefit. A partial tenotomy of both external recti was made, with most gratifying results.

Case III. This illustrates the relief of epilepsy by treatment of hyperphoria: W. M., aged 30, consulted me in March, 1905. He gave a history of suffering from severe headaches, from which he got some relief by sending his head as far backwards as possible. For a year or more he had had slight epileptic attacks, with loss of consciousness. They were not severe and were unattended by protrusion or biting of the tongue. They probably lasted but a minute or so, and in half an hour he had recovered, except for a feeling of listlessness and drowsiness. Examination showed a myopia of 4 degrees, with hyperphoria right of 6 degrees. After correction I partially divided the right superior rectus. A test showed still 2 degrees of hyperphoria. In spite of this, he steadily improved and the attacks ceased. I kept track of him for two years, during which time he continued well, but have not heard from him since.

What is the proper course to pursue, operation or prisms? Obviously, the first consideration should be the correction of the refraction. I believe many cases of slight heterophoria correct themselves when the irritation of incorrect or of no glasses is removed. In other cases where there is little or no refractive trouble, hyperphoria, even as little as 2 degrees will give rise to annoyance and must be corrected by prisms. This is especially true of hyperphoria. It may be necessary to do tenotomy in some of these cases. I think that where after wearing a prism singly or with a spherical glass with a prism of five degrees or thereabouts, for some time without relief of the symptoms, a partial tenotomy is indicated. I would recommend a partial tenotomy in all cases of hyperphoria or exophoria of 3 degrees or upwards, but I would be chary about operating on the internal rectus. I would prefer a small advancement of the opposing muscle. It is a serious matter to weaken anyone's accommodation, and the case should be studied with great care. Finally, let me deprecate promiscuous operating for heterophoria. Choose

your cases carefully and do not divide the tendons unless you are convinced that nothing else will do the work as well.

NOTES ON A TRIP ABROAD.

BY D. J. GIBB WISHART, M.D., TORONTO.

MY observations in London were confined to the clinics of Mr. Tilley, in University College, and Mr. Lowe, in the Central Throat Hospital. The former is the speediest operator in the resection of the septum that I have seen anywhere. A private case in which he removed tonsils and adenoids, as well, did not from first to last occupy more than 25 minutes, and he made no appearance of hurry. Mr. Lowe has no fear of deformity following his resections of the septum, where he finds it needful to remove the anterior supports completely.

In Bermingham we had a small attendance at the section, but the material was excellent. There were three sessions, at each of which a single topic was thrashed out, and if time allowed a paper or two read. This method of conducting the programme appeals to me as rational, and I hope it may be adopted more fully in this side of the ocean.

The treatment of tuberculosis of the larynx, which has not been up for discussion since 1905, was introduced by Dundas Grant, Watson Williams, and Seccombe Hett, and the subject was ably brought up to date by these speakers. Dundas Grant dwelt chiefly upon the value of rest to the larynx as regards both voice and cough, the necessity for the removal of nasal obstructions, the benefits of treatment by galvanopuncture, and the value of injections into the superior laryngeal nerve for the relief of pain. His paper was an exceedingly useful discussion of a number of points which in themselves small collectively mean so much for the well being of the sufferer.

Watson Williams expressed a firm conviction in favour of sanatorium treatment as tending to the general well being of the patient, and laid stress on "moist climates, freedom from wind and dust, and moderate elevation, as being most favourable both for pulmonary and laryngeal tuberculosis." Tuberculin injections of doses just large enough to avoid any febrile reaction, were justified by his experience of twenty years' use, and Dr. Williams expressed some interesting views upon infection from human type and from bovine type considering the laryngeal symptoms were found in conjunction with the former type, and therefore required a distinction in the choice of tuberculins.

On the whole he deprecated local treatment, except in special cases.

Jobson Horne was in excellent form, and punctuated his views with a mixture of sarcasm and seriousness. He focused our attention upon the need of changing the dolumnar mucosa into the squamous variety, producing a condition of pachydermia laryngis., the nature form of arresting the disease, and for this preferred rest and the cautery. The discussion on the diagnosis and treatment of conditions in the accessory nasal sinuses, giving rise to oculo-orbital conditions, was opened by Prof. Onodi, of Buda-Pesth. He agreed that over 90 per cent. of the cases of disease of the lachrymal apparatus were of nasal origin, and argued that the occurrence of central scotoma, unilateral or bilateral, should always suggest the possibility of disease of the posterior sinuses, and render examination necessary. Again, inlatent sinus disease, where the nasal examination was negative, removal of a middle turbinal, even if no pus is found is justifiable if it relieves the symptoms, and may be resorted to if no other focus can be found for the visual disturbance. Bronner emphasized the careful exploration of the sphenoidal sinuses in case of obscure eye symptoms, retro bulbar neuritis, and slight unilateral optic neuritis. These papers drew forth a keen and prolonged discussion, and the weight of opinion was in the line advocated by the openers.

The report of Dr. Dan McKenzie upon a series of resection of the septum almost produced a riot, and it is more than probable that the whole subject will be up for discussion at the Liverpool meeting next summer, when a lively interchange of views will be brought forward.

During the meeting the members of the section were favoured with a demonstration by Dr. Wm. Hill of his method of examining the entire stomach by means of his new gastroscope, which he introduces through the Killian tube, and which he has worked out in collaboration with a surgeon, Dr. George Herschell.

In Edinburgh I spent a forenoon in Logan Turner's clinic, under the guidance of Dr. Fraser. The radical operation on the ear is not followed by packing in any case, after the first dressing, with excellent results both as to healing and hearing.

The Third International Laryngo-Rhinological Congress.

An account of this congress divides itself most readily under four heads—Place, Programme, Exhibitions, and Entertainment.

Berlin was reached via Hamburg, by a journey of three hours over a perfect line, but a dull, flat, sandy country. One is at once struck by its newness, its ugly houses, the fact that its people live chiefly in flats, and its teeming population of over two millions.

The capital of Germang has great aspirations to rank as a Weltstadt, to which it has not attained unless its character as the wickedest city of the world entitles it to this preeminence.

It is a charming city, notwithstanding, beautifully laid out, with handsome public buildings and glorious parks, splendid railway stations, and comfortable, up-to-date hotels. We saw the Emperor and thousands of his troops, the much-dreaded and certainly ungentle "Polizei," and found that Berlin really lives from midnight to four a.m., when the streets and restaurants are more crowded than at any other hours of the day. Across the way from our hotel was the Rhein gold, where literally thousands are always eating, and everywhere restaurants and beer gardens abound. There are at least two large restaurants that never close day or night during the year, except for a few hours on the 31st of December for a toilet. One wonders when the Berliners sleep, and it seems evident that every soul within the city must take one meal a day in a restaurant. It will be long, however, ere Berlin is to Germany what Paris is to France. Hamburgh, Dresden, Munich, and other cities are capitals likewise, and not likely to let Berlin forget their claims.

The war spirit is not so dominant as some papers like the Daily Liar, as the London Daily Mail is termed, would have us believe.

Socialism polled 3,500,000 votes at last election, and in the coming December elections expects to poll double that vote. The time is soon coming when the Socialists who live in the cities will demand and obtain an equal representation with their country fellows, the proportion at present being 1-10, and upon the Sunday which I spent in Berlin 250,000 citizens gathered at Flotow, one of the suburbs, and enthusiastically passed strong resolutions against all war feeling. The people are taxed to the limit, a servant girl is taxed on every shilling she earns, and so anxious is the taxgatherer that he makes an estimate of the quality and quantity of the food supplied her, and she pays heavily thereon. Wages are low, a maid of all works gets 16 marks, $14 a month, and slaves late and early. Every industry is carried by the banks, and, as we have lately seen, the money lent by these banks comes from the industrious peasant of France.

The programme—Over 400 of the leaders in our specialty, chiefly Germans, were paid their six-dollar fee and attend this congress.

The Herrenhaust, the meeting place of the Prussian House of Lords, was given over to our use, the lower floors to meetings, and the upper to the exhibitions. It was most capacious, and beautifully decorated and right in the centre of everything. The congress began

unofficially on the evening of Tuesday, the 29th August ,by a social gathering of the members and their ladies in the Herrenhaust, which, together with its charming gardens and flowing fountains, presented a magnificent picture. At nine the next morning business was formally opened under the presidency of the veteran Frankel, and the gathering was welcomed on the part of Germany by no less a personage than the Prince, fourth son of the Emperor, who, standing over six feet and in full uniform, made a capital address, and afterwards welcomed the members of the international committee in an ante-room, shaking hands with each and conversing freely in whatever language was required. It is remarkable that neither the Governments of Britain nor the United States think it worth while to acknowledge sciences, officially in such a manner, and one felt mortified that, while Austria, France, Italy, etc., were officially represented by Government delegates, our English-speaking countries were not so. This official acknowledgment of the value of scince is not the least of the reason of the preeminence of the German therein. There were four official reports presented at the beginning of each of the four morning sessions:—The Relations of the Experimental Phonetics to Laryngology, by Gutzman, of Berlin, and Struyken, of Bred; Bronchoscopy and Oesophagoscopy, their Indications and Contra-indications, by Killian, of Freiberg, Kahler of Vienna, and Jackson, of Pittsburg; The Lymphatic Apparatus of the Nose and Naso Pharynx in its relation to the rest of the body, by Broeckaert, of Ghent, Poli, of Genoa, and Turner, of Edinburgh; and, finally, the so-called Fibrous Polypi of the Naso Pharynx, the Place and Mode of their Insertion and Treatment, by Jaques, of Nancy, and Hellat, of St. Petersburg. These and the discussions thereon, together with 130 other communications from the members, kept the session fully occupied, every speaker ascended the rostrum, and the programme was dealt with without the loss of a minute. Those desiring to address the congress handed in their names beforehand, and were called in turn. Some of the lantern demonstrations were most instructive, particularly those by Killian, and during the hours of adjournment many interesting demonstrations could be seen in the side rooms.

The papers contributed upon phonetics and the exhibition in connection therewith opened up a field which was quite new to the English-speaking members.

The exhibition filled the halls and rooms of the secnod floor, and was complete in every detail. One large room was devoted to a display of every instrument illustrative of the steps in the progress of bronchoscopy and oesophagoscopy to the present time. A similar room was

devoted to phonectics. The instrument-makers were there in full force, and it required hours of diligent observation to exhaust the new invention and modifications which these had to present. Probably the most interesting was an apparatus for photographing the picture seen in the bronchi, œsophagus and stomach, which is attached to the proximal end of Burning's tube, and occupies small compass. This is made by Leither, of Vienna. To my mind, the exhibition alone makes it worth while to attend such a congress, even if the language is a matter of difficulty.

Entertainment—This is, as might be expected, in a German community, consisted chiefly in eating. We were entertained at supper by the city of Berlin in the Rathaus, which was embowered in flowers in honour, and had the theatres and opera placed at our disposal upon another evening. Some of us had the privilege of attending a massed band concert in front of the palace, when 1,200 instru-bandsmen took part. The chief entertainments were an excursion to Potsdam and The Havel, occupying an entire afternoon and evening, and winding with a presentation of a most entertaining adaptation of Salome, and of an excursion to the Health Exhibition in Dresden, which followed the close of the programme on Saturday.

Berlin will henceforth be increasingly a point of interest to laryngologists, from the acceptance of the Chair of Laryngology by Prof. Killian. The teaching of our specialty has suffered because of the increasing years and ill-health of Prof. Frankel, who has at last retired, and, although there were rumors of jealous interference against the claims of the South German, unanimous in approval.

Four years hence the Fourth Congress will take place in Copenhagen.

DISCUSSION ON THE TREATMENT OF GENERAL SEPTIC PERITONITIS. (SELECTED.)

BY RUTHERFORD MORISON, F.R.C.S., PROFESSOR OF SURGERY, UNIVERSITY OF DURHAM.

BEFORE opening the subject of treatment for discussion it is advisable to offer some general pathological considerations bearing upon the subject.

The extent of peritoneal surface has been estimated to be almost equal to that of the skin.

The shock and rapid death which result from scalding a large area of the skin are probably due to a cause similar to that which is respon-

sible for the shock and death that follow the corresponding diffuse injury resulting from the rupture of some gastric and intestinal ulcers.

The cause of general septic peritonitis is the same as that of septic infection elsewhere in the body, namely, invasion by pyogenic organisms. Their entrance in sufficient quantity to produce diffuse inflammation is practically never through the blood, but is a consequence of some gross surgical lesion. It is most frequently due to a leak in the vermiform appendix, or to a perforating gastric or duodenal ulcer. The most virulent organisms found in the peritoneum are, as elsewhere, usually strepticocci. A streptococcal infection of the peritoneum, like that of the skin, may cause death from toxaemia in a few hours, although the local reaction is very moderate.

The terminations of inflammation of the peritoneum are the same as those of inflammation in other parts of the body; they are, resolution, fibrosis, and destruction, partial or complete.

1. Inflammation may cause nothing more than a passing hyperaemia (resolution).

2. It may end in the formation of adhesions (fibrosis).

3. In local destruction of peritoneum with abscess (partial destruction); or

4. In diffuse destruction with gangrene (total destruction).

Let us deal first with the cause of the peritonitis—germ invasion. When this was first realized every surgeon attempted to get rid of the cause—the germs—with the most appalling results. In a paper on appendicitis, which I wrote about twelve years ago, gave, after a short trial of them, an emphatic warning against these attempts, saying:

The more thorough the operation performed on these patients the more quickly they die.

We have had to learn by bitter experience in this, as in other domains of surgery, that the discovery of the germ producing the disturbance in no way aids us in curing the patient. A real cure, if it be ever found, will not arise from the gross mechanical methods employed by the surgeon.

The fact is that bacteriology has done such important work for surgery that now surgeons are obsessed by it, and despise the unaided use of their own senses, and the experience of their old masters. Until a wider outlook is taken, and more help can be given to the *vis medicatrix Naturae,* the treatment of septic infection must be unsatisfactory. For surgical purposes the name of the organisms present, or even the fact of their presence, is of little avail, for we now know that no mechanical means can get rid of them, and that the name of the variety

is of little importance, because some patients with a streptococcal peritonitis recover, whilst others with a *Bacillus coli infection* die. Beyond arresting the supply of germs from the primary focus, an operation can only deal with the effects of inflammation.

I do not think it is appreciated how much there is in the old idea which considered nothing of importance but the associated circulatory disturbance. It is possible to watch all the important and naked-eye results of a peritonitis in an inflamed conjunctiva. Let me illustrate my meaning as to the circulatory disturbance by an example. In an arm too tightly bandaged, and after removal of the constriction, there may result: (1) Transitory hyperaemia; (2) fibrosis (Volkmann's ischaemic contraction): (3) partial destruction (ulceration, sloughing); (4) gangrene—the same terminations as occur in a streptococcus infection.

When it becomes apparent that the condition of the circulation is the chief surgical guide both as to treatment and to prognosis, the practical importance of this knowledge is realized. It is much more important for purposes of treatment to know how much, and what portions of the peritoneum are red and sudden than to know which variety of organism has been found in the exudate. In other words the soil and the seed both require consideration. Whatever germ is present, the prognosis is always good if the heart is strong, and the pulse of good volume and not over 100. It is always bad if there is cyanosis, if the extremities are cold and the pulseov er 120. (A patient with cold hands rarely recovers.)

Everyone now seems to believe that the sunken appearance and the symptoms of shock in cases of septic peritonitis are due to toxaemia. We know so little what toxaemia is that its influence is impossible to estimate. It is certain that the same symptoms follow the strangulation of a loop of intestine (and I have seen them occur after the ligature of piles attended and followed by no loss of blood in a nervous patient). Surely in these instances the cause is not toxaemia? Anything which seriously disturbs the balance between the somatic and splanchnic circulations will produce these symptoms, and I prefer to believe that this is their origin in cases of septic peritonitis.

A more rational treatment naturally followed upon the belief that the peritonitis subsequent to infection by germs is not a disease to be fought altogether with surgical weapons, but that it is a protective reaction of the peritoneum, one to be aided and abetted if possible, but one very readily damaged or upset. So far as I know I was the first to make the observation, contrary to the then received belief but one now generally accepted, that the peritoneum possessed exceptional im-

munity to septic infection, for in a paper read before the Medico-Chirurgical Society of Edinburgh on March 1st, 1893, the following sentences occur:

On several occasions I have observed in abdominal wounds, dressed for the first time on the tenth day, that, though the superficial parts were suppurating, the peritoneum was not involved, both, of course, having been exposed to the same deleterious influences. I have also noticed, not without surprise, that rougher surgery may be perpetuated with impunity inside of the peritoneum than would be tolerated by any portion of the organism outside of it. The unavoidable conclusion is that the peritoneum has a resisting power not belonging to other tissues.

In an article on peritonitis Bond writes:

The safety of the patient depends on the integrity of the peritoneal epithelium and of the phagocytic defence.

Other aids in the reaction against the attack of organisms of special surgical interest are a free secretion of peritoneal fluid and the plastic powers possessed by the peritoneum.

Dudgeon and Sargent have found that nearly all cases of peritonitis which recover exhibit a primary infection (probably derived from the bowel) with the *Staphylococcus pyogenes albus,* and they regard the peritoneal fluid containing this as of a protective nature and one which should not be washed out. It is certain that, in cases of septic peritonitis not due to sudden injury or to operation, preliminary changes of a protective nature are started at once. One of the most important of these changes concerns the omentum, which may often be found glued in such a position as to prove its value as a life-saving mechanism, and there can be no doubt that without it the mortality from abdominal emergencies would be much greater than it is.

