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## *Original Contributions.*

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### CEREBRO-SPINAL MENINGITIS.

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BY ALEXANDER MCPHEDRAN, M.B., TORONTO.

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THE comparative rarity of cerebro-spinal meningitis will be perhaps considered sufficient reason for publishing the following case. The history has been written by Dr. H. S. Hutchison, House Physician at the Hospital for Sick Children.

CASE.—Lottie R., aged ten, left Winnipeg on Thursday, April 5th, 1900, for Toronto, accompanied by her young brother. Both had been in perfect health, but during the trip her brother seemed drowsy and always thirsty. When they arrived on Sunday he seemed quite bright and well, but on Monday morning he took a severe chill, followed by many others, and by a severe headache. On Tuesday, the 10th, he became wildly delirious, and a herpetic eruption appeared over the eyelids, and on the face and body slightly. Kernig's sign, marked retraction of the head, projectile vomiting, and retraction of abdomen, all followed in the course of the next three days. He died comatose on the 16th. On Thursday, the 12th, Lottie became sick, complaining of languor, headache, and pain and stiffness in her neck.

On the 13th she lay "crouched in a heap," continually burrowing under the pillows with her head, which was aching severely. She had chilly sensations, was drowsy, and irritable. Vomiting occurred, and coryza was present. The conjunctiva of each eye was markedly injected. On Saturday, the 14th, she had a sudden chill, followed by periods of delirium, which lasted for about half an hour. Violent vomiting occurred. Photophobia also came on.

Lumbar puncture was done, but with negative results. The brother passed into coma in the evening.

On Sunday, the 15th, she was admitted to the Hospital for Sick Children. Her appearance was one of distress; the cheeks were flushed, and she complained of headache. The muscles of the neck were somewhat stiff, but no pain or retraction of head was present. Flexing of the neck was resisted, and was quite painful. There was no spasm of the muscles. Extension of the leg on the flexed thigh was resisted at an angle of 70 degrees (Kernig's sign). There was tenderness immediately below the occiput. The pupils were contracted, but reacted to light. The tongue was coated and the bowels were constipated. After looking at the light for a while, patient complained of pain in her eyes, and turned away. In the way of treatment, an ice-bag to the head and neck, potassium bromide, grs. x, and potassium iodide, grs. x, every two hours, morphia hypodermically to relieve the pain, inunction of unguentum hydrarg., and a simple enema in the evening, were the measures adopted.

During the following day, the 16th, the patient was very irritable and restless. The eyes were reddened. Herpes appeared on the lips. Her brother died in the morning. The diplococcus intracellularis was demonstrated in cultures made *post mortem*.

Next day she was quieter, and could flex head freely. The cervical glands were enlarged. The herpes extended to the chin, and also appeared on the upper lip and right nostril. The highest temperature was 104 degrees. The treatment was the same as before. The diet was milk.

On April the 18th, the fourth day after admission, a copious scarlatiniform rash appeared on the body, less abundant on the limbs. The highest temperature was 102 3-5 degrees. Treatment did not include the inunction.