Treatment.

The percentage mortality from general septic peritonitis has enormously decreased of late years, and the chief reason is that an increasing majority of the medical profession regard such a death as a serious reflection upon their promptitude, courage, and skill. Instead of injecting patients who have a ruptured vermiform appendix, or a perforated gastric or duodenal ulcer, with morphine, till their complaints cease, arrangements are now made by doctors who realize their responsibility, for immediate transference to a properly-equipped hospital. Every surgeon knows some practitioners who have made this a strict rule, and have seldom, if ever, lost a case, while the public are beginning to recognize that skilful diagnosis and early recognition of the need for

operation may be of greater importance than the method of its performance.

Nevertheless, the fact that in an important meeting such as this the treatment of septic peritonitis has been one of the subjects selected for discussion proves, if further proof is needed, that we neither have, nor expect in the near future to have, the necessary knowledge to deal satisfactorily with this dread scourge.

Some figures, collected for me by Mr. C. F. M. Saint, verified by the Surgical Registrar, Mr. R. J. Willan, and relating to cases admitted to the Royal Victoria Infirmary, Newcastle-upon-Tyne, during the year 1910, convey greater instruction than anything I can say.

Appendicitis.

There were in all 427 cases, with 18 deaths.

Post-mortem examination proved that the cause of 16 of these deaths was general septic peritonitis.

Six of the 18 were not operated upon, and all were suffering from advanced general peritonitis on admission.

Of the 12 cases operated upon, 1 died of portal sepsis 10 days, and one of pulmonary embolism 7 days after operation.

In all the remaining 10, general septic peritonitis was present at the time of the operation.

There were 290 acute cases, and all of the deaths (18) occurred in this series. (There were no deaths in the interval cases.)

Sixty-two of the 290 acute cases had not perforated, and had no associated peritonitis. There was one death from portal sepsis in this series.

Thirty-eight had perforated, but had not yet developed any gross peritonitis. In this series there was one death from pulmonary embolism.

One hundred and fifty-seven were associated with localized peritonitis and abscess. All recovered.

Thirty-three were associated with general septic peritonitis. Twenty-five were operated upon, 13 recovered and 12 died. Eight were not operated upon. Of these, 2 recovered and 6 died.

These figures convey the lessons derived from the mortality, which, of course, is the most important consideration of all, but there are others to remember. For many years in Newcastle we have taught as the ideal that the inflamed vermiform appendix should be removed before rupture or abscess has had time to develop, and that only by this means a serious and prolonged illness, with the possibility of a ventral hernia at the end

of it, can be insured against; until about five years ago this view was very commonly acted upon. Then there came a wave of opinion, based chiefly, I think, on London teaching, in favour of waiting for an interval in the most acute cases, or of taking leucocytosis as a guide, or for localization. The results of this were so disastrous, and so many patients were sent in with general septic peritonitis, that the importance of early operation in appendicitis again became universally acknowledged.

The next figures to which I wish to draw attention are an abstract from the statistical tables of ruptured duodenal ulcer admitted to the Royal Victoria Infirmary during 1910. There were 36 cases in all.

Of this number, 3 were admitted very ill with septic peritonitis and died soon after admission without operation. The diagnosis in each was verified by *post-mortem* examination. Six patients died after operation, 3 of them from general septic peritonitis and 3 from septic bronchopneumonia (1 twelve days after operation, 1 eight days after operation, 1 two days after operation).

The time at which operation was performed has been divided into periods thus:

At six hours and under there were 11 operations. All the patients recovered.

Over six and under twelve hours there were 6 operations. All the patients recovered.

Over twelve and under twenty-four hours there were 8 operations. Six of the patients recovered and 2 died.

Over twenty-four and under forty-eight hours there were 5 operations. Two of the patients recovered and 3 died.

Over forty-eight hours there were 6 cases. Of these, 2 recovered and 4 died. In the 2 cases which recovered the perforation had been entirely excluded by adhesions from the general peritoneal cavity.

The next figures refer to ruptured gastric ulcers admitted during 1910.

The total number was 16. Of these, 12 recovered and 4 died from septic peritonitis (verified by *post-mortem* examination).

At six hours and under there were 3 operations. All the patients recovered.

Over six and under twelve hours there were 7 operations. Of these, 6 recovered and 1 died (shock; patient was quite collapsed when operated upon; his pulse was 152).

Over twelve and under twenty-four hours there was 1 operation. The patient recovered.

Over twenty-four and under forty-eight hours there were 2 operations. Both patients died.

Over forty-eight hours there were 3 admissions, with 2 recoveries and 1 death. It is noted of the 2 cases which recovered that the gastric opening was localized by plugging and adhesions.

The case which died had been perforated one week and was admitted moribund. She died just after admission, no operating being performed.

Amongst the less common causes of general septic peritonitis admitted to the Royal Victoria Infirmary during 1910 there were 3 cases of ruptured small intestine from kicks. All were operated upon. Of these, 1 recovered and 2 died. The patient who recovered was operated upon twenty-four hours after the accident. Of the 2 that died, 1 was operated upon two and the other seven days after the injury. Both deaths were due to septic peritonitis.

One woman was admitted with general septic peritonitis due to rupture of the urinary bladder from a kick fourteen days before. She died after operation, the cause of death being general septic peritonitis present at the time of the operation.

Three young women were admitted with general gonococcal peritonitis. Two were operated upon, and one was left alone. All three recovered.

Three cases of general pneumococcal peritonitis were admitted. They were all little girls and very ill. One was operated upon and died. The cause of death was general peritonitis and commencing pneumonia. Two were not operated upon and died, one of general peritonitis and double empyema, and the second of general peritonitis and pneumococcal meningitis.

The last case with which I shall trouble you, and which I only present because the lesson it conveys involves an important principle of treatment, refers to a woman who was admitted to the Royal Victoria Infirmary under my care on July 16th, 1910.

She was the mother of seven children. Two days before admission she had introduced a bone crochet needle into her uterus, with the object of procuring abortion. It broke, and half of it had not since been seen. She had walked in, and immediately after admission had a rigor. Her pulse was 120 and her temperature 106 degrees F., and she looked very ill. The lower part of the abdomen was tender on pressure. Vaginal examination showed a three months pregnant uterus only.

Operation was done soon after her admission. The cervix was first divided anteriorly to admit of exploration. Her story was verified by

the discovery of the knitting needle lying across the interior of the uterus, and vaginal hysterectomy was done.

(The uterus containing the fœtus and the crochet needle can be seen in the Pathological Museum.)

The peritoneum covering the uterus was found to be acutely inflamed and raised into bullæ at parts by effusion underneath it. (There is no record in the notes of any bacteriological report.)

This woman certanly had an acute septic metritis, with commencing peritonitis, and there is but little doubt that her recovery was due to prompt removal of the infective focus.

The trend of my remarks has, I hope, led to the assumption that "general septic peritonitis" includes for the present purpose a consideration of causes, as well as manifestations, so far as the former serve as a guide to treatment.

General surgical principles have been lost sight of too often in dealing with the treatment of any special disease, and this has been especially true in the case of general septic peritonitis.

The first knowledge required concerns its cause. It is now everywhere accepted that *the* cause of general septic peritonitis is a gross surgical lesion, allowing of the entrance of organisms by a definite channel, and that blood and other infections are so rare as not to count in practical diagnosis. The statistics I have given prove, if further proof should be required, that if the cause can be effectively and early dealt with the patient will not die of peritonitis.

With regard to diagnosis of the cause, I can only say of the practitioners in our district that it is now the exception for a mistake to be made in the case of ruptured gastric or duodenal ulcer or perforated appendix. It seems impossible for anyone who has read the lucid papers of Moynihan on duodenal ulcer to miss the diagnosis of that, the most difficult of the three.

The first principle to grasp is that the peritoneum has a capacity to deal with organisms and dirt with such effect that, if an overwhelming dose from the source of supply can be prevented, recovery will follow. The only method by which this can be certainly and successfully accomplished is surgical, and consequently the first question after the diagnosis has been made in a recent case concerns an operation. When should it be done? Where should it be done? The answer to both questions is made clear by my figures. The operation should be done as soon as possible, and it should be done in a properly-equipped hospital. Objections have been frequently raised by friends of the patient, and possibly by the doctor, against the removal of anyone so seriously ill. The

answer to this is that patients are very rarely made worse by a careful removal, and they often lose their lives in consequence of the most careful attempts to treat them at home. The fact should be recognized that the best domestic arrangements can only inadequately serve the requirements of present-day surgery.

Operation.

There are three depressing factors in every such operation which require attention. The first is exposure. It is essential to keep the patients warm during the operation. This only requires to be mentioned to be approved, but it is occasionally forgotten.

The second concerns the anaesthetic. Whatever anaesthetic be chosen, as little of it and for as short a time as possible should be given. The first requirement is met by skill on the part of the anaesthetist; the second by having everything ready before the operation is undertaken and losing no time during its performance. My preference is for chloroform until the laryngeal reflex is deadened, followed by ether for the remainder of the operation.

The third—perhaps the most important of all—concerns the handling of the patient during the operation. No rough manipulations should be permitted. Pulling about and disturbance of the abdominal contents is one of the most potent causes of shock, and the mortality following rough operations is considerably in excess of those where every movement is performed as gently as possible and with a definite object.

The Abdominal Incision.

The best abdominal incisions are two in number: a straight one in the middle line and an oblique in the direction of the fibres of the external oblique muscle. They do less permanent damage to the abdominal wall, allow of more easy extension, and can be more effectively closed against subsequent hernia than any other.

The incision runs directly over the causative lesion if a diagnosis has been made. If there is no definite diagnosis to guide, the umbilicus should be excised by an elliptical incision, and the abdomen opened in its centre for the purpose. The incision should be long enough to allow of easy inspection and manipulation without mauling or rough retraction. Through it the diseased appendix will be removed, the ruptured gastric or duodenal ulcer closed, or other primary focus dealt with according to surgical rules. For excluding an irremovable focus from the general peritoneal cavity the use of gauze tampons, supported and protected by omentum and retained by temporary sutures, are occa-

sionally indispensable. Gauze should never, if it be possible to avoid it, come in contact with the small intestine, because of its liability to produce adhesions and obstruction.

Cleansing the Peritoneum.

One of the many debts which abdominal surgery owes to the late Lawson Tait is the method of cleansing the peritoneum by washing it out. It was said that, by this means, a more thorough cleansing and one which damaged the peritoneum less than any other could be made. Like all striking surgical suggestions, this was enthusiastically received, universally adopted, carried to excess, and finally condemned, for it still holds the field as the best method of cleansing the peritoneum when it is necessary to do so. If mopping appears to be needed, the mops should be wrung out of normal saline (oz.j of sodium chloride to one pint of water), and if lavage be necessary, normal saline solution at a temperature of 100 degrees F. should be employed. In the majority of cases any cleansing at all is unnecessary and, as often carried out at the present day with *dry* mops, is injurious.

The truth of this is abundantly proved by the extraordinary results achieved by Murphy, of Chicago, in general septic peritonitis from appendicitis. He neither mops nor washes, and his results carry conviction because, of his cases operated upon within forty hours after the commencement, less than 4 per cent. have died.

When is it Necessary or Advantageous t oCleanse the Peritoneum? —Much less often than we could have believed possible before the extraordinary capacities of the peritoneum for self-defence, and the ease with which these might be disturbed, were realized. My prsent practice is to reserve it for cases in which operations have been done early and extravasation has occurred widely in the peritoneum—for example, in gastric and duodenal ulcers, in recently ruptured appendix abscess, with diffused pus, ruptured gall and urinary bladder, and haemorrhages, and to introduce the tube first under the diaphragm and wash out from above downwards, with the shoulders of the patient raised. I entertain no doubt that by this measure not only are lives saved, but that, with drainage added, subdiaphragmatic and pelvic abscesses and intestinal obstruction are prevented.

Drainage.

An old rule, and still a good one, is "When in doubt, drain." This rule now, however, has a new significance. Because the older surgeons so often had doubts many of them drained in nearly every case. None

of us now doubts his capacity to *prvent* peritoneal sepsis, and prevention of sepsis is no longer an object of drainage. We drain, some more, some less, to get rid of septic products. My present views are that a temporary suprapubic glass drainage tube is useful as arresting or preventing general peritonitis by allowing of the washing out of gastric and other extravasations, the washing if possible being carried out during the repair of the focus of infection. The tube should be removed, and the small wound closed when the operation is completed. Provision should always be made for the closure of a drainage tube opening. I lost one patient from a small knuckle of intestine getting into such an opening which had been left unsutured.

The indications for more permanent drainage are the presence of infected matter or the possibility of leak from imperfect suture or damaged viscera. For general septic peritonitis the drain should be pelvic, and pelvic only, and it should be emptied at the time of the operation and kept empty afterwards by the syringe pump constantly used for the purpose by Lawson Tait. In these cases the *Fowler posture*—that is, sitting up—is now universally adopted before, during, and after operation, and if not employed to excess it is most useful.

In patients who are very ill *an intravenous infusion of normal saline solution* and a small dose of adrenalin at a temperature of 100 degrees F., slowly administered during the course of the operation, is invaluable. The total amount should rarely exceed 2 pints, and not less than fifteen minutes should be occupied over the introduction of each pint.

The dressing I advocate is a voluminous one of wool, with the object of producing elastic compression and retaining heat. The value of both is, I think, under-rated in wound treatment generally, though it is unlikely to be forgotten in the school of Gamgee.

In the after-treatment there is no more useful measure than the method of *proctoclysis* advocated by Murphy, and now used with such success all over the world. Some patients are reported to have recovered after the absorption of as much as 22 pints in twenty-four hours, and there is this to be said in favour of the method, as compared with venous and subcutaneous infusion, that it is much less dangerous, since the colon is possessed of a natural discrimination.

Stomach lavage is another valuable measure. Nothing helps to arrest the vomiting or gives such relief in the sickness of general septic peritonitis as this.

Morphine.

The most emphatic condemnation of the use of morphine, backed

up by a large amount of scientific evidence, have failed to convince me that the effects of pain and restlessness are not worse than the evil effects of this narcotic, and I do not grudge a single dose. No one, surely, doubts the serious effect of repeated administrations.

Purgatives.

Nothing is more surprising in surgery than the revolution that has occurred with regard to the use of purgatives. It seemed at one time impossible that any other view should be taken than that the only way to prevent, and the only way to cure, septic peritonitis was by free purgation, and it is humiliating, though perhaps useful, to find that a view so generally accepted and acted upon should have fallen into apparent disrepute. There is no doubt that it was once a fashion that was abused in surgery, but the proper use of purgatives should not be forgotten.

The general belief, and one well founded, is that a patient with general septic peritonitis is and looks very ill. The facies Hippocratica, so familiar to readers of text-books, is naturally expected and looked for, but there are notable exceptions. In several cases of appendicitis under my care the patient has been so well as to be walking to the operating table and exclaiming against the fuss that was being made, but the operation revealed a fetid gangrenous perforated appendix, and a large quantity of stinking purulent matter free in the peritoneal cavity.

A similar absence of symptoms may be sometimes noted in ruptured gastric or duodenal ulcers. After the initial severe pain and fright have passed off these patients may look very well, and insist there is nothing much wrong with them; and it is difficult to believe, until operation proves it, that general septic peritonitis is already present. In these instances it requires care to prevent an operation from doing harm, and some measure of harm will be done if anything more than the focus of infection be dealt with and the most gentle local cleansing employed. The peritoneum of these patients is already dealing successfully with what has escaped into it, as proved by their good condition, and their recovery depends on the stoppage of further supplies of a like nature, and the avoidance of damage to the already handicapped abdomen.

The absence of shock and serious symptoms in these cases is, as far as I have observed, associated with little disturbance of the peritoneal circulation, and the exposed intestines and peritoneum are not red.

There is an accepted aphorism in certain surgical circles that every case of general septic peritonitis not obviously moribund should be operated upon. When surgeons are guided by such rules as this, they inflict needless suffering, and bring discredit on themselves and their calling. It is time for us to recognize that surgery made easy by such

methods is bad surgery, and that operations which discover no cause requiring surgical help for the peritonitis are bad operations. I have endeavored to convey my own conviction that the object of surgery in these cases is to remove the focus of infection, and that, if this cannot be done, the operation has failed in its endeavor.

Interference is often of doubtful benefit in cases of general septic peritonitis of more than three days' duration, from whatever cause they may have arisen.

In the great majority of such instances the focus of infection has by this time been shut off, and much harm can be done by a senseless and untimely operation. In this view Berry agrees with me.

A note of two cases which I saw during the last two months will convey my meaning. Both were women, with a long-standing history of chronic gastric ulcer. In both rupture had occurred three days before my visit. Both had general septic peritonitis, and both were very ill. With the older woman, her general condition was the bad feature of the case.

She was pallid and sweating, had a quick feeble pulse and elevated temperature, but was easier of pain and had slept frequently during the last twenty-four hours. Her abdomen was distended, but not tense, and not very tender or markedly rigid. There was some dulness in both flanks, but not sufficient to indicate any considerable amount of fluid. The diagnosis made was that the rupture in the stomach was shut off from the general peritoneal cavity, that operation would be very dangerous and of doubtful benefit, and that it was best to carefully watch and wait.

In the younger patient the abdominal condition appeared to be the more serious.

She was flushed, but had a dry, warm skin. Her pulse and temperature were higher than normal, but not dangerously so, and the pulse was of fair volume. Her abdomen was tense and much distended, with signs of free fluid in the flanks. In her case the diagnosis made was that the rupture was shut off, but there was still active peritonitis without dangerous absorption.

Both were treated by partially sitting up, constant heat to the abdomen, frequent saline injections into the rectum, and small doses of morphine when required for pain or restlessness—a method known in America as Ochsner's; both developed a pelvic abscess towards the end of the second week; in both this was evacuated per rectum, and both recovered.

In some of these cases, with failing circulation and cyanosis of the

hands, I have seen great improvement follow the addition of 1 drachm of tincture of digitalis to the first pint of rectal injection.

In acute pneumococcal, gonococcal, post-operative, and puerperal peritonitis—at least, in the stage when it usually comes under surgical observation—operation is unlikely to do good and may do grievous harm; that is to say, when there is no removable septic focus, early operation is not satisfactory treatment. I have had several patients recover from operation for an enormous collection of pneumococcal pus in the peritoneum after the acute stage had passed, but have never seen anything but harm result from early operation.

Acute gonococcal peritonitis, though sufficiently alarming in its commencement, with palliative treatment, soon settles into a condition that calls for little anxiety.

Unless post-operative peritonitis is due to some leak capable of repair, no good should be expected from operation. That the failure of operation in puerperal peritonitis may be due to the difficulty of a sufficiently early diagnosis in the dangerous cases is suggested by the note of my uterine case. The lesson emphasized most strongly, and the one on which I wish to lay the greatest stress, is the importance in the peritoneum, as elsewhere, of recognizing and removing the *focus of disease.*

Discussion.

Professor Koch (Groningen) said: I thing all surgeons and most physicians will agree that operative treatment of diffuse peritonitis is always indicated. This will certainly be the case as long as there will not be found a specific treatment by serum or vaccine for this infection. When we all agree about the necessity of operation there may be still much difference of opinion about the following questions: (1) Is operation indicated in all cases at all times? (2) What is the best method of operation and after-treatment, and have we to use different methods in different cases?

As to the first question, I believe that all cases should be operated on as soon as possible, only those cases that are brought moribund into the hospital being left alone. The prognosis will be better the sooner the operation is performed. All statistics have taught us so. In later years the results of treatment of peritonitis have shown much progress; this is for the most part brought about by the fact that the majority of cases operated on by every surgeon are cases of appendicitis and to the general conviction that appendicitis is best treated the first day. If we subtract the appendicitis (and pyosalpinx) cases from the larger statistics the results are much less favorable. Doing this in Rehn's

statistics the mortality rises from 50 to 70 per cent., in Hirschl's from 50 to 89 per cent., in Krögius' from 50 to 61 per cent.

I think the results of each surgeon will depend very much upon this—whether he is getting his cases in the beginning and whether he has more or less cases of appendicitis amongst them. I myself am in a bad position, as patients mostly come very late to the hospital at Groningen. They often do not call in the help of their physicians until they have been ill for some days. For these people—and I suppose there are such people in many other places—it would be of great value to be taught something of the dangers of abdominal pains, just as is done for tuberculosis and cancer.

By early operating we can save the larger number of diffuse peritonitis cases. When we see the patients in later stages I think we must operate on them also; then we give them in doing so the only chance of recovery.

As to the second question—the methods to be adopted—I have to say that in the worst cases general anaesthesia is not to be used. By giving these patients an injection of morphine, and by the use of local anaesthetics, we can very well do without general anaesthesia. In the less severe cases I think general narcosis is to be preferred, as it gives us much more liberty to do all that is necessary without causing pain.

When we know the cause of the peritonitis the incision is to be made as near as possible to this region. So in most cases the right iliac region will be incised. I think it is better to cut through the different abdominal muscles in the same direction, as we make in this way a simpler wound and get a beter entrance into the abdomen. After all, it is better to get cured with a hernia than to die with a beautifully "conserved" abdominal wall. When nothing is known about the cause of the peritonitis the incision is best made in the median line. These cases are often very difficult when we cannot find the cause. After the opening of the abdomen, when the exudate escapes, we may observe a great betterment in the organ. He did not believe that any surgeon great betterment in the patient's condition, which may allow us to resort to general anaesthesia when we had previously avoided it. After opening the abdomen we have to go straight down to the cause of the peritonitis and remove it by extirpating the morbid appendix or closing the perforated bowel. Then we have to clear the abdominal cavity as well as we can from the exudate. We may do this by sponging or by flushing out. In my cases I have used both methods and cannot find much difference in the results. Now, knowing how difficult it is to get the cavum peritonei cleaned by flushing, I cannot think it worth all the

trouble to wash the abdomen out. But the sponging is also very troublesome, and perhaps the peritoneum is not quite indifferent to the rubbing or mopping. So I have for the last two years made use of an instrument to suck out the exudate. In former times I used a tube which was in communication with a water suction pump, but the bowels often were sucked into the tube. In my new instrument aspiration of the bowels is made impossible, as the sucking tube is surrounded by a perforated second one, and the space between the tubes communicates with the atmosphere; the pressure in this space never becomes negative. The inner tube is brought in communication with a bottle placed near to the operation table, and from this bottle the air is withdrawn by the water pump. By putting my instrument in the lowest places where pus accumulates the pus is withdrawn very easily and without disturbance. For cases where washing is wanted I combine the tube with a second one to introduce water, so you can wash and suck out at the same time.

As a rule two or three incisions are made with the intention of emptying the abdomen as well as possible.

When the bowels are distended very much they come out when the abdomen is opened, and it will often be found impossible—or at least give much trouble and cause loss of valuable time—to replace them. In those cases punctures of the bowels are of much value. As for the making of one or more fistulae of the bowels, as recommended by Heidenhain, I never saw much benefit from it. Appendicostomy has often been of great use to me, not so much to drain the bowel as for the purpose of giving water to the patient during the first days after the operation.

Milking out the bowels, as recommended by Dahlgren, I have seldom performed, as I have the conviction this is exhausting the powers of the collapsed patients.

The wounds are sutured by me and drains applied to the lowest parts of the abdomen, where pus may be expected to accumulate. The skin is never sutured, as I have sometimes seen gangrenous purulent phlegmons of the subcutaneous tissue after it.

After the operation one of the most cruel symptoms we have to treat is the persistent vomiting. I think this is best treated by the continuous drainage of the stomach, a thin drain being introduced through the nose, as is recommended by my friend and countryman, Westerman. This treatment is much more effective and less fatiguing than repeated washing out of the stomach.

If an appendicostomy is made the administration of water is, of course, very easy, and is a much better method than the continual proc-

toclysis, which is very troublesome, and is apt to soil the bedclothes. In many cases subcutaneous and intravenous injections of physiological salt solution are made; in bad cases I have often seen the good effect of the addition of some drops of adrenalin solution to those injections (Heidenhain). Though the effect of these injections is only transitory, they may, however, be of use in helping the patient through the worst moments. Fowler's sitting position of the operated patients seems to be very good, but demands much care on the part of the nurse; Küster's ventral position was always refused by my patients. In the after-treatment the use of medicines as coffee, wine, strophanthus, camphor, and ether is valuable.

As to the question, if we have to treat all cases in the same way, I should think the answer must be in the negative. For in those very bad cases where the circulation is insufficient, the pulse small and frequent, the skin blue and cold, every impression on the skin causing a long-lasting white spot, we cannot do more than give an outlet to the pus by one or more small incisions, made without narcosis, and drain the abdominal cavity. To seek for the origin of the disease would be too much for the powers of these patients. Cure will seldom follow these operations, but they will cause a diminution of the suffering. Mostly the pain is bettered, and when the stomach is drained the dreadful vomiting will cease also. In less severe cases operation ought to be done as radical as possible, by removing the cause and cleaning the abdomen as well as possible.

Mr. Herbert J. Paterson (London) said that the Fowler position, the importance of rapidity in operating, and the method of continuous proctoclysis, had all been the result of the teaching of American surgeons. The whole operative treatment of diffuse peritonitis was admirably summed up in Dr. Murphy's pithy remark, which could not be too often repeated: "Get in quick, and get out quicker." He was glad that Mr. Morison had emphasized the axiom that operation was indicated in an overwhelming majority of cases. The Ochsner treatment had been misunderstood, and had sometimes been an excuse for delay in cases which would probably better have been operated on. Pneumococcal peritonitis was often very difficult to diagnose, the signs very inconstant, and often slightly marked; the temperature and pulse might be normal, and it was often very difficult to decide that the patient had peritonitis at all. He agreed that operation was contraindicated in pneumococcal peritonitis, but he personally considered that in gonococcal peritonitis operation was indicated, as the diagnosis was as a rule easier. In pneumococcal peritonitis his experience was unfortunate, as all his cases

had proved fatal; but in gonococcal peritonitis his experience was happier. It was a good working rule, that unless one could make a good guess as to the cause of the peritonitis, it was better to postpone operation, and treat the patient on the lines laid down by Ochsner. Rapidity in operating and avoidance of unnecessary exposure of viscera were the most important operative factors influencing the fate of the patient. Last year Dr. G. W. Crile had given the section an admirable summary of his investigations in shock, and showed how important it was to avoid every possible cause of shock, mental or physical. For this reason the speaker was an uncompromising opponent of washing out the peritoneal cavity in any shape, in any form, and in any circumstances. Fortunately, they had long passed the days when patients after operation for peritonitis were placed in baths of antiseptics to flush out their abdominal cavities, or were put back to bed with tubes, Medusa-like, projecting from all parts of the abdomen, through which continuous irrigation was carried out, until the peritoneum could no longer withstand such treatment, and revenged itself by the removal of the patient from such misguided energy. He had followed up cases at the time when the fashion for washing out was at its zenith, and he was convinced that irrigation greatly increased shock, and the shock at operation was echoed in the tardiness of the patient's subsequent recovery. He believed that the peritoneum could deal with foreign matter better than the surgeon, and that, as regards washing out, any possible gain was more than counterbalanced by the increased immediate risk. Subdiaphragmatic abscess was rare if the Fowler position was adopted. Administration of chloroform was absolutely contra-indicated in these cases. The greatest advance was continuous proctoclysis, and to this and the use of ether as the anaesthetic the improvement in results was mainly due. (The speaker showed his apparatus for continuous proctoclysis by the Murphy method.) In conclusion, he referred to the administration of cathartics after operation. In bad cases his own practice was to commence the administration of small doses of calomel almost as soon as the patient had recovered from the anaesthetic. The evils attributed to peristalsis were exaggerated, and if such evils existed at all, they were more than compensated by the peritoneal drainage and removal of toxic products effected by the use of calomel.

Mr. G. P. Newbolt (Liverpool) considered that cases of appendicitis giving rise to general septic peritonitis were seen by the surgeons earlier now than even five years ago. As to the results obtaind, statistics varied greatly as used by different men. Great confusion seemed to exist in the definition of general septic peritonitis, which, in his judgment, was

an infection of the whole peritoneal cavity, and not an infection limited to an area around an infected organ. He did not believe that any surgeon could save 96 per cent. of genuine cases of general septic peritonitis. The three factors contributing to success were speedy operation, skill in anaesthesia, and efficient drainage with proctoclysis. There was frequently great difficulty in determining when to refuse to operate in these cases, as now and then the most desperate cases recovered after operation. Chloroform, to his mind, was a dangerous drug; he much preferred ether. He administered a small dose of morphine, 1-6 grain, after operation, to allay restlessness. The formation of subdiaphragmatic abscess in those recovering from operation for this disease often proved extremely troublesome to deal with and required careful watching for.

Mr. Grant Andrew (Glasgow) said: Given a case of general septic peritonitis, from whatever cause, my practice is first to make a small suprapubic incision, about 1 to 1½ in. in length, opening the general peritoneal cavity. This at once gives valuable information as to, first, whether free fluid is present in the cavity, its nature, its odor, its amount; and as to, secondly, the condition of the serous covering of the bowel—its vascularity, its degree of distension, and the presence of newly-formed adhesion. If in doubt as to the seat of the exciting cause, this preliminary incision is of great value, because from the nature and character of the free fluid alone a diagnosis can usually be made. Having proved that the fluid is free in the general peritoneal cavity, a narrow strip of gauze, with string or tape attached, is passed right down to the pouch of Douglas, and there left meanwhile to act as a drain. The exciting cause is then dealt with. I desire to deal alone with the appendix as the *fons et origo mali*, for I now always, and in every circumstance, expose the appendix by the gridiron method. This enables one to close the wound entirely without the risk of hernia. The offending appendix, in this class of case usually gangrenous, and possibly perforated with an extruded concretion lying in its immediate neighborhood, is removed in the usual fashion. The stump must be well buried. The bed of the appendix and the surrounding structures are swabbed with iodine, 4 per cent., mopped dry, and the gridiron wound, after similar treatment with iodine, is closed in layers. The upper part of the body is now slightly raised, so that all intra-abdominal fluid gravitates towards the pouch of Douglas. The gauze placed in the suprapubic wound is now removed, and any pus which may have collected in the pouch or in the lower part of the pelvis is mopped out, siphoned out, or sucked out by rubber tube and syringe. This wound is also closed after the edges

have been disinfected with iodine. If the condition of the patient permit, the Fowler position is assumed immediately the patient is returned to bed and "proctoclysis" is commenced. I am firmly convinced that this method of closure without drainage is sound surgery. It must be proved, however, to be not only as safe, but safer than when drainage is employed. If the cause be removed much more can be left to the peritoneum than was formerly thought possible. What risk is run by primary and complete closure of the wounds? As general peritonitis is already established I have yet to learn that drainage will make any difference to the result. I believe the presence of packing and the use of a drain, either rubber or glass, is to exert a devitalizing influence on the bowel and to encourage the formation of a faecal fistula. Nothing is gained by leaving the wound open, and, furthermore, if partially closed and a drainage tube inserted at the angle of the wound, it is there a hernia will occur. The question might be asked, In what proportion of cases will you secure an uninterrupted recovery, if recovery at all?

Since September last I have operated upon 17 cases which come under this category—that is, free pus in the general peritoneal cavity without limiting adhesions and not confined to the pelvi-peritoneum. The appendix was gangrenous in each case and the primary cause of the peritonitis. In each case the same technique as above described was practised, both the appendical and the suprapubic wounds were closed. Recovery took place in every case save one, who died six hours after operation—a hopeless case. In 8 out of the remaining 16 cases primary union of both wounds occurred. In 8 cases the wounds became infected in varying degree, necessitating the removal of the lowermost surface stitch in 3 of the cases and of all the surface stitches in another; as the incision was gridiron this did not weaken the cicatrix. In one case a pelvic collection formed, which burst into the bowel and was discharged per rectum. In another pain was complained of in the region of the liver, and with a remittent temperature one feared a subdiaphragmatic collection, but this gradually subsided, and finally cleared up. In no case did a faecal fistula result.

These records compare favorably, I think, with those from any other line of treatment, and prove that subsequent drainage is unnecessary if the exciting cause be removed.

Professor Gilbert Barling (Birmingham) said the term "general septic peritonitis" was often very loosely used, and many people did not mean quite what they said. This led him to say that he was at variance with Mr. Grant Andrew when he referred to his series of cases where he had successful results following upon immediate closure of the abdominal

wound in "general septic peritonitis." He did not think that what Mr. Grant Andrew called septic peritonitis was what he himself always was accustomed to regard as general septic peritonitis. What he (Mr. Barling) meant by that therm was that the whole peritoneal cavity was infected right up to the diaphragm, and he maintained that the vast majority of these cases would not recover no matter what was done. Another point which he wished to make was as to the nature of the infection. He had great respect for any form of infection, but the one he feared most was streptococcal infection. If he understood Mr. Rutherford Morison aright in saying that it did not matter greatly what the kind of infection was, he felt compelled to disagree with that statement. He narrated a case where he had removed the appendix in a little lad, and had regarded the case as one as nearly as possible certain to do well; but the boy died in thirty hours, and when the bacteriological report came it was found to be a streptococcal infection. He was convinced that there was greater danger from infection by that germ than any other. Of course, one did not know the germ till after cultivation, so that one's treatment was not affected by the knowledge of the germ, but one's prognosis was. As regards the question of incision, he emphatically supported Mr. Rutherford Morison's ideas, and thought no harm came of extensive incisions. It appeared to him that the spread of peritonitis was to a certain extent mechanical. The spread upwards from the appendix region was limited in the middle region of the abdomen by the transverse mesocolon. The mechanical arrangement of the peritoneum had a good deal to do with the spreading or limiting of septic peritonitis. Coming to the question of swabbing and irrigation, he thought that both had their advantages, and one should not exclude the other. If one found a localized collection in the pelvis there seemed no reason why this should not be cleaned out as thoroughly as possible by swabbing. Similarly, if one had to deal with a recent duodenal or gastric perforation one might not possibly swab out all extravasated materials, and it was here that irrigation was most useful. Professor Koch referred to cleaning the exudate from off the peritoneal surface in some cases. He wished to clearly understand what was meant. He was of opinion that where an exudate had formed it was better to leave it alone; and he instanced a case of pneumococcal peritonitis in which (influenced by some recent French literature which he had been reading on the subject) he carefully removed as much of the exudate as possible. The result was disastrous, because in forty-eight hours that patient died from general pneumococcal infection, and he believed that it was a mistake to have removed the exudate (said to like boiled wash-leather), because

it exposed raw surfaces to the absorption of organisms. On the question of the treatment of appendicitis, he would say that it was true that they would like to see every case of appendix infection operated upon at once. That was to say that every case should be diagnosed immediately, should be brought at once into an operating theatre, and be seen without delay by a competent surgeon; but, nufortunately, delays often took place, the diagnosis was not always accurately made, the patient's friends did not always send for the physician; and so it was necessary to take the world as they found it. To make a routine of operation in all these cases directly one saw them on the second or third day, and to attempt to close the abdominal wound would be in many cases disastrous; whilst they might guess shrewdly as to the condition of affairs inside the abdominal cavity they could not tell for certain what it was like until they had opened. Sometimes the symptoms were intense in their severity, and the condition found in the appendix region slight; sometimes the reverse was the case. It was, therefore, necessary that they should adopt no hard and fast line of treatment, but that they should take their cases as they came and treat each on its own merits.