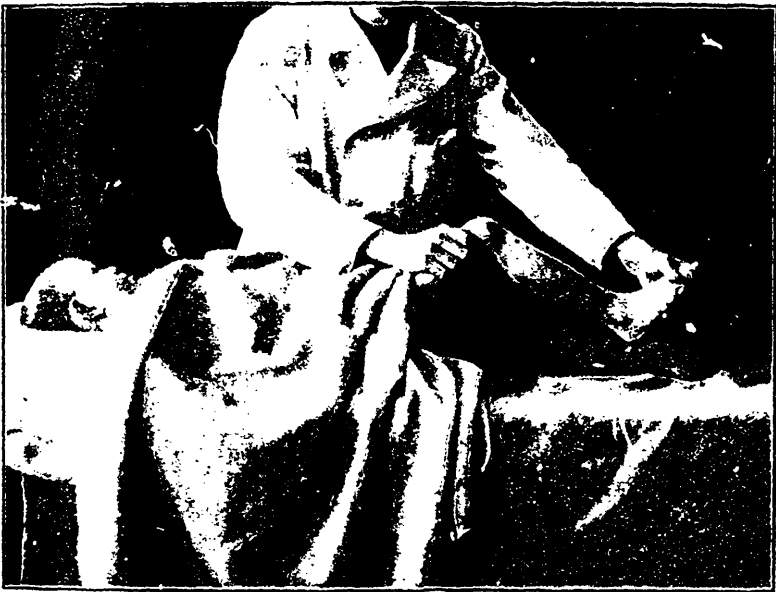
On April the 20th, the herpetic eruption turned quite black. The pupils were sluggish and the eyes deeply congested. The neck was held very stiffly and slightly retracted. The rash was copious, especially about the groins and back; it was dark red, and did not disappear completely on pressure. The highest temperature was 100 degrees. The treatment included potassium iodide and potassium bromide, each grs. x, every four hours only; hydrarg. cum creta, grs. ii every four hours; liquor strychnine ℥ii every six hours, and morphia for pain. Chloretone was tried, but failed to relieve pain.

On the 21st, the pupils were dilated, and ophthalmoscopic examination showed the retinal arteries and veins to be distended and sinuous, but no optic neuritis was discovered.

During the following week she seemed to improve. She resied well, and was much brighter mentally. The scarlatiniform rash

disappeared. In the third week the spasm of the muscles became more marked. There was less tenderness in the cervical region. The herpes on the lips were quite healed. Emaciation became very great. Very little nourishment was taken, and pulse was feeble and irregular. The hydrarg. cum creta and the potassium iodide were discontinued, and spts. frumenti was given.

During the next two weeks the general condition gradually improved. Patient took more nourishment. The mental condition became much better; there was very little pain on movement, and the pupillary reflex became more active. The headache disappeared. An abscess formed in the right thigh anteriorly in the



sixth week, and about three ounces of thick green pus were obtained. The staphylococcus pyogenes aureus was the infecting agent. The patient improved markedly and took nourishment well.

Liquid peptonoids, one ounce every two hours, and Ferrol emulsion with manganese, were given after the fifth week.

From this time forth there was marked general improvement, and the patient was discharged on the 11th week completely restored.

I had the privilege of seeing both children, with their physician, Dr. C. M. Foster. The boy's case ran a course very characteristic of cerebro-spinal meningitis. There were the onset with

chills, projectile vomiting, severe headache, wild delirium, herpes, Kernig's sign, marked retraction of the head, with rigidity of the muscles of the neck, followed later by deep coma. In the girl's case the symptoms were less severe. In both there was great restlessness and constant burrowing the head under the pillow. They illustrate the truth of the statement that the disease is "characterized by the slowness of its cure and the rapidity of its fatal issue" (Tourdes).

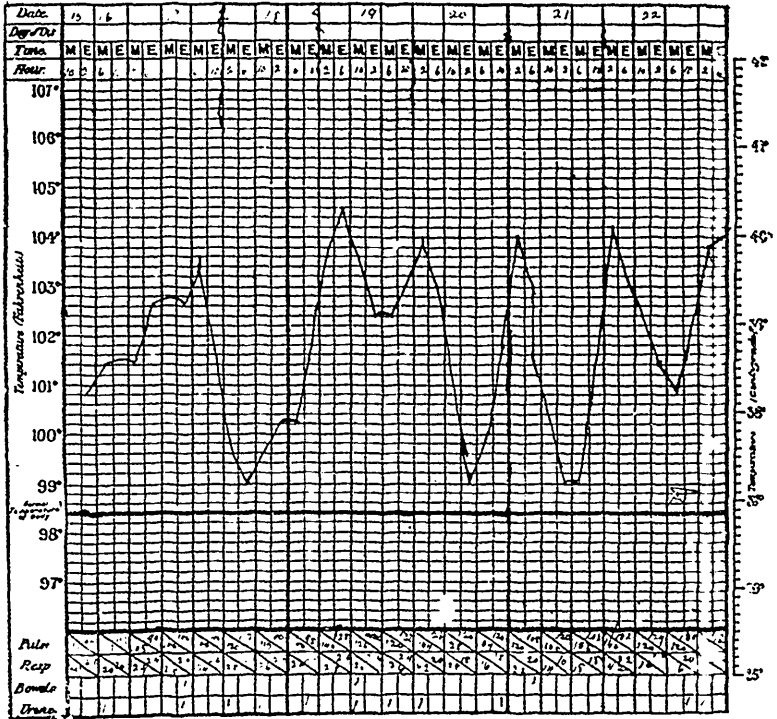
At the autopsy on the boy by Prof. J. J. Mackenzie and Dr.