Dr. J. Crawford Renton (Glasgow) said that he was in agreement with all that Mr. Rutherford Morison had said in his paper, and he spoke only to emphasize the importance of urgent cases being operated on without delay. The public were being educated now in many directions; particularly were they instructed in the dangers of tuberculosis. He would like to see information regarding urgent abdominal conditions spread more widely if it would tend, as he thought it would, to the more speedy bringing of such cases into the hands of the family doctor and of the surgeon. In speaking of the importance of getting the bowels to act as soon as possible, he was accustomed to administer, as soon as the patient had recovered from the anaesthetic, small doses of calomel every two or three hours for three to four days, and then to use an ordinary enema. In addition, normal saline injections were used. Pituitary gland tabloids he gave before as well as after the operation, to counteract shock. The Fowler position should be adopted as soon as possible, and the patient brought into the hospital in that position. Post-operative vomiting was likely to be less if ether (after a few preliminary whiffs of chloroform) were used, and if it did occur it could be treated by stomach lavage, which, with the Fowler position, never failed.

Mr. Garnet Wright (Manchester) said: While in general agreement with the previous speakers, I am at variance with them on the subject of removal of patients to hospitals and nursing homes if their own homes are at all reasonably good. While this does not harm in early

cases, it is harmful in those cases which are on the borderland, ready and apt to become grave, where the general circulation is beginning to fail. In such circumstances it is better to operate at home, in spite of the fact that the after-treatment is more difficult, because these cases may become very much worse by the removal from home. I wish also to emphasize the importance of doing the minimum required to remedy the defect which has caused the peritonitis. In the majority of cases lavage and mopping are unnecessary and may do harm by prolonging the operation and increasing shock. If there is extravasation of intestinal contents, they should be got rid of, and the best method is by lavage. In appendix cases no more mopping is required than is necessary to clear the field. After the removal of the appendix, free drainage should be provided. In general free drainage of the septic peritoneal cavity is of greatest value, and in desperate cases may sometimes be employed with success without dealing with the exciting cause. The chief improvement in after-treatment has been the use of proctoclysis—continuous saline injection. It is difficult and requires special apparatus and good nurses, and is unobtainable in private houses. Where it cannot be done, intermittent administration, supplemented by subcutaneous injections, may be employed. As regards the point raised by Mr. Gilbert Barling, that all cases should not be operated on immediately, and that sometimes a case proves worse than it looks, it appears to me that the latter statement is a potent argument in favor of operating as soon as possible.

Mr. C. P. Childe (Portsmouth) said: The operative prognosis in general peritonitis is governed chiefly by two factors. The first is the degree of toxaemia present, estimated roughly by the clinical picture the patient presents; the second is the ease and rapidity with which the operation necessary for the relief of the condition can be accomplished, and the patient got back to bed. The prognosis depends far more on these than on the actual condition found when the abdomen is opened. The latter may appear very alarming; for instance, the peritoneal cavity may be full of foul pus, without limiting adhesions of any kind. Yet if the patient's general condition at the time is passable (a fair pulse, the skin not in a cold sweat, not pinched and sunken in the face); further, if the operation can be so quickly performed that at the termination of it he is not much worse than at its commencement, he will, as a rule, recover. In fact, if the general state of the patient is good, before even the abdomen is opened and the condition within it is known, always providing that nothing unforeseen occurs to greatly prolong the operation itself, the prognosis may be assumed to be favorable. The power of resistance of the patient to the microbic infection, as evidenced by the

clinical picture, is a far more reliable guide in prognosis than the extent or nature of the infection as evidenced by the pathological finding.

For instance, I operated a little while ago on a case of gangrenous femoral hernia requiring enterectomy. When the constriction was divided pus flowed freely along the director from within the abdomen. The latter was therefore freely opened by prolonging the incision upwards. The lower half of it was found full of pus without any limiting adhesions whatever. A culture showed the infection to be streptococcal. The patient's resistance power to this particular infection, as evidenced by her general condition, was good. The operation—enterectomy, gently sponging away the pus, and freely draining the abdomen—did not occupy a great length of time. The general condition of the patient at the end of it was unchanged. She made a perfect recovery.

If the local condition within the abdomen—namely, pus diffused freely in the peritoneal cavity—or the nature of the infecting organism, the streptococcus, and not the general clinical picture, had been taken as the guide, she ought to have died rapidly.

In regard to treatment, a great advance has taken place of recent years in many particulars. The most important of all, and one in which there is still great room for improvement, is early recognition of the acute abdomen and early operation—operation which, before the abdomen becomes distended, can almost always be done quickly and without in itself placing a great additional strain on the recuperative powers of the patient, and operation which takes place before toxaemia has had time to develop. If these two conditions were generally complied with, it is hardly too much to say that the mortality from general peritonitis would be reduced almost to vanishing point. Apart from this, which is the preventive treatment, the following appear to me to be the most essential points to attend to:

1. *Position.*—When a patient is admitted to hospital suffering from any acute abdominal affection, my instructions are that he always be placed at once in the Fowler position. If operated upon he is carried to the theatre, operated upon, and returned to the ward in this position, which is retained till all danger is past.

2. *Clothing.*—The patient is clad from head to foot in a cotton-wool jacket.

3. *Operation.*—The skin disinfection with iodine obviates unnecessary exposure, washing, shaving, etc. It saves time, which is of the utmost importance. The operation consists in the removal of the infecting focus with the least possible delay. If the case is quite early—for example, a perforated gastric ulcer or appendix operated upon within

say six hours, the abdomen may frequently be closed throughout; but it is difficult to be sure when this can safely be done, and far the majority of cases are drained with rubber tubes. Probably in a much larger percentage than actually occurs, it would be safe to close the abdomen and leave the peritoneum to deal with the remaining infection, but the surgeon not having the requisite courage which comes of definite knowledge on this point adopts the safer course. I have practically abandoned all washing out of the peritoneal cavity. Discharges wherever seen are gently sponged away with gauze swabs, wrung out warm in saline solution. Moist swabs are in my opinion better than dry, for the reason that they inflict less injury on the delicate inflamed peritoneum. Drainage tubes surrounded with gauze are placed in position whence most of the discharge flows. The tubes are for drainage, the surrounding gauze not for drainage, but for shutting off the space. In the later cases of perforated gastric ulcer the pelvis is always drained by a large rubber tube brought out above the pubes. I have seen an omission of this precaution followed by a large pelvic abscess. Secondary abscesses sometimes form, owing no doubt to pockets of infection which have escaped drainage, and which Nature's defensive processes have been unable to deal with; but these secondary abscesses are always localized, and are rarely dangerous to life. The removal of the infecting focus, if done in time, seem always to cut short the disease. If secondary abscesses form, after a few days, in a case which has been doing well, the temperature will begin to rise and will maintain an irregular type, but the patient will be evidently not very ill. I am not in a great hurry to open these abscesses, for two reasons. First of all, in many cases in a few days they will discharge themselves through one of the openings already present. If they do not do so, by waiting a little while the most convenient route for opening them can generally be determined. Far the majority of them form in the pelvis, owing to the gravitation of infective matter towards the lower abdomen in all of these cases, and in women they can be usually opened through Douglas' space. When this is accomplished a large drainage tube is inserted into the cavity, fixed with a catgut stitch to the cervix, and cut off flush with the vaginal orifice. Through this the cavity is irrigated out twice daily with sterile water, and when the catgut stitch gives way and the tube comes out, which is usually in about a week, vaginal douching is continued until the abscess has closed.

4. Proctoclysis is employed from the beginning, and is of the greatest service. Twelve to sixteen pints is not an uncommon amount absorbed in the first twenty-four hours, when administered by an experi-

enced nurse, and I quite agree with Murphy that generally, if the fluid is not retained, it is because it is improperly given. If, as occasionally happens, the patient will not retain it, axillay infusion is substituted.

5. Small doses of calomel are administered by the mouth till the bowels have been got to act and flatus to pass.

6. The rectal tube is inserted for ten minutes every four hours. This frequently enables the patient to pass flatus—an all-important matter—and further assistance is given in this direction if required by the administration of turpentine enemata at intervals.

7. If vomiting persists, lavage of the stomach in some cases at once and for good arrests it.

8. Care should be taken that there is no tight bandaging. This, in the case of a distended abdomen, is a serious handicap on the patient's breathing capacity, and the loosening of the upper part of the bandage will often bring the greatest relief.

9. In the acute cases vaccines are not of much use on account of the time taken in their preparation. At Portsmouth we employ the Clinical Research Association for this purpose. But in cases in which I have given instructions for the preparation of an autogenous vaccine the patient has usually been convalescent or dead before its arrival. Caution is necessary in gauging the value to be ascribed to vaccines. For instance, in the case of streptococcal peritonitis above mentioned I ordered an autogenous vaccine to be prepared at once. Before its arrival the patient was convalescent, and it was therefore not administered. Had I been able to procure it more quickly, and had I used it in the first twenty-four or forty-eight hours, I should undoubtedly have been much biassed in its favor, and have been inclined to attribute the result to its influence, seeing that a purulent streptococcal peritonitis is probably the most fatal peritonitis of all.

Mr. Stanmore Bishop (Manchester) drew attention to the similarity of reaction to inflammatory stimulation in the eye, joints, and the peritoneum, quoting the axiom of Hilton in *Rest and Pain* on the behaviour of muscles around, and connected with, an inflamed joint. The musculature covering the peritoneum behaved in exactly the same way, and presented marked rigidity in peritonitis, so that this condition could be distinguished readily from colic, in which no rigidity existed. Great importance should be attached to the preparation of the patient, and particularly was this so where efforts were made to reduce to a minimum the quantity of anaesthetic. For this purpose preliminary administration of the scopolamine-morphine-atropine combination was commendable. He administered after the operation pituitary extract, whose ef-

fect was to increase the blood pressure in the abdominal organs, and so promote increased peristalsis. He expressed astonishment that Dr. Crawford Renton should administer pituitary extract *before* the operation in view of its action in increasing peristalsis. It seemed to him that common sense must govern such procedures as the employment of drainage and morphine. The drainage obtained from drainage tubes was limited. If a tube were introduced into the pelvis, in forty-eight hours it was surrounded by a coating or tube of fibrinous exudate, which limited drainage by its adherence to the rubber tube; and if the tube were removed prematurely, of necessity the intestine would be dragged upon; it should be left till it was perfectly loose.

Mr. Leonard A. Bidwell (London) advocated the use of pituitary extract after operation. He was of opinion that it had considerable value in re-establishing peristalsis. He was accustomed to give 1 c.cm. every four hours for the first two or three days. One advantage of it was that it counteracted the disadvantages of morphine, so that he generally gave at least one dose of morphine, 1-6 grain, to give the patient a quiet night. On the question of flushing and wiping out the peritoneal discharges, he thought there was no hard and fast rule to be followed. If flushing were done, it was absolutely necessary to provide free exit for the fluid. His next point was as to the great value in general septic peritonitis of the use of a rectal drain—that is to say, an opening made from within, through the pouch of Douglas, by means of a pair of strong curved forceps into the rectum, and a tube passed through this opening, and then through the anus and stitched to the skin of that region. This permitted closure of the suprapubic wound. The rectal tube he found was frequently removable in two or three days. It had been alleged that if the rectal drain were used it would be impossible to administer saline solution per rectum, but in his experience there was no interference with the administration of salines.

Mr. D. P. D. Wilkie (Edinburgh) called attention to the importance of an immediate microscopic examination of the peritoneal exudate at operations on cases of general peritonitis. Such examinations in a large number of cases revealed the fact that the particular type of bacterium causing the inflammation was of less importance than the reaction on the part of the patient. Presence of streptococci did not necessarily mean a bad prognosis, provided the cellular reaction was a vigorous one. The important point was the relative number of micro-organisms free in the fluid to the number of phagocytic cells. If many of the bacteria were found free in the fluid the prognosis was, as a rule, a grave one. At *post-mortem* examinations on cases dying from general peritonitis the

jejunum was frequently found greatly distended, whereas the ileum was found collapsed and adherent in the pelvis, and the patient had obviously died partly from a peritoneal but also partly from an intestinal toxaemia. After the operation of opening and draining the abdomen in such cases the inflamed intestines coming together adhere, peristalsis was interfered with, and forming of pus was very liable to occur. In order to favor peristalsis and free drainage, he had advocated the pouring in of a few ounces of sterile vaseline oil to delay the formation of plastic adhesions; the experimental and clinical results which so far had followed the use of this method had been very encouraging. In the after-treatment of desperate cases two methods had been found to be of considerable value. The one was the passage of a continuous oxygen current through the drainage tube in the pelvis. Oxygen was rapidly absorbed by the peritoneum; it excited an active hyperaemia which tended to overcome the venous stasis associated with severe cases of peritonitis. In several cases a rapid and marked improvement in the patient's general condition had resulted from the employment of this method. The other method which he had tried in cases which appeared desperate, and after all the ordinary methods of after-treatment had been employed, was the injection of blood serum withdrawn from the median basilic vein of another patient in the ward who had just recovered from an infection by the same bacterium. Sixty c.cm. of blood were withdrawn from the vein; the serum was allowed to separate, and then injected into a similar vein of the patient, whose condition appeared hopeless. Of 7 cases treated in this way 2 recovered, and one had little doubt that their recovery was in large measure due to the antitoxin thus administered.

Mr. Bloomer (Stafford) pointed out that the peritoneum was capable of removing its own troubles, and narrated the case of a young lad who had abdominal section performed with success seven times for various conditions originating from an appendicular abscess.

Reply.

Professor Morison, in reply to the discussion, said he thought he had gained more than he had given in this discussion. He was grateful that he had not been asked to define what general septic peritonitis was. In regard to the statistics presented by him, he asked the section to accept them as true; they were not his own, but were compiled from the work of all the surgeons of the Newcastle Royal Infirmary, and they proved every fact in his paper.—From the *British Medical Journal*, 28th October.

CURRENT MEDICAL LITERATURE

MEDICINE.

Under the charge of A. J. MACKENZIE, B.A., M.B., Toronto.

SIGNS IN FAILING CIRCULATION.

The importance of accurate functional diagnosis in the treatment of diseases of the heart and circulation is emphasized by E. Schmoll, San Francisco (*Journal A. M. A.*, November 4). He thinks that the great majority of physicians overestimate the value of physical diagnosis and pay too little attention to the condition of the other organs whose welfare depends on an intact circulation. He points out the errors liable to be made, caused by changes in size and position of the heart produced by cystole and diastole, by respiration, pathologic changes within the chest or abdomen and those depending on the general configuration of the body. The left side of the heart is particularly difficult to locate and its length and diameter are changed by all the above causes. Kyphoscoliosis makes bizarre changes in the heart-outline, and anemia and chlor-abdominal conditions which may closely simulate heart disease in their symptoms, displacements of the viscera, stomach dilatation, etc., among them. The theory of constitutional heart weakness, worked out by Kraus, is of the greatest importance in this connection, and in Schmoll's experience it has been invariably accompanied by the general asthenia described by Stiller. Enteroptosis is a general accompaniment. Obesity is another condition in which the heart may be distorted or displaced, and a questionable enlargement is a bad indication on which to make a diagnosis between functional and organic disease. The symptoms on the side of the lung and liver are also important matters for consideration as indicating heart conditions, as well as is the presence of arterio-sclerotic changes in the aorta and large vessels. The smallest symptom becomes suspicious when accompanied by slight rheumatic disturbances. A positive Wassermann test has sometimes cleared up a doubtful case, as in an instance mentioned. An enlarged thyroid is often overlooked as a cause of heart trouble. For the purposes of treatment Schmoll divides heart diseases into two groups, one including all of a rheumatic origin and the other characterized by progressive arterial disease. The common signs of failure in the first group are râles at the base of the lung posteriorly, a gain in weight, enlargement of the liver and edema of the ankles. It is in these cases

that digitalis deserves its reputation. In those of the second group, though the symptoms may closely resemble those of the first, digitalis will only aggravate. Not only the heart is diseased, but almost every other vital organ is affected by deficient blood-supply, which is especially the case with the kidney. Here a salt-free low-protein diet is indicated, supplemented by free use of diuretics. In studying the physical changes in one organ in all these cases we must not overlook the secondary changes elsewhere.

CARDIAC IRREGULARITIES.

The importance and treatment of cardiac irregularities is the subject of a paper by A. W. Hewlett, Ann Arbor, Mich. (*Journal A. M. A.*, November 4). He points out that we usually pay less attention to this than to the questions of broken compensation in heart disease, but, even if the condition is a nervous one, it disturbs the patient and interferes with his recovery. Variations in cardiac rhythm may also actually interfere with the circulation when they cause the heart rate to be above or below its optimum range. Too fast a rate interferes with the filling during diastole, and slow rates are not compensated for by increased output at each systole. A broken rhythm can also interfere, as he points out, hence cardiac irregularities deserve more attention than is usually accorded to them. The need of careful observations at the bedside is emphasized, to check up and obtain the best value of the results of animal experiments. First vagus irregularities are noted. They occur most usually in young and nervous persons and after infectious diseases. They are favored by the use of digitalis. As they usually only signify an unusually active vagus control they do not require treatment and the patient and friends should be reassured. Partial heart block has been frequently produced in susceptible individuals by drugs of the digitalis group, and in the treatment of heart block, whether partial or complete, we should first seek to remove the cause. If it is partial and the patient has been taking large quantities of digitalis or allied drugs, they should be discontinued. Of the various lesions that may affect the bundle of His, only the syphilitic lesions are amenable to treatment, and, in the presence of the positive Wassermann, specific treatment is demanded. It should be remembered that blocks may disappear spontaneously, especially when occurring with infectious diseases. When a complete block does not disappear under treatment or of itself, it may be improved, theoretically at least, by increasing the slow ventricular rate or the efficiency of the individual ventricular contractions. The

good results that sometimes follow the use of digitalis in complete block is probably explained by its effect on the individual muscular contractions. In partial heart block, digitalis should be used very cautiously, if at all, as its tendency to increase the block may more than compensate for any good effects on the contraction. Extra systoles, or cardiac contractions originating in parts of the heart other than those ordinarily governing its rate, seem to be due to abnormal stimuli or increased local irritability. They are very capricious in their appearance and more persistent in the old than in the young being more liable to be due to toxic causes in the latter than to myocardial degeneration. Tea or coffee may produce them. In large doses digitalis is capable of producing systole. When only occasional and accompanied with evidence of broken compensation, or with nervous symptoms, they do not in themselves call for treatment. At present we must treat them on general principles, relieving the nervousness and treating the factors which may damage the heart muscle or serve as abnormal stimuli. On the whole the treatment of extrasystoles is very unsatisfactory. Auricular fibrillation, the most important and serious form of cardiac irregularity, is characterized clinically by an extreme degree of ventricular irregularity and an absence of gross auricular contractions. It frequently begins with paroxysms, which later become more continuous. While usually assumed to be from organic changes, it may possibly be also of nervous origin. It is common in the late stages of exophthalmic goiter and may occur after operations, possibly due to the anesthetic. In the great majority of cases it is a permanent affection which resists treatment, but the most brilliant success that has been achieved has been with the drugs and digitalis group. Patients vary much in their reaction to the medication, young persons with mitral valve diseases being better affected than older ones with myocardial degeneration. In conclusion, Hewlett says that each form has its own problems, some of which still wait solution. We need more facts in regard to the effect of drugs in cardiac irregularity and especially on patients with heart disease.

CLIMATE IN TUBERCULOSIS.

W. J. Barlow, Los Angeles (*Journal A. M. A.*, October 28), says he has decided views as to the value of climatic treatment in tuberculosis. Open air treatment is universally employed and a change to meet the best conditions for this is entirely rational. The atmospheric conditions

of greatest importance are in order of importance: 1. Plenty of air. 2. Percentage of sunshine. 3. Amount of humidity. 4. Temperature with its variations. 5. Pressure of air. 6. Severity of winds, dust, etc. As a general rule, he says, patients with pulmonary tuberculosis developing between the ages of seventeen and forty should be sent to a high dry altitude. With disease beginning after forty patients should be kept in lower altitudes and more equal and relaxing climates and children will always do better near the coast in cold or warm climates. The great mass of tuberculosis patients under the age of 40 in the early stages, with or without fever and constitutional symptoms, including patients with hemoptysis and those with beginning dyspepsia, present indications for high altitude treatment (3,000 to 7,000 feet). So also do cases with compensated cardiac disease and with no great degree of emphysema. Contra-indications are acute pneumonia cases with high fever, rapid pulse and respiration, advanced cases with extensive involvement or cavity formation of both lungs with extensive adhesions and dyspnea, chronic fibroid cases with a good deal of bronchitis and emphysema, young children and infants and many patients of neurasthenic type or nervous temperament. The various portions of the Rocky Mountain region are described. For medium altitude treatment (1,000 to 3,000 feet), there are many resorts throughout the East which are suitable at all seasons throughout the year. In the West there are only two important places of this sort, Phoenix (altitude 1,087 feet) and Tucson (altitude 2,400 feet). Of these, Tucson is probably best for all-round climatic advantages, but for those who can exercise and ride around, Phoenix would probably be more agreeable. The southern California resorts are all included in the low altitudes by the author as well as are those in the region of the Great Lakes and in the Southern States.

NEW METHOD OF STOMACH INFLATION.

Stewart Lewis, in the *Journal A. M. A.*, describes the following new technique for inflating the stomach:

Procedure.—The patient is placed on the examining table, the abdomen exposed, a towel arranged under the chin and a siphon of carbonated water rested on the shoulder, with the nozzle at the patient's lips. These instructions are given:

"I wish you to drink some carbonated water in order to get some gas into the stomach, which will swell it a little and help my examina-

tion. Please manage the siphon yourself; drink very slowly at first so as not to choke yourself, and then drink as rapidly as you can. I will tell you when to stop."

The average patient will thus take eight ounces or more without difficulty. In favorable cases even half this amount will bring the outline of the stomach clearly into view, while the mixture of gas and fluid gives to palpation a crackling feel and typical splash apparent to the most inexperienced.

Difficulty is found in the following cases:

1. *Obesity*—Comparison of percussion outlines before and after inflation will rarely leave one in doubt.

2. *Relaxed Pylorus*—In these cases the gas rapidly escapes into the small intestine. With a little practice one readily understands this condition, and the observation is itself of value. The inexperienced may here be led to wrongly make a diagnosis of misplaced stomach. Percuss carefully during the inflation.

Method of Percussion—Lewis prefers to employ direct percussion with a small wooden object such as a lead pencil, or, better, a flat object such as a paper knife or wooden-handled scalpel. With this working from below upward, the abdominal wall is struck so as to produce a "spat," superficial, high-pitched. This sound is transmitted only to the viscus directly underlying. Gastric tympany is clearly differentiated.

The following objects are attained:

1. Size and position are accurately determined.

2. With practice some idea of gastric tone may be obtained. Roughly speaking, four ounces of fluid will lower the border of the normal stomach about an inch. In atony it may lower the border two or three inches.

3. As noted above, rapidity of escape of gas into the intestine will be a crude test of the tone of the pylorus.

Tumors may be more readily palpated.

WIDAL'S SALTLESS REGIMEN.

The saltless diet, which is indispensable in certain conditions of chloride retention and renal impermeability, comprises the following articles of food:—

Unsalted bread, supplied by any baker on demand.

Any fresh meat (beef, mutton, or chicken), raw, grilled, or roasted, eaten without salt, but buttered to taste.

Fresh-water fish, fried or boiled.

Fresh eggs, raw or lightly boiled. Yolk of egg may be used to make sauces for the purpose of relieving the monotony and insipidity of the regimen.

A little unsalted cheese.

Potato without salt, boiled or baked, fried or "sauté," mashed or with milk or in salad. This is an excellent food for renal patients.

Rice in any form at will. Fresh peas in butter, carrots, leeks, chicory, lettuce, French beans, celery, artichokes, salads, dressed with oil and vinegar.

The preparation of the different vegetables demands some skill to render them appetizing without using salt. Meat jelly, if made without salt, may be used to give taste to the sauces and vegetables. By using an ounce or two of this jelly every day, flavored with thyme, astragon, laurel leaves, onion, or parsley, it is possible to give taste enough to the dishes to mask the absence of salt.

We can make vegetable soups to which a moderate quantity of pastes is added—macaroni, vermicelli, &c. No beef-tea. Sweetmeats and pastry made without salt are permissible. Chocolate is not only admissible, but is positively beneficial since it contains 0.67 per cent. of theobromine.

In the matter of beverages, three or four pints of water sweetened with sugar, lemon juice, or syrup. Mineral waters may be taken provided they do not contain more than a few grains of chloride to the pint.

A NEW SIGN IN SCARLET FEVER.

In the *California State Medical Journal*, June, there is a description by Taubles of investigations with regard to the sign described by Pastia, of Bucharest, as diagnostic of scarlet fever in the early stages. This consists in an intenense continuous linear pigmentation of the skin folds across the anterior surface of the elbow, varying in color from rose red to dregs of wine and even appearing ecchymotic. These lines vary in number from one to four, and the eruption on the skin lying between them, when they are multiple, resembles that on the rest of the skin. The time of appearance of the sign is simultaneous with the appearance of the rash. It persists not only during the eruptive period

but for a varying time afterwards, even until desquamation is complete. It has been noted on the skin folds of the axilla, but its presence there is not so constant as on the elbow.

RHEUMATISM.

Poynton and Paine (*Lancet*, Oct. 28th) conclude from a series of experiments on rabbits with fluid from the knee joint of a fourteen-year-old boy with acute rheumatic fever, that: 1. There seems to exist no doubt that acute appendicitis resulted directly from an intravenous inoculation of a diplococcus obtained during life from an acute rheumatic arthritis, and that it was the only obvious alimentary lesion. 2. The conditions that were produced were of varying severity. 3. In each case the animal was young. 4. The conditions arises without the presence of any concretion or foreign body in the appendix, and commences deep in the wall of the appendix. This later point militates against the view held by Aschoff, that in human appendicitis the disease starts from within the lumen of the appendix. 5. It is interesting that the middle part of the length of the appendix is affected, a position in which a stricture is so often found in man. 6. In one case early peritonitis with living diplococci in the peritoneal fluid occurred, although there was no perforation—a point of much importance in its bearing upon the pathology of human appendicitis. 7. The ballooning of the affected area of the appendix in one case suggests the probability that in man some such loss of tone favors stagnation of secretions and contents and the formation of a concretion. 8. The association of arthritis, mucus diarrhœa, and appendicitis is of interest in its bearing upon the difficult question of autointoxication from the bowel in the human subject as a cause of arthritis. It suggests that rather than this being the primary factor, the probability is that all the lesions may be the result of some primary cause circulating in the blood stream and determining to these various positions. 9. The authors do not assert for one moment that the only cause of appendicitis is this diplococcus. Adrian's investigations and those of others are sufficient evidence, quite apart from clinical experience, to prevent falling into this error. 10. Whether or not these results favor the widely held view of a relationship between acute rheumatism and appendicitis must depend upon the significance that is attached to this diplococcus and the degree of parallelism that exists between human disease and experimental infection.—*New York Med. Journal*, Nov. 11th.

HEALED TUBERCULOSIS LESIONS FROM A LIFE INSURANCE STANDPOINT.

George W. Paker, Peoria, Ill., presents a careful analysis of the results obtained by sanatoria in the treatment of tuberculosis and of the statistics on this subject obtained by the great life insurance companies. In deciding on the acceptance of a risk examiners should consider the length of time since the pulmonary lesion was active. Freedom from all tuberculous symptoms for from five to fifteen years and an unimpaired capacity for work should make a man a good risk. The applicant's weight at the time of the lesion and of the examination should be taken into consideration. The family history and the association with tuberculous patients are important. The occupation, station in life, age, temperature, pulse rate, and the condition of general health must all be considered in estimating a life insurance risk.—*Medical Record*, November 4, 1911.

STERILIZATION OF MILK BY ULTRA-VIOLET RAYS.

Report from Amsterdam describes a device for the sterilization of milk by ultra-violet light rays developed from an incandescent lamp.

"An apparatus has been constructed, it is explained, whereby the milk flows in a thin stream along an electric light. Demonstrations were first made with water infected with different kinds of bacteria, and it is said that the water was purified in a few minutes, without appreciably increasing its temperature. The result is attributed to the quality of the ozone formed under the influence of the light, but the demonstrations must be conducted where there is sufficient room for the light to burn freely. This method of sterilization, without heating or adding preservatives, is believed to have great hygienic value in respect to nursing children."

FRENCH COMMISSION ON ANTITYPHOID VACCINATION.

In the weekly report for Oct. 6 of the United States Public Health and Marine-Hospital Service are published extensive extracts from a translation of the report of the commission appointed by the Academy of Medicine of Paris to investigate the status of antityphoid vaccination. This commission, consisting of Drs. Chantemesse, Delorme, Kelsch, Landouzy, Netter, Roux, Thoinot, Vaillard, Widal and H. Vincent, re-

viewed the experiments and statistics on which the use of antityphoid vaccine is based. The facts and information contained in the report are summarized as follows:

"First: Antityphoid vaccination for several years has been applied with success in the English, German and American armies. More than 100,000 persons have been inoculated either in their native country or especially in colonies where these soldiers were sent and where typhoid fever is prevalent.

"Second: The benefits conferred by these preventive inoculations are revealed by comparative statistics of the typhoid morbidity and mortality, on the one hand, among soldiers subjected to the vaccinations, and, on the other hand, among the non-vaccinated. The former have presented a case incidence of typhoid fever of at least one-half that of the latter.

"Third: Antityphoid vaccination does not accomplish the complete disappearance of this infectious disease in the communities where it is practiced, but it diminishes very notably its frequence. Moreover, such of the vaccinated who contract typhoid fever, notwithstanding, have much milder attacks than non-vaccinated subjects. The percentage of deaths supervening among the former is one-half that of the non-vaccinated typhoid patients.

"Fourth: A single inoculation of bacillary vaccine assures a less efficacious protection than two or three inoculations. For vaccination by autolysates of living bacteria, four injections are made.

"Fifth: Relative or complete, the immunity engendered by anti-typhoid vaccination appears to last from one year (Pfeiffer-Kolle vaccine) to four years (Wright's vaccine). It is, therefore, advantageous, if it is desired to prolong this period of immunity, to have recourse to revaccination.

"Sixth: No matter which vaccine is used, antityphoid vaccination has shown itself to be without danger for the very numerous persons who have been inoculated. It appears that injections of vaccine of dead bacilli, while harmless in themselves, give rise often to fever as well as painful local and general symptoms. These disappear in from twenty-four to forty-eight hours. The proposition has been made to employ the autolysate of living bacilli as an antigen. This vaccine is much better borne and causes little pain or none at all.

"Seventh: As a precautionary measure, vaccinal inoculations should never be made during an epidemic nor in persons who certainly have been exposed within less than three weeks to the contagion of typhoid fever. Preventive vaccination, therefore, should generally be

undertaken before the usual time of the appearance of epidemics in localities and communities where they are habitually observed.

"Eighth: For the same reason (that vaccination may cause a temporary predisposition to infection), and during the period immediately following inoculation, every person vaccinated against typhoid fever should take the strictest precautions to avoid the chances of typhoid infection by a careful watch upon the water that is drunk and the food that is eaten, as well as by rigorous personal hygiene and cleanliness. The period during which such precautions must be taken has a duration of two or three weeks at the most.

"Ninth: In the army and navy, antityphoid vaccination is destined to render real service, more particularly in Algeria and Tunis, as well as in the colonies where typhoid fever is frequent and severe. When there are no cases of typhoid fever and no danger of an epidemic at the place of destination of soldiers and sailors, the inoculations may be undertaken upon their arrival. In the contrary event, the inoculations should precede by at least three weeks the arrival of these young men in the colonies where the disease exists in endemic form.

"Tenth: No subject should be vaccinated in whom typhoid seems imminent or at the beginning of an attack, as vaccination may aggravate the disease. It should be practiced only upon perfectly healthy subjects, free from all organic or other defects and from local or general affections, no matter what their nature, especially tuberculosis."

As a result of examination of these and other data, the commission reached the following conclusions, which were unanimously adopted:

There are grounds for recommending the voluntary employment of antityphoid vaccination as a rational and practical method of diminishing, by a sensible proportion, the frequence and gravity of typhoid fever in France and in the French colonies.

This recommendation is addressed to all whose profession, whose usual or accidental methods of alimentation, whose daily or frequent association with the sick or with bacillus carriers, expose them to direct or indirect contagion by the bacillus of typhoid fever.

The groups of persons designated as likely to be particularly benefited by antityphoid inoculation are—

(*a*) Physicians, internes, medical students, male and female nurses in military and civil hospitals.

(*b*) Members of families in which bacillus carriers have been demonstrated.

(*c*) Young persons of both sexes who have come from salubrious regions in the country to cities which are habitual foci of typhoid fever.

(*d*) The population of cities where the latter disease is frequent.

(*e*) Soldiers and sailors (rank and file) sent to colonies where typhoid fever is epidemic or endemic.