*Chart No. /*  
Under the care of  
Dr. W. C. Pheasant

HOSPITAL FOR SICK CHILDREN, TORONTO.

Name *Lottie Reynolds*  
Age *12 yrs*  
Date of Admission *April 12 1900*  
No. *1016*  
Disease *Cerebro spinal meningitis*

(The record on this chart is from the 29th day of April, 1900, to the 12th day of April, 1901.)



Foster, a thick, tenacious, yellowish deposit was found on the convexity of the brain. The meninges at the base and extending down the spinal canal as far as could be examined through the foramen magnum, were deeply congested. The ventricles of the brain were somewhat distended with serous fluid, from which the diplococcus intracellularis was obtained. It is to be regretted that permission to open the spinal canal could not be obtained, as the exudate is usually most marked at the lower end of the cord.

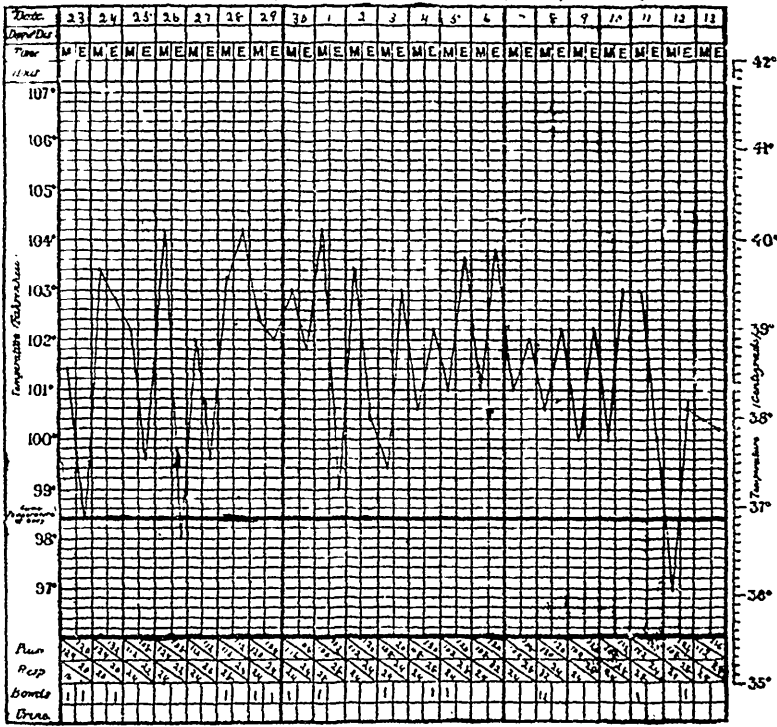
In the girl's case the symptoms were less marked than in the

boy's. The neck was rigid, but not retracted. There was a copious herpetic eruption on the face. The temperature chart shows marked remissions, usually of the inverse type—a morning rise and afternoon fall, a course that has often been met with in protracted cases. In cases fatal within a few days, the course may be apyretic, even with a much accelerated pulse.