The findings of the French commission seem to deserve this extensive review because they present the best and completest summary of our knowledge to date on this important subject.—*Boston Med. and Surg. Journal,* Oct. 19, 1911.

GYNÆCOLOGY AND ABDOMINAL SURGERY.

UNDER THE CHARGE OF S. M. HAY, M.D., C.M., GYNAECOLOGIST TO THE TORONTO WESTERN HOSPITAL AND CONSULTING SURGEON TO THE ORTHOPEDIC HOSPITAL.

THE RECOGNITION AND TREATMENT OF GONORRHEAL ENDOMETRITIS AND CERVICITIS.

Walter T. Dannreuther, New York, states that in gonorrhea in the female the endometritis and cervictis are much more difficult to diagnose than the urethritis; the chronicity, danger of complications, and resistance to treatment are also greater in the former conditions. The gonococcus is frequently found in the secretions from patients in whom the disease was not suspected. It is found in little girls, in young women before marriage, and in unmarried women after the menopause. Indirect infection may occur from towels, toilet seats, etc. A married woman may for a time resist the disease of her husband and later, on account of lowered resistance, succumb to it. No patient should be considered cured until repeated examination of the secretions has shown the gonoccus to be absent. In every case of vaginal discharge a microscopic examination of the discharge should be made. thick greenish discharge, or one that excoriates the vulva should always be suspected. The appearance of the cervix may be such as to resemble a cauliflower, or it may be swollen and everted. Specimens should be obtained on a little sterile cotton from the meatus urinarius, the cervical canal, and the vaginal orifice. If no gonococci can be detected in the cervix and they are found in the vagina it is because they are hidden in Bartholin's glands. Intrauterine injections are frequently responsible for the spread of the disease. The acute cases should be kept in bed on a bland diet, and should be given vaginal irrigations by means of a syringe with a nozzle having a hole in the end instead of at the side. Subacute cases

should be treated in the office by dilating the cervix and irrigating the uterus with a hot watery solution of iodine, one dram to the quart, or of silver nitrate, 1-5000. Nabothian glands must be punctured and sterilized. The uterine cavity may be curetted and swabbed out with iodine.—*Medical Record,* November 4, 1911.

APPENDIX DYSPEPSIA.

Formerly the cause of chronic stomach trouble was always sought in the stomach itself and our therapeutic measures were always aimed directly at that organ. It is only in recent years, says W. F. Cheney, San Francisco (*Interstate Medical Journal,* October), that a chronically inflamed appendix or gall-bladder has been recognized as a cause of dyspepsia. When we see how many observers, working independently in different parts of the world, have come to similar conclusions regarding the existence of an appendix dyspepsia we are forced to believe that the condition must hereafter be reckoned with as one of the possibilities in all chronic disturbances of digestion. If we seek for any typical history of this condition we shall be disappointed, says the author. Some cases show in their history a striking resemblance to gastric ulcer, with epigastric pain after eating, flatulence, belching, sour eructations, nausea and vomiting, and even hematemesis at times. These are the cases, as Graham has said, which were needlessly subjected to a gastro-enterostomy for "medical ulcer," there being found at operation no demonstrable lesion in the stomach. In other cases, says Cheney, the history is that corresponding to hyperchlorhydria, with heartburn, water-brash, flatulence, and nausea, but without pain or vomiting. It seems probable that many of the cases of "sour stomach" resisting all forms of medical treatment are due to chronic appendicitis. In fact, this has already been proved in those cases in which the removal of a chronically diseased appendix has been followed by a relief of all symptoms and a return of the gastric secretions to normal. A third group of cases complains of heaviness and fullness after eating, flatulence, belching and regurgitation of food, an inability to take more than a small amount of food at a time. These cases may show a normal stomach analysis and the symptoms seem to be due to pylorospasm. The author has not always been able to get a history that points to the appendix as the seat of the disease, but believes that the so-called "bellyaches" of childhood are very often due to appendix inflammation which lays the foundation for the future dyspepsia. Another important point in the diagnosis is that the epigastric pain and

other gastric symptoms are either excited or increased by exertion. Again, the time of onset of the pain is usually irregular in contrast to the striking periodicity in gall-stones and ulcer. Unfortunately, the occurrence of hematemesis, or blood in the stools, does not speak absolutely against the diagnosis of appendicitis; for evidence is accumulating, says Cheney, that the occurrence of hematemesis can no longer be considered as speaking for gastric ulcer in the differential diagnosis between the two.

TUBERCULOUS PERITONITIS.

J. H. Bradshaw (*Arch. Pedriatrics.*, April, 1911, 284) puts on record a complete cure resulting from two laparatomies performed on an infant of eighteen months suffering from tuberculous peritonitis without serous exudate. The case is noteworthy because it is the serous and not the dry form of the disease that gives the best results from operation; in fact, many operators refuse to operate upon infants with tuberculous peritonitis when there is no effusion in the peritoneal cavity.—*American Journal of Obs. and Dis. of Women and Children,* Oct., 1911.

In July, 1907, the reviewer operated on the wife of a physician. On opening the abdomen the peritoneal cavity was studded everywhere with tuberculous deposit. It was a warm day in July and the sun was shining brightly in the operating room. The abdominal cavity was well and repeatedly flushed with normal saline, after which the intestines were removed from the cavity and spread out upon towels over the abdomen and for a few minutes exposed to the direct warm rays of sunshine. The patient made a good recovery.

In June, 1909, I had occasion to perform another abdominal operation upon the same patient, and, to my surprise, there was not the slightest evidence of tubercle to be found. She remains in good health to the present time, and since her last operation has weighed probably more than at any previous time. I am convinced that the benefits of sunshine in tuberculous conditions, especially orthopedic cases, is not fully appreciated by most of us.—S. M. H.

CANCER OF THE FALLOPIAN TUBE.

Notwithstanding the frequency of cancer of the ovary, E. E. Montgomery, Philadelphia (*Journal A. M. A.*, October 28), says the investi-

gations of Orthmann seem to show that carcinoma is rarely transmitted from it to the tube. Careful observation indicates that in cases associated with tubo-ovarian cysts, the cancer in the tube was primary. Primary carcinoma of the Fallopian tube is rare ,but the investigations of Orthmann, Boxer and others have shown that it occurs more frequently than supposed. While sarcoma and chorio-epithelioma have been found, carcinoma is much the most frequent. In the early stages the symptoms are not alarming and the condition may be overlooked, even on operation, unless microscopically examined. Pain is rare, and the most frequent symptom is menorrhagia, and a watery discharge is not infrequent. The symptoms are much like those of a number of other pelvic conditions, but the occurrence of menorrhagia and a watery discharge in a woman who has been the victim of pelvic inflammation, when found associated with tubal enlargement, should be considered danger signals and call for early operative interference. The largest percentage of reported cases occur between 45 and 50, but this is not of diagnostic importance. It has been found as early as 27 and also after the 60th year. Neoplastic rather than inflammatory involvement indicates radical removal. When both tubes and ovaries are involved, or the tubes only in the neoplastic change, the uterus and ovaries should also be removed. The diagnosis cannot be made from the microscopic appearances alone. Its malignant character must be determined from microscopic findings. McCoy reports an interesting case occurring in a woman aged 34 years, her first husband having been said to have died of cancer. She presented the anomalous condition of carcinoma of one tube, tuberculosis of the other and myoma of the uterus. She made an apparently good recovery, but her future cannot but be interesting pathologically. The author's summary is as follows: "The study of the cases which have been reported by a number of observers would seem to justify the following conclusions: 1. Menorrhagia and watery discharge occurring in women giving a history of previous tubal inflammation should be regarded as danger signals demanding careful investigation. 2. The association with such symptoms of tubal masses should be considered as requiring their removal, and where both tubes are involved the removal of the uterus through an abdominal incision. 3. All neoplastic masses of the tube should be subjected to microscopic investigation, for only thus can the diagnosis as to malignancy or non-malignancy be accurately determined.

OPHTHALMOLOGY.

UNDER THE CHARGE OF F. C. TREBILCOCK, M.D., OPHTHALMOLOGIST TO TORONTO WESTERN HOSPITAL, AND G. STERLING RYERSON, M.D., L.R.C.S., PROFESSOR OF OPHTHALMOLOGY, UNIVERSITY OF TORONTO.

FOREIGN BODIES IN THE CORNEA.

The removal of foreign bodies from the cornea is an operation which falls often to the lot of every physician, yet there are many men who give very little thought to the importance of doing it in a proper way. The final result of this delicate procedure in many cases is to leave a cornea denuded in a great part of its area of epithelium, that is, to leave a large traumatic ulcer of more or less depth. To be sure such ulceration generally covers over satisfactorily, but there is always the chance of infection, and even if that be escaped, the new surface formed may be irregular in its curveture; a condition of irregular astigmatism may ensue. It is well to remember that the poor vision so often left after cor- the new epithelial surface, than to the opacities so generally left.

Consequently one should give a proper amount of thought to what appears to be a trivial matter, lest by his very carelessness the ultimate sharpness of sight be lessened, a point of great import to his patient.

The necessities for the satisfactory removal from the cornea of such particles as bits of iron, steel, emery, etc., are: perfect sight on the part of the operator; a proper position of the patient; a good illumination of the field of operation; an anæsthetic cornea; a narrow-pointed spud; and generally a lid retractor, so that the physician may have both hands free.

It is not necessary to enlarge upon these points, except to say that I generally prefer artificial light, and focus the rays upon the foreign body with a large lens; and that more satisfactory work can be done with a broad needle than with the orthodox spud, which is generally too wide. The particle should be picked out with as little disturbance to the cornea as possible; don't let the point of the needle touch the surface of the eye until it is exactly at the edge of the speck you are to release. Have the other eye kept open and fixed upon some object on the wall or ceiling which gives a satisfactory position to the spot where you are to work. A drop of Atropine Sol. 1 per cent., with a pad and bandage, completes the dressing.

PERSONAL AND NEWS ITEMS.

ONTARIO.

Dr. Severier Ducharme and Dr. Reaume are to be the candidates in North Essex.

The Ontario Government has decided to increase the grant from $5,000 to $10,000 in aid of the Hygienic Institute of London. The management will be vested in the Western University. This will be of decided advantage to the Medical School in London. Hon. Adam Beck has taken an active interest in securing the institute for London.

The eleventh annual meeting of the Home for Incurable Children, Toronto, was a successful affair. The debt has been wiped out. There was a mortgage of $10,000.

Dr. MacGuire has been nominated for the Legislature in North Norfolk.

The by-law to grant $4,000 toward the erection of a new addition to the Berlin-Waterloo Hospital was carried recently by a vote of 105 to 88, a majority of 17. Berlin voted $15,000 last May and the County Council made a grant of $5,000, making a total contributed by the municipalities of $24,000. Work on the new wing will commence almost immediately.

Dr. Roberts, M.H.O. for Hamilton, in compiling his annual statement, found that the total of forty cases of typhoid which have occurred in the city this year is the lowest on record, and that no other Canadian city can show anything as low proportionately as this. The doctor attributes this condition to the stringent rules of the Board of Health. For the same reason there was less diphtheria last year than for fifteen years past, and no case of smallpox was reported.

The Toronto General Hospital has been made the recipient of a valuable static electrical machine, by Mr. J. L. Englehart, chairman of the T. and N. O. Commission.

Dr. R. M. Mason is again a candidate for the local Legislature in East Victoria.

The Board of Governors of the Kingston General Hospital elected Mr. F. G. Lockett as chairman, and decided to erect another wing to the institution, which is in need of enlargement.

The Ontario Government will establish a farm in connection with the Hospital for the Feeble Minded at Orillia. The farm will contain about 300 acres, and is supplied with pure spring water.

The Medical Health Officer of Toronto is paying a good deal of attention to the "carriers" of disease germs. Children who have been known to have been exposed to diphtheria in a number of instances yield positive cultures.

Dr. and Mrs. Albert H. Cook have returned to Toronto, and are residing at 104 St. John's Road.
on Thursday, November 16.

The body of the late Edward McSweeny Cassidy, son of Dr. J. J. Cassidy, of 45 Bloor Street east, reached Toronto a few days ago. Mr. Cassidy was accidentally killed at Holmfield, Manitoba, by a train. He was well known in Toronto, where in 1904 he was an honor graduate of St. Michael's College.

The late Thomas Cross, of Toronto, left $200 to the Hospital for Sick Children, and $200 to the Missionary Society of the Methodist Church.

Dr. W. H. Wood has been put in nomination as a candidate in West Middlesex.

The male nurses in the Toronto Asylum are to receive higher pay. The medical superintendent's residence is to be fitted up as a home for the female nurses. During the past year over 300 patients were admitted.

The nurse inspection of public school children in Toronto is doing good. The patients that come to the hospitals for treatment present a much cleaner appearance now than formerly.

Each of the nine cases of cerebro-spinal meningitis reported to the Provincial Board of Health during October was fatal, according to statistics just issued. No similar cases were reported last year, but it has been noticeable all through this year that invariably cerebro-spinal meningitis proves fatal. During the month 849 cases of contagious diseases were reported, with 119 deaths, which compares very favorably with the corresponding month last year, when there were 1,226 cases and 226 deaths. There were 182 cases of typhoid, with 23 deaths, and 315 of diphtheria, with 22 deaths.

Toronto has 418 cases of tuberculosis under supervision of the city nurses.

Dr. Ernest Jones, Toronto, has returned from Germany, where he read a paper before the International Congress of Medical Psychology.

Dr. James Russell, formerly medical superintendent of the Asylum for the Insane in Hamilton, will be a candidate in West Hamilton.

Dr. Jessop will again be a candidate in Lincoln. It is thought he may not be opposed.

Dr. Godfrey will be the candidate in West York. He has represented this seat for some years.

Dr. Thomas Smellie has resigned his seat in the local Legislature for Fort William, and has accepted the registrarship of the Thunder Bay district.

Dr. J. A. Harvie, of Coldwater, is offering himself as a candidate for the Ontario House in East Simcoe.

The mother of a patient who had been cared for in the General and Marine Hospital in St. Catharines charged the institution with neglect. Dr. Bruce Smith investigated the case and found that the patient had received the best of attention.

Dr. H. G. Lackner has been again nominated for the Ontario Legislature for North Waterloo.

Dr. Arthur E. Ross is a candidate for the Ontario Legislature for Kingston.

Dr. W. A. Henderson of Sarnia, will be a Legislature candidate for West Lambton.

Dr. Hastings, Medical Health Officer for Toronto, favors a municipal abattoir and tightly-covered garbage receptacles.

Dr. W. E. Struthers, Public School Medical Inspector, has urged that there should be a special institution in Toronto for the care of defective children. He thought that about 400 or 500 acres of land should be secured near Toronto, and suitable buildings gradually erected thereon. This institution should be maintained by the state.

The Board of Control for Toronto will spend $600 annually for the care of the teeth of poor children.

Dr. A. E. Vrooman, of Victoria West; Dr. McQueen, of North Wentworth; Dr. Racine, of Russell; Dr. G. Henderson, of West Ottawa; Dr. R. A. Preston, of North Lanark; Dr. A. E. Ross, of Kingston, and Dr. D. Jameson, of South Grey, are candidates for the Ontario Legislature.

Dr. C. S. Inman, of London, England, has been appointed at the head of the Hygienic Institute of London, Ontario.

QUEBEC.

Despite economy almost amounting to parsimony, McGill University financial statements show a deficit of $60,000 in the past year, while the invested funds of the university have been impaired to the extent

of $154,600 by recurring deficits. The expenditure for the year was $832,638. The only departments to pay expenses were the faculty of law and the Royal Victoria College for Women. The deficit in arts was $8,053; applied science, $6,317; library, $7,013. The library is so poorly equipped at that, professors had to go several times to Harvard for researches. In medicine, the showing is much worse, and the deficit is $32,894, an increase of $2,200 over the preceding year.

Professor Alcock, of St. Mary's Hospital, London, England, has been invited to fill the chair of physiology at McGill University, to replace Professor Wesley Mills, resigned.

The departure of Professor Armstrong from the Montreal General Hospital promotes Professor Hutchison to the chair of clinical surgery, to be replaced by Doctor Elder. Doctor Bazin becomes surgeon to the hospital.

The reduction of the exportation of opium from India and the limitation of the growth of the poppy in China will soon reduce the consumption of opium to a minimum.

The local Government Board for Great Britain has issued an order making the reporting of cases of tuberculosis compulsory. It is hoped in this way to greatly decrease the number of deaths from this disease.

There comes from Hartford, Conn., the news that Lawlor, a football player, was kicked on the head early in the game and rendered unconscious. He played throughout the game, though he did not remember anything that occurred. He appears to have remained in an unconscious condition till some time after the game was finished.

Montreal has the highest birth-rate of any of the large cities of the world, but has also a death-rate only exceeded by one. The following table has been prepared by Dr. Ward, of the Civic Health Department, calculated on the per thousand of population:—

City.	Births.	Deaths.
Montreal	36.45	22.40
St. Petersburg	27.8	24.1
Berlin	25.5	14.7
London	23.6	12.7
Rome	23.6	18.5
Milan	23.3	17.1
Paris	18.0	16.7
Brussels	16.8	13.6

Mayor Guerin, of Montreal, has perfected some of the ideas which he proposes to advance for the abolition of slum conditions in Mont-

real. The new proposed Health Department law will give the city the right to disperse people living in houses where the conditions are not sanitary. They will, for instance, forbid people living in dark, unlighted rooms and in houses which are not lighted both from the front and back. They can also order unsanitary houses to be torn down. The building by-law, which is in the course of preparation, will also have provisions which will assist in working out the scheme.