Kernig's sign was easily obtained. This sign is readily demonstrated by endeavoring to straighten the leg on the thigh, when the child is in the sitting position, or by flexing the thigh, on the body

*Chart No 2* HOSPITAL FOR SICK CHILDREN, TORONTO.

with the case of  
 J. P. S. H. d. ...  
 Lattie  
 Raymond  
 10 yrs.  
 Date of Admission  
 April 18 1900  
 Disease  
 Meningitis  
 The record on this chart  
 from the 23<sup>rd</sup> to ...  
 (Date) ... 1900 to the  
 day of (Day) 1900



while the child is lying down, and then endeavoring to straighten the leg on the thigh. In either case, pain and resistance is produced when the leg is extended to an angle of about seventy degrees on the thigh, as shown in the accompanying figure. The pain and resistance is probably due to the stretching of the roots of the lumbar and sacral nerves, and these are in state of irritation when the spinal meninges are inflamed. While this sign is probably present in all cases of spinal meningitis, further observation seems necessary to prove that it may not be found in irritable

states apart from such inflammation. It is, however, a valuable sign.

Lumbar puncture was not repeated because the evidences of cerebral pressure were not marked.

In the treatment, it will be observed that the remedies were given with a free hand in order to produce the desired effect if possible. Whether they had any influence on the ultimate recovery it is impossible to say. Warm baths are highly recommended by European writers. They may be given three times a day or oftener. They have marked effect on the spasm and the pain. At the same time the temperature and pulse are improved.

151 Bloor Street West.

**REPORT OF A CASE OF FORCIBLE REDUCTION OF THE  
DEFORMITY OF POTT'S DISEASE.**

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BY H. P. H. GALLOWAY, M.D.,

Surgeon to the Toronto Orthopedic Hospital; Orthopedic Surgeon Toronto Western Hospital;  
Orthopedic Surgeon Grace General Hospital; Member American Orthopedic Association.

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It is only four or five years since Calot began to advocate the operation of forcibly reducing the deformity as a routine element of treatment in cases of Pott's Disease of the spine. His reports were so optimistic and his advocacy of the operation so enthusiastic that surgeons in various parts of the world began to follow his example, and in a surprisingly short time reports from other operators began to appear, and a large mass of literature on the subject rapidly accumulated. Fortunately, however, his extravagant proposals never secured universal confidence and it is significant that a subject which two or three years ago was discussed voluminously in all standard medical journals is now but rarely referred to in these reflectors of current medical thought.

There has been, however, a general feeling, even on the part of those surgeons who discounted the operation and refused to perform it, that some advance in the treatment of Pott's Disease must inevitably result from the renewed interest in the subject excited by the world-wide discussion aroused by Calot's reports; and many who refused to consider the new operation as at all applicable to ordinary cases were still of the opinion that in exceptional instances it might prove a valuable resource. In a paper read before the Toronto Medical Society on January 12th, 1899, and published in *THE CANADIAN JOURNAL OF MEDICINE AND SURGERY* the following February, the writer reviewed the literature of the subject and took the following position:

"It is quite unjustifiable to go on doing this operation until the ultimate result in a considerable number of cases already treated in this way shall have been clearly determined. Hundreds of cases have already been operated upon, but years must elapse before we can be sure whether the operation was a blessing or an unfortunate interference which left the patient worse than before. Until clinical evidence and *post-mortem* findings have demonstrated that satisfactory repair will follow forcible reduction of the deformity, the usefulness of the operation should be held *sub judice*, and we should simply halt, refusing to perform the operation, but neither condemning nor approving it.

"Two possible exceptions to this rule should be considered. First, when a case of Pott's disease is complicated by paralysis,

which has failed to yield to a fair trial of the usual methods of treatment, the spine should be straightened. . . . There is such unanimity of testimony regarding the favorable effect of this operation on the paralysis of Pott's disease, that it may be quite justifiable to take chances on producing a wobbly spine in the hope of avoiding the ill-results of a complication which may prove to be disastrous if unrelieved. Second: Very early in the disease where the destruction of bone has been slight and the deformity is consequently small, it may be justifiable to straighten the spine as the first step of the treatment."

The only particular in which I am disposed to modify the view expressed at that time is in regard to the early cases with but a small degree of deformity. These should not be subjected to the operation of forcible reduction. No surgeon would be reckless enough to do this operation unless he felt reasonably certain of being able to carry out efficient after-treatment; but when the disease is of limited extent and the amount of deformity small *efficient* treatment will nearly always bring about a practically perfect cure with deformity so slight that it is not worth taking into consideration. In view of this fact it now appears to me that the operation in early cases is, to say the least, superfluous.