A strong deputation recently waited on Sir Lomer Gouin, the Premier of Quebec, to ask for an annual grant of $100,000 to the University of McGill. The deputation did not receive much encouragement. It was pointed out that Laval would also be entitled to consideration. The sum asked was as large as that granted each year to primary education.

The governors of McGill University have completed their plans for a big financial campaign and next Monday an attempt to raise a million dollars within a week to meet its needs will be commenced. A number of committees have been appointed and a tremendous effort will be made to set the university on its feet financially. Dr. Douglas, of New York, who was last year honored by McGill, cabled to-night to the organizers of the campaign that he would lead the way with a subscription of $100,000.

The needs of McGill University for funds are urgent. One hundred years ago James McGill made provision for the foundation of the university. For thirty years the institution has made no appeal to citizens for funds. In these three decades its growth has been almost phenomenal. In 1881 four hundred students were enrolled; this year there are 2,200 students on the roll.

University's five-day whirlwind campaign, which opened Monday morning, closed this evening with $1,526,965 collected, and the financial standing of the institution, for a time at least, is secured.

FROM ABROAD.

Madame Curie is the chief professor of sciences in the University of Paris. She was the co-discoverer with her husband, Prof. Pierre Curie, of radium, and, in 1903, shared with him half of the Nobel prize for physics. It has just been announced that the Nobel prize for chemistry has been awarded to Madame Curie.

The severe October storm which swept the northern water badly

damaged the fishing fleet, according to news from Dr. W. T. Grenfell, the medical missionary at Labrador. His own yacht, given by Princeton University, was rendered a complete wreck.

Alfred Peter Hillier, M.D., M.P. for one of the divisions in Herts, England, died a short time ago. He was a widely read medical practitioner on public questions, and was a distinguished member of Parliament.

Among the members of the medical profession in foreign countries who have recently died are: Dr. Emil Emmert, lecturer on eye diseases in the University of Berne, aged 66; Dr. Nicolas, surgeon to the hospitals at Marseilles; Professor Julius Caspary, director of the Dermatological Clinic of the University of Königsberg since 1905; Geheim Medizinalrat Dr. Aschenborn, assistant in the medical department of the Prussian Minister of the Interior, aged 60; and Dr. Getto, of Deidesheim, believed to be the oldest medical practitioner in Germany, aged 98.

Lord Strathcona has given £2,000 to the British Home for Incurables.

Report from Berlin states that on Oct. 30 Dr. Simon Flexner, director of the laboratories of the Rockefeller Institute for Medical Research in New York, was appointed an honorary member of the Royal Institute for Experimental Therapeutics at Frankfort-am-Main.

The Bishop of London once more, in forcible terms, calls attention to the falling birth-rate. He reiterates his opinion, expressed six years ago, that the cause is deliberate prevention of conception, and deplores it as a gigantic evil.

Following on the deaths of two eminent London physicians, their wills were officially reported by the Court of Probate. That of Dr. George Fielding Blandford is given as £106,785, and that of Dr. J. Hughlings Jackson at £22,637.

It is announced that the Berzelius medal of the Swedish Medical Society has been awarded to Dr. Emil Fischer, of Berlin.

Report from Pekin on Oct. 25 states that bubonic plague is epidemic along the Siberian border of Manchuria, and that the Chinese Government has established rigorous quarantine on the adjacent frontier.

Dr. Ernest Keys Cullen has resigned his position at the Johns Hopkins Hospital and will take up private practice in Detroit, Mich.

Dr. Howard A. Kelly has returned to Baltimore, and has completely recovered from the operation performed upon him at St. Mary's Hospital, Rochester, Minn., a month ago.

The third lecture in the seventh course of Harvey Society Lectures will be given on Saturday evening, October 28th, at the New York

Academy of Medicine, by Professor Max Verworn, of the University of Bonn. The subject will be Narcosis.

The Department of Tropical Medicine of the New York Post-graduate Medical School is organizing an expedition to investigate pellagra in the Southern States. The work will start in the spring of 1912 and is made possible by the gift to the institution for this purpose of $15,000 by Colonel Robert M. Thompson and Mr. J. H. McFadden.

The sixty-fifth anniversary of Ether Day was celebrated at the Massachusetts General Hospital, Boston, on Monday, October 16th. The first public demonstration of surgical anæsthesia took place in that hospital, and the custom of observing Ether Day at the hospital has been in vogue for a number of years. Dr. Simon Flexner, of the Rockefeller Institute, delivered an address on the Biological Basis of Specific Therapy.

Railway trains are supposed to be a possible means of spread of typhoid fever in America. It has been recommended that all toilet-rooms should be closed whilst the trains are traversing the Croton watershed that supplies New York.

Los Angeles is having constructed the so much needed open-air school-rooms. In all school buildings that are being constructed there are open-air study-rooms, lunch-rooms and reading-rooms. This is a very valuable forward step.

Plans have just been filed for new buildings for the New York Society for the Ruptured and Crippled, to be erected at a cost of $800,000, a short distance east of Third Avenue and extending from 42nd to 43rd Streets.

On October 16th there was unveiled at Vienne, France, a statue to Michael Servetus, the forerunner by a hundred years of William Harvey in the discovery of the circulation of the blood, but better known as the author of theological writings attacking the dogmas of the Trinity and divinity of Christ.

Professor E. A. Minchin, M.A., Professor of Protozoology in the University of London, will deliver a special course of about fifteen lectures on "Trypanosomes and Allied Flagellates" at the Lister Institute of Preventive Medicine, at 5 p.m. on Tuesdays and Fridays, during the second term (January to March, 1912). These lectures are free and are open to medical practitioners.

Dr. William Osler, M.D., F.R.S., will deliver the Sillimen Lectures, six in number, on the "Evolution of Modern Medicine," at Yale University, in October, 1912.

The site and buildings of the University of Manchester have recent-

ly been valued at £600,000. This money has been entirely provided by private persons. Between 1900-1910 the university has spent £212,416 on buildings. There are 378 medical students at the university.

Dr. Thomas Linacre, who was physician to Henry VIII., founded the Royal College of Physicians of London September 25th, 1518.

Report from Berlin on Oct. 19 states that Asiatic cholera is extensively prevalent among the native inhabitants of Tripoli and among the Italian troops now invading that country. Report from Chiasso, Switzerland, on Oct. 23, states that in Italy the epidemic of cholera is abating everywhere, except at Venice. During the week from Oct. 8 to Oct. 14 inclusive, there were in all Italy 247 new cases and 91 deaths of the disease. Of these, 56 cases and 15 deaths were in Venice. There were no new cases in Rome.

Report from Providence, R.I., states that Robert E. King, of that city, a man of many aliases, has been held in bail of $1,000 for the federal grand jury on a charge of alleged use of the mails to defraud. King claimed to be a "mystic healer of all ailments that flesh is heir to," and as such his principal stock in trade was "a Hindoo magnetic belt made by a dead Swami or Indian magician." Evidently love of the occult has lost little of its power as a means of luring the gullible to deception.

Report from Berlin describes experiments now being made there on yeast as an article of food. Dried yeast contains about two and one-half times as much protein as beef; the bitter taste can be removed by the addition of sodium bicarbonate; and it is exceedingly cheap. The spores could, of course, be killed by heat before being eaten. Over seventy thousand tons of yeast are produced annually by the German breweries, and its use as food would prove of great economic value.

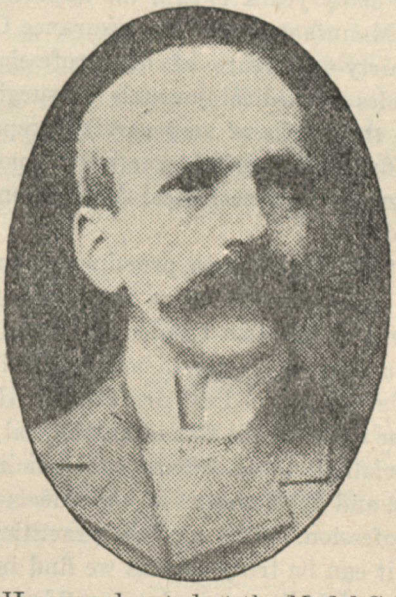
OBITUARY.

J. F. W. ROSS, M.D., C.M., L.R.C.P.

Dr. James F. W. Ross, of Toronto, died on the 17th of November, at Richmond Hill, where he met with a fatal accident three days before. He was on his way to visit a patient in Cookstown when the accident occurred. He was driving his car himself at the time; but the recent

fall of snow concealed a rut, into which one of the wheels of his car plunged, causing it to turn over. Doctor Ross was forced against the steering wheel with such violence that several ribs on each side were fractured and the heart severely compressed. His circulation soon became weak and his breathing difficult. One of his lungs soon became markedly congested, and a pneumothorax rapidly made its appearance. He was taken to the home of Dr. Langstaff, of Richmond Hill, where he remained till his death. He was attended by Drs. J. A. Temple, Allen Baines, John L. Davison, A. C. Hendrick, and F. W. Marlowe.

Dr. J. F. W. Ross was the son of the late Dr. James Ross, of Toronto, and was born in 1857. His great-grandfather came from Scotland



to Canada in 1780. He was educated at the Model School, the old Grammar School, and Upper Canada College. He matriculated in 1875 and studied medicine in the Toronto School of Medicine, from which he graduated at the University of Toronto in 1879. After spending a year in the Toronto General Hospital as house surgeon, he went abroad for post-graduate study, and visited Berlin, Liepsic, Zurich, and Vienna. He took his L.R.C.P. in London in 1880. He spent some time in Birmingham with the late Mr. Lawson Tait. He returned to Toronto and, in 1882, married Adelaide M., third daughter of the late Mr. George Gooderham. He leaves his widow, two sons and two daughters to mourn his loss.

Dr. Ross devoted his energies mainly to gynaecology and abdominal

surgery. In these he became widely known as a skilful diagnostician and brilliant operator. He was gynaecologist to the Toronto General Hospital, professor of the same subject in the University of Toronto, and consulting surgeon on the staffs of St. John's, St. Michael's, and the Toronto Western Hospitals. To all these positions he lent lustre. As a teacher he was loved by all his students for his wise words. At some time or other he held high offices as the gift of his confrères. He was at one time president of the Canadian Medical Association. In 1904 he was president of the Ontario Medical Association. He took a very active part in the formation of the Toronto Academy, and became its first president from 1907 to 1909. To this institution he gave his most loyal support. For many years he held the important position of Medical Director of the Manufacturers' Life Insurance Company.

During the thirty-two years of his professional career he contributed many articles to medical journals on surgical subjects. These papers always bore the marks of very careful preparation. They were widely read and influenced surgical practice in many ways. He was a member of the American Gynaecological Association, and took an active part in its discussions.

Several noble traits stood forth prominently in the late Dr. Ross's character. One of these was his desire to place before his professional brethren the outcome of his own studies and careful observations. In this respect he was a true benefactor to both medical men and the public. He was also a unifier of the medical profession. He gave his time and abilities freely in the cause of the Canadian Medical Association, the Ontario Medical Association, the Academy of Medicine, the union of the two medical schools, and development of high ideals everywhere throughout the medical profession. As a medical practitioner, he was the soul of honor. Of him it can be truly said as we find in Macbeth: "He was a gentleman on whom I built an absolute confidence."

To his sorrowing widow, his children, and his relatives, we extend our sincere sympathy and bespeak the same from every member of the medical profession who knew the late Dr. Ross.

As a home man, a professional man, and a business man, he ever walked in the footsteps of affection, honor and truth. We cannot more fittingly close these remarks than in the words of Addison's Cato, so well lived up to by the subject of this sketch:

Honor's a sacred tie, the law of Kings,
The noble mind's distinguishing perfection,
That aids and strengthens virtue where it meets her,
And imitates her actions, where she is not.

W. L. PIRT, M.D.

Dr. W. L. Pirt, of Carman, Manitoba, was found dead beside his auto two miles west of the town on 1st November. The hind wheel of the machine was broken and the car was a wreck. It is supposed that the doctor was returning from a visit to one of his farms when he was the victim of an accident to the machine. There will be an inquest.

A. F. PRINGLE, M.D.

Dr. Alex. F. Pringle, of Northfield, Minn., died suddenly 25th October, at the residence of his sister, Mrs. Carman, of Cornwall, Ont. He had met with an automobile accident in London, England, some months ago, and was for some time in a hospital. He was on his way to his western home after a trip to Europe, and was spending a few days with relatives here. Deceased was 58 years of age and leaves a wife, but no children. He was born in Cornwall, being a son of the late Judge Pringle. He was a specialist in the treatment of diseases of the eye.

The date of his funeral is not yet set, subject to the arrival of his widow from Minnesota.

D. N. MORRISON, M.D.

Dr. Morrison, of Sydney, C.B., died at Halifax, September 4th, 1911. He was born at Loch Lomond, C.B., in 1857. He was a graduate of Halifax College of 1883. For a number of years he practised at Freeport, Oxford County, N.S.

RICHARD STANBURY, M.D.

Dr. Stanbury, of Bigfield, in the County of Huron, Ontario, died September 7th, 1911. He was born in Devonshire, England, in 1834. He graduated from Victoria College in 1865. He practised continuously in Bigfield.

W. G. WALKER, M.D.

Dr. Walker died 19th September, 1911, from the effects of a dose of carbolic acid taken by mistake. He was born in Stratford in 1869, and graduated from McGill in 1892.

T. H. THORNTON, M.D.

Dr. Thornton, of Consecon, Prince Edward County, Ontario, died on 26th November. He graduated in 1870. He had spent all his professional career in Prince Edward County. He was one of the best known practitioners in the county.

BOOK REVIEWS.

NEUROLOGY HISTORIES.

Case Histories in Neurology, a Selection of Histories setting forth the Diagnosis, Treatment and Post-mortem Findings in Nervous Diseases. By E. W. Taylor, A.M., M.D., Instructor in Neurology, Harvard Medical School; Assistant Physician, Department of Neurology, Massachusetts General Hospital; Visiting Neurologist, Coney Island Hospital, Boston. Boston: W. M. Leonard, Publisher, 1911.

The object of this book, the third volume of the Case History Series, is to set forth in practical form the fundamental facts regarding the symptomatology, diagnosis, treatment, and pathological findings in the more frequent disorders of the nervous system.

The first section presents A General Statement of Diagnostic Methods.

Then follow the main divisions of the book:—First, Diseases involving Peripheral Nerves; second, Diseases of the Spinal Cord; third, Diseases of the Brain; fourth, Conditions of Undetermined Pathological Basis; fifthy, Psychoneuroses.

The book presents 114 case histories, classified in the sections named.

In addition to the general introduction each chapter has its introduction and summary.

Each case is carefully considered, much attention given to differential diagnosis, and possible methods of treatment are stated.

Numerous graphic illustrations and frequent "notes" commenting upon, and comparing cases, denote the painstaking teacher of post-graduate classes.

The book is a broad and carefully prepared clinical course in Neurology, dealing with actual cases and supplementing in a way that makes the book not only one of great value, but also very interesting, the teachings of the general systematic text-book.

TRANSACTIONS OF THE GENITO-URINARY SURGEONS.

Transactions of the American Association of Genito-Urinary Surgeons. Twenty-fifth annual meeting held at the Hotel Astor, New York City, May 31st, June 1st, 2nd, and 3rd, 1911. Vol. VI. published for the Association by Frederick H. Hitchcock, 105 West Fortieth Street, New York.

The papers in this volume are good and the illustrations attractive. Care has been taken in the editing and the volume is very free from errors. Those who are interested in this field of work will find much useful information in this volume. Comparing this with former issues from this association we must say that there is no falling-off in quality. "Age does not wither, nor custom stale" the work of this association.

MEDICAL DIAGNOSIS.

A Handbook of Medical Diagnosis in four parts, for the use of Practitioners and students. By J. C. Wilson, A.M., M.D., Professor of the Practice of Medicine and Clinical Medicine in the Jefferson Medical College, and Physician to the Hospital; Physician to the Pum-Sylvania Hospital; Physician-in-Chief to the German Hospital, Philadelphia. 418 illustrations and 14 full-page plates. Third Edition, thoroughly revised. Philadelphia and London: J. B. Lippincott Company.

In 1,438 octavo pages one should be able to say a good deal. In the volume before us, Dr. Wilson not only says a good deal, but he says it very well. The various topics of diagnosis are taken up in consecutive order and discussed fully. As one turns over page after page of this volume, its comprehensive character grows on the attention. There is nothing omitted. The author has the powers of observation well trained, and he has the ability to state in a clear manner what he observes. The volume is a genuine thesaurus on medical diagnosis. With this work for a guide very few errors need be made in the interpretation of signs and symptoms, and reading from them the name of the diseases and the morbid processes that are at work. The evidences of careful revision are abundant. This has been so thorough that there is but little to criticize. The publishers have given forth a handsome volume. We feel satisfied that all who become possessed of this book will enjoy it very much, and will often betake themselves to its pages. "The whole Art of Medicine is in Observation" is taken as the motto for the book. It is a good one and is lived up to; and those who study its pages will also be able to read "the language of disease."