But in cases of Pott's disease complicated with paralysis which refuses to yield to milder measures of treatment there can be no doubt that the operation of forcible reduction is at times a most valuable measure, as numerous reliable reports have shown.

G. M., aged 3 years, was referred to me by Dr. J. D. Curtis, of St. Thomas, in September, 1899. The child was undersized and poorly developed, and enquiry into the early history revealed the fact that he had suffered from a succession of illnesses, including measles, severe broncho-pneumonia, and otitis media. Symptoms referable to the spine appeared when the child was sixteen months of age.

Treatment by mechanical means—a spinal brace with jury-mast attachment—and also by continuous recumbency for several months, had been faithfully tried, but although there had been satisfactory improvement as regards pain and other acute symptoms, a condition of incomplete paraplegia set in. When I first saw the patient there was a kyphos of moderate size occupying the upper dorsal region, and the paralysis was so extensive that the ham strings appeared to be the only groups of muscles in the lower extremities that retained any power of voluntary motion. The child objected strongly to examination, and it was interesting and instructive to note that while with his hands and arms he made all the physical resistance he was capable of, the legs remained practically motionless. The reflexes were exaggerated, and involuntary spasms by which the legs and feet were at times forcibly



flexed, were noted. There was no control of bladder or rectum. On September 14th the child was admitted to the Toronto Orthopedic hospital and put to bed on a canvas-covered gas-pipe frame arranged as an inclined plane, the head of the frame being elevated about twelve inches higher than the foot. Of course the child tended constantly to slide down on this inclined plane, and by securing the head to the top of the frame by a properly arranged sling, this tendency was turned into an efficient traction and counter-traction arrangement. A large pad of felt placed directly under the kyphos provided a fulcrum which served to keep the spine constantly hyperextended. A towel passing over the trunk and pinned to the canvas of the frame kept the child from turning and twisting about in bed, and completed the arrangement of the patient which was desired.

My previous experience in treating cases of the paralysis of Pott's disease by this method had been so satisfactory that speedy marked improvement was confidently expected, but in this I was disappointed. At the end of a month some degree of improvement had occurred, enough to fully justify continuance of the treatment, but very marked paralysis still persisted. The child left the hospital on October 12th, and the same plan of treatment was continued at home. On November 23rd I again saw the patient in St. Thomas with Dr. Curtis, and the degree of improvement in the paralysis was so slight that the operation of forcible reduction was recommended, and it was arranged that the child should return to the hospital in a few days. Immediately after this, however, Dr. Curtis wrote me that very substantial improvement had taken place, and we resolved to await further developments. I visited the patient again on February 9th, 1900, and the condition at that time is best indicated by the following notes from my history book.

"Paralysis much improved, but internal rotators of right limb and external rotators of left limb appear to be still paralyzed. General health good. Spine appears to be consolidating. Will be able to wear brace in a few months."

On April 16th the child was again brought to the Orthopedic Hospital for the purpose of having a brace designed and fitted. In trying the appliance on, however, I noticed that the paralysis had returned and was almost as bad as at first. It seemed to me useless to persevere longer with the plan of treatment we had been employing and the operation of forcible reduction was performed on May 22nd. After being anesthetized the child was turned on its face and, while powerful manual traction was exerted on the head and legs by assistants, I pressed strongly with the ball of my right hand upon the kyphos. Considerable force was required before any distinct yielding occurred, but the giving away of the tissues under the pressure was not only felt by my hand but was

clearly apparent to the ears of the nurses and assistants. The operation produced a good deal of shock, and for a short time there was reason for no small degree of anxiety, for along with momentary interruption of respiration, the child turned very pale and became almost pulseless. Measures to bring about revival were, however, very soon successful, and after carefully padding the body with absorbent cotton and felt, the trunk and head excepting the face were enveloped in a plaster-of-Paris dressing applied while the spine was supported in a strongly hyperextended position.