MISCELLANEOUS MEDICAL NEWS.

VITAL STATISTICS OF TORONTO.

City Clerk Littlejohn, of Toronto, has issued the vital statistics for October, which afford striking evidence of the general prosperity of the city. No fewer than 613 marriages were registered for the month, an increase of 399 over October of last year, and 213 over September of this year. No less than 55 were registered on the last day of the month. Births are lower than last year, and deaths higher, but those from contagious diseases are normal. The figures for October and previous month and October last year were as follows:—

	Oct. 1911.	Oct. 1910.	Sept. 1911.
Births	763	872	840
Marriages	613	214	400
Deaths	482	346	605

Deaths from contagious diseases:—

	Oct. 1911.	Oct. 1910.	Sept. 1911.
Scarlet fever	0	4	0
Diphtheria	7	9	13
Whooping cough	3	0	1
Typhoid	15	14	11
Tuberculosis	21	22	23
Measles	2	0	2

FINAL EXAMINATIONS AT COLLEGE OF PHYSICIANS AND SURGEONS, ONTARIO.

The following named candidates have passed the final examination of the College of Physicians and Surgeons of Ontario:—

William Edward Ainley, Bridgewater, N.S.; Roy Aubrey Belfry, Orillia, Ont.; Louis Charles Emile Beroard, Ottawa, Ont.; Harold Buck, Port Rowan, Ont.; William Arnott Burgess, Leamington, Ont.; Edward Patrick Byrne, Kingston, Ont.; Robert Atchison Caldwell, Murillo, Ont.; Angus Alexander Campbell, Shanty Bay, Ont.; James Patrick Campbell, Arthur, Ont.; Joseph Edmond Charbonneau, Chelmsford, Ont.; Henry Stanley Crowe, Central Onslow, N.S.; William James Defries, Toronto, Ont.; Archibald Stuart Duncan, London, Ont.; Joseph Cullo-

den Eager, Waterdown, Ont.; James Christopher Gillie, Chapleau, Ont.; William Norman Gilmour, Brockville, Ont.; Edna Mary Guest, Elginfield, Ont.; William Rellison Hambly, Napanee, Ont.; David Alexander Hopper, Toronto; Cyril Gray Imrie, Whitehall, Mich.; Arthur Brown James, Brantford, Ont.; Herbert Edgar Johnson, Randolph, Ont.; James Proudfoot Jupp, Toronto; Joseph Aloisius Kearns, Barrie, Ont.; Henry Dewitt Lees, Niagara Falls, Ont.; Henry Herbert Murray, Toronto; William Alexander McCracken, Cornwall, Ont.; Edward Lorne McIntyre, Forest, Ont.; Charles Reginald McKay, Port Colborne, Ont.; Thomas Wesley Nancekivell, Woodstock, Ont.; John Morris Nettleton, Penetanguishene, Ont.; Thomas Reginald Pickard, St. Mary's, Ont.; John Thomas Phair, Toronto; Maurice Aaron Pollock, Toronto; Joseph Mastai Ravary, St. Amour, Ont.; Charles Sheard, jr., Toronto; Robert Henry Sheard, Toronto; Gordon Berkeley Stalker, Walkerton, Ont.; Sydney Eustache Thompson, Kingston, Ont.; Michael Ulric Valiquet, Ottawa, Ont.; Walter Sargeson Verrall, Chatham, Ont.; George Sutton Weir, London, Ont.; Frederick William Weston, Campbellford, Ont.; Joseph Charles Woods, Aylmer East, Que.; Roland Wilbur Young, Waterloo, Ont.

SCHOOL DENTISTRY IN SWEDEN.

In Germany there are at present about one hundred complete dental surgeries for school children; in Sweden, with one-twelfth as many inhabitants, about thirty. These surgeries are open daily, and in Sweden every child is required to have constant dental supervision during school life. At first this treatment was given free, but it has been found that by charging a small nominal fee the expense of the institutions is much diminished and that beneficiaries and their parents value much more highly the services which they receive. The system of school dentistry is apparently more fully developed in Sweden than in any other country. —*Boston Med. and Surg. Journal,* Nov. 9th.

ALVARENGA PRIZE OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Senor Alvarenga, and amounting to about one hundred

and eighty dollars, will be made on July 14, 1912, provided that an essay deemed by the Committee of Award to be worthy of the prize shall have been offered.

Essays intended for competition may be upon any subject in medicine, but cannot have been published. They must be typewritten, and if written in a language other than English should be accompanied by an English translation, and must be received by the secretary of the college on or before May 1, 1912.

Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelope having on its outside the motto of the paper and within the name and address of the author.

It is a condition of competition that the successful essay or a copy of it shall remain in possession of the college; other essays will be returned upon application within three months after the award.

The Alvarenga Prize for 1911 has been awarded to Dr. Francis D. Patterson, of Philadelphia, Pa., for his essay entitled "The Parathyroid Glandules."

THOMAS R. NEILSON, M.D.,
Secretary.

TRANSMISSION OF DISEASE BY MEANS OF BOOKS.

The undersigned is preparing a paper upon "Books a source of disease," to be read before the next "International Congress of Hygiene," and in order to obtain data, respectfully requests the readers of this note to send him an account of any cases, the source of which have been traced to books or papers, or where the evidence seemed to make books or papers the offender. He would also further request information where illness or even death was caused by the poisons used in book-making.

All the information possible is wanted to present as complete a paper as possible. As in the case of insects, which we now know to be "carriers of disease," it is first necessary to collect the scattered evidence in order to show that there is real danger in books; and this will compel better care to be taken of libraries and books and improve the health of mankind.

WM. R. REINICK,
1709 Wallace Street,
Philadelphia, Pa.

WHO SHOULD ADMIT PATIENTS TO HOSPITALS?

The question of the way in which the beds of hospitals are filled up is likely to attract a good deal of public attention ere long. Some of the leading newspapers have taken up the subject vigorously, and seem determined to push it to its furthest conclusions. Nor can it be denied that there is reason in the assertion that the voluntary hospitals should have ample provision for local accidents. In a matter of this kind it is well to probe the situation, and in that way ascertain as far as may be the ultimate factors concerned in an untoward result. As all medical men know, the house surgeons and house physicians are almost invariably entrusted with the power of admitting or refusing admission to patients. A responsibility of that kind entrusted, as it is, to young men whose experience of the world is necessarily limited, and whose tact and wisdom have in most cases to be acquired in the rough experience of later life, is certain to lead to more or less abuse. There is an almost universal inclination on the part of residents who are keen at their work to admit "interesting" cases, and to reject patients suffering from hopeless or chronic and otherwise unattractive maladies. In some instances the resident palpably favors certain members of the honorary medical staff to the exclusion of others. His power is absolute. He has simply to say that there are no beds at his disposal and, as a rule, the last word is said. Now and then, though we hope and believe rarely, the resident keeps patients in the wards and is loth to admit fresh cases, so as to avoid any addition to his work.—*Med. Press and Circular,* Oct. 11, 1911.

THE STORAGE OF POISONS.

On the first of the present month the new regulations with respect to the sale of mineral acids came into force, whereby all retailed bottles containing these substances, among which ammonia will shortly be included, must be distinguishable by touch from ordinary bottles, and must bear conspicuous "poison" labels. These regulations have been made by the Privy Council in pursuance of Section 5 of the Poisons and Pharmacy Act, 1908, with the object of preventing the number of accidents and deaths which occur each year. It is a wonder that this precaution was never introduced before, but what is quite as necessary is that some steps should be taken to ensure that poisons, at least in public institutions, shall not be stored in the promiscuous fashion that still obtains even in otherwise well-regulated places, and further, that access to them shall only be permitted to one or two responsible persons.

The unfortunate accident that happened recently on board the French barque *Bougainville,* whereby a fatality ensued from drinking carbolic acid in mistake for port wine, would have never occurred had the poison been stored in a receptacle totally different from a wine-bottle. Hospital wards have rightly their separate poison cupboards, but smaller institutions and most private dwellings are generally lacking in this important detail.—*Med. Press and Circular,* Oct. 18, 1911.

THE NOBEL PRIZE.

We hear from Stockholm that Allvar Gullstrand, of Upsala, well known through his dioptric researches, has received the Nobel prize for medicine for 1912.

On October 21st, seventy-eight years ago, there was born at Stockholm Alfred Nobel, well known as a chemist, but still better as the founder of the Nobel Institute of Stockholm. From 1850 to 1854 he lived in the United States, studied with his father from 1859 to 1861, and in 1862 produced, for the first time, in large quantities, nitroglycerin. In 1865 he founded in Krümmel on the Elbe, Germany, a large factory for explosives. In 1866 he invented dynamite and through this and through his method of using an explosive for the detonation of dynamite, he became the founder of the nitroglycerin industry and inventor of the technique of modern explosives. Between the years 1867 and 1873, he opened fifteen factories for the manufacture of explosives in Europe and America. In 1873 he settled in Paris and invented there an explosive with a gelatin base. Many other inventions followed, among them, in 1884, an important technique in the distillation of petroleum, which method greatly improved the Russian petroleum industry; and, in 1888, the smoke free powder, ballistite. In 1891 he removed his laboratories to San Remo. During all these years he had been closely allied with his brother Ludwig (born 1831 in Stockholm, died April 12, 1888, in Cannes, France), a large owner of petroleum wells in Russia. Five borne and causes little pain or none at all.
years Alfred Nobel lived in Southern France, where he died on December 10, 1896.—*New York Med. Journal,* Oct. 28, 1911.

GIFTS TO MUSKOKA HOSPITAL.

A bequest of $300 has come to the Muskoka Free Hospital for Consumptives from the executors of the late Mr. C. E. Baines, who was for some time a patient at the Muskoka Cottage Sanitarium, the "pay" institution of the National Sanitarium Association, and who, during his stay in Muskoka, had every opportunity of observing the work being

done, both by the "pay" and "free" institutions. Mr. Baines remembered the work for the needy in a bequest of $300 to the Free Hospital. A bequest of $61 has come from the executors of the late Ann Robinson, of Dundalk. Interest in the practical work undertaken at Weston is shown in receipt of a cheque for $250 from the Massey-Harris Co., being endowment of a bed for one year, and a cheque for $500 from the Confederation Life Association, renewing their yearly endowment of two beds at the Muskoka Free Hospital.

MEDICAL PREPARATIONS, ETC.

THE INTERNATIONAL HYGIENE EXHIBITION.

Grand Prix Awarded to Manufacturers of Sanatogen and Formamint.

The worth of a "grand prix" depends chiefly upon the character of the exhibition which awards it. In the case of the International Hygiene Exhibition at Dresden—under the patronage of His Majesty the King of Saxony—the honour is a genuine one and represents the highest medical opinion in Europe. It is interesting to note, therefore, that the only Grand Prix awarded in the pharmaceutical section at this exhibition has been received, against numerous competitors, by Messrs. A. Wulfing & Co., manufacturers of the well-known preparations, Sanatogen, Formamint and Albulactin.

The British section, under the patronage of H.R.H. Princess Christian, was organized by the Lord Mayor of London, Sir Vesey Strong, and played a prominent part at the exhibition, where all the leading nations were officially represented.

LITERATURE WORTH READING.

The value of heat as a therapeutic agent has been so conclusively proven that it will admit of no further argument.

The difference, however, between convective heat in contra-distinction to radiant heat is a subject in which the profession generally is interested.

Convective heat is particularly applicable in cases where radiant heat is not indicated and the reverse is quite true. Their differential thermic value is clearly set forth in the October issue of the Bloodless Phlebotomist, along with an interesting paper by Dr. David MacIntyre, a Cunard Surgeon, upon "Drugs at Sea."

In the same issue of the Phlebotomist, Dr. Edward Parrish, of Brooklyn, presents his methods of treating Tic Douloureaux and Dr. Leverett, of Yonkers, relates his experience in the successful handling of ivy poisoning cases, which in many instances are quite as intractable as Tic Douloureaux.

In addition to these papers, much other interesting and instructive material is given, and it is worth while to write to the Denver Chemical Mfg. Co., New York, for a copy of the Bloodless Phlebotomist for October, which they will send upon request.

DYSMENORRHEA AS A PRE-DISPOSING CAUSE OF NEUROSIS.

Functional irregularities of the organs of generation, particularly if accompanied by pain, is possibly the greatest factor in the increasing number of women who consult the general practitioner presenting marked neurotic manifestations.

Where malformation is not present, successful treatment depends not only upon the recognition of the cause, but the proper selection of a remedy for its removal.

To normalize pelvic circulation and to relieve pain without resorting to an opiate is the object to be accomplished. Since the time of Sims, the sheet anchor of the general practitioner in the treatment of menstrual and obstetrical conditions has been Hayden's Viburnum Compound, a dependable and reliable product.

In neurotic conditions dependent upon menstrual irregularities, Hayden's Viburnum Compound not only exerts a calmative, but a corrective influence.

Samples of H. V. C., with formula and literature, will be forwarded upon request to the New York Pharmaceutical Company, Bedford Springs, Bedford, Mass.

CEREBRO-NERVOUS AFFECTIONS OF WOMEN.

Prof. Charles J. Vaughan, Chair of Gynaecology, Atlanta College of Physicians and Surgeons, writes: "Neuralgia constitutes the great cause

of danger from the employment of hypnotics and narcotics, which only afford relief by numbing, but effect no cure. On the other hand, the formation of a drug habit rather aggravates the condition from which relief was originally sought. Neurasthenia, neuralgia and other manifestations, either of an active or passive character, are common and are always peculiarly rebellious to treatment. Cerebro-nervous affections peculiar to women associated with pathological disturbances of the reproductive organs are legion, and most trying to physician and patient. I have found nothing so well suited to these cases as Antikamnia Tablets, administered in doses of from one to three tablets and repeated every one, two or three hours according to the attendant's judgment. These tablets afford complete relief without fostering a drug habit, and their exhibition is attended with no unpleasant after-effects. For the relief of painful menstruation there is no combination of remedies so generally successful as Antikamnia & Codeine Tablets. Their sedative, analgesic and anodyne properties especially commend them in the neuralgic and congestive forms of this distressing affection."

NASO-PHARYNGEAL CATARRH.

BY J. G. HUTCHINSON, M.D.

The treatment of nasopharyngeal catarrh consists in local applications and in remedies that are to correct systemic states that are friendly to the development and continuance of the disease. An appropriate remedy must be one which is antiphlogistic, antiseptic and soothing. In fulfilling this demand my constant reliance for a number of years has been Glyco-Thymoline. I employ it as a spray and douche. My favorite prescription is Glyco-Thymoline one ounce and distilled water two ounces. I have the patient douche the nose and spray the pharynx thoroughly with this solution every three hours. In some cases which do not get on rapidly I give the Glyco-Thymoline solution fifty per cent. strong, though the first prescription is usually the proper strength and will bring about prompt relief if the patient earnestly cooperates with us in an effort to get well. I often do not employ any constitutional remedies because the condition is often purely local and nothing beyond topical applications are called for or are necessary. Still, when there is anemia, emaciation, chronic bronchitis or any other systemic disease or condition present, it is our duty to direct our treatment to its correction, as well as to keep up local treatment until there is no evidence of morbid condition.

Mrs. T., age 27, came to me for treatment of naso-pharyngeal catarrh. She had all the usual symptoms and declared that she was

growing worse steadily. Her voice was changed and she constantly spit up muco-pus and there was considerable nasal discharge. I put this patient on a solution composed of one ounce of Glyco-Thymoline and two ounces of distilled water. She douched her nose and sprayed her throat with this solution every three hours. I put her on a preparation of iron, as she had a mild degree of anemia. On this treatment, which my patient persisted in for two months, there was a steady progress toward recovery, which was complete by the end of the third month. This patient conformed to my instructions regarding hygienic measures.

Mr. A. J., a traveling salesman, came to me for treatment of nasopharyngeal catarrh. He had grown steadily worse since the cold weather began and this disease he said was a constant source of annoyance to him. I thought his degree of emaciation and anemia called for cod liver oil, and I accordingly gave him a good preparation of it. He was given Glyco-Thymoline in the strength used for the former patient. This relieved the dryness and pain in his throat and nose in a day or so, and he began to improve in every way. I was able to discharge this patient cured in six weeks after commencing with him.

Miss S. had nasopharyngeal catarrh, which was very aggrevating to her and which, as is the case with most of these patients, was gradually growing worse. She was given no internal treatment, as there was, in my estimation, no demand for any. On local treatment Glyco-Thymoline in the strength of one to three of distilled water brought about a complete cure in about eight weeks.—*Therapeutic Record,* Feb. 15, 1910.

THE VACATION DANGER.

It has often been advanced as the reason for the seasonal prevalence of typhoid fever in the cities during the Autumn months that among the home-coming throngs many are in the incubation period of the disease, contracted at unsanitary country houses, farms and vacation resorts. In any event, September, October, and November seem to be the months in which the disease is most rife. The prolonged course of typhoid and the milk diet necessary during the febrile period are usually responsible for a considerable loss of flesh and strength, and the patient is therefore almost always pretty well devitalized at the beginning of convalescence. In conjunction with liberal feeding, Pepto-Mangan (Gude) is of distinct value as a general tonic and reconstructor, during the convalescent period, and may be safely commenced early, as it is entirely free from irritant properties and does not disturb the digestion nor cause constipation.