The child experienced very little inconvenience after the operation, and with the exception of a slight rise in temperature there was little reaction. At the end of four days the child was taken home to St. Thomas.

I visited him June 2nd and made the following note: "In good condition and comfortable and paralysis improved."

About the middle of June I received a letter stating that the paralysis had very greatly improved but that the child was not well, apparently suffering from digestive trouble. Nothing serious was apprehended at that time, but the illness soon assumed a grave aspect and the symptoms pointed strongly to the development of a cerebral abscess. Some days before death, which occurred on June 25th, hemiplegia developed. Convulsions preceded the fatal termination.

REMARKS.—Although no *post-mortem* was made, there is no reasonable ground for doubting that the child died of cerebral abscess. This diagnosis, which was made by Dr. Curtis, was confirmed by another able practitioner, who saw the case in consultation. Moreover, the child had suffered from recurrent suppuration of the middle ear, and the ear had been discharging for some weeks before the cerebral symptoms supervened. In all probability the ear was the source of infection. Although the child died within five weeks of the time of being operated upon, there is no reason to suppose that the operation on the spine had even a remote connection with the fatal issue. In other words, death resulted from an intercurrent affection. The fact that improvement in the paralysis began a few days after the operation, and had advanced rapidly up to the time when the cerebral symptoms appeared, is evidence, though not proof, that the final result of the operation would have been very satisfactory had the child lived.

The case confirms the reports of other operators as to the usefulness of the operation of forcible reduction in cases of paralysis which have resisted milder measures of treatment.

12 East Bloor St., Toronto.

**ANNUAL ADDRESS OF CHAIRMAN OF PROVINCIAL  
BOARD OF HEALTH.**

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BY HARRY E. VAUX, M.D.

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GENTLEMEN,—Another year has swiftly passed, and to-day we are again called upon to take up the important duties placed upon us by the Government of our fair Province. As we assemble year by year we are painfully conscious of the absence of faces which had become very familiar and dear to us, and we miss the voices of those who for many years have been closely associated with us in devising and maturing measures which had for their object the prevention of disease.

I am sure I voice the feelings of the older members of the Board when I extend a cordial welcome to the new members who, since the beginning of the past year have taken their seats with us, and I feel quite sure that the same fraternal feeling which has been so conspicuously present in the past will exist in the future.

It would seem appropriate at this, the first meeting of a new year and a new century to take a retrospective glance at what has been accomplished in sanitation, even during the few years of this Board's existence—of the slow, apparently, and yet really rapid education of the public mind in matters pertaining to the elemental principles of hygiene, and of the difficulties and obstacles placed in the way of advanced legislation by those who should have been the most forward in the movements advocated.

I presume the history of our Board and its struggles is the history of all other reform movements. But, gentlemen, standing at the threshold of a new century we can indeed thank God and take courage, for I believe sanitarians stand to-day in a position which a few years ago appeared to be almost beyond their reach. Their efforts are being better known and more appreciated by those whose interests are at stake, and who will not be satisfied until every available safeguard is thrown around those they love. But, gentlemen, fascinating as would be a review of all that has been done in sanitation, and of all that may be achieved by persistent and painstaking effort in the future, I feel that, even had I the ability, this is neither the time nor the place for such an attempt.

During the year which has passed the work of the Board has been largely of a routine character. There have been no serious emergencies to grapple with; although, as appears from the quarterly reports of the Secretary, the year opened and closed with small-pox, and it is still with us. It has indeed been a most remark-

able outbreak, existing, as seen by the reports of the Marine Hospital Service, in almost every State of the American Union, with thousands of cases, and a death-rate of only four per cent.

Dr. Lindsey, the old and experienced officer of the Connecticut State Board, says: "The most remarkable characteristic of this widespread epidemic is the mildness of its type. In this respect it is unprecedented in the experience of any living observer. Nor can there be found in all the mass of literature on the subject any account of an epidemic of small-pox in so mild a form, and so free from fatal results. Indeed, in many places where it has prevailed the profession for a time has been divided in its diagnosis of chicken-pox or small-pox."

The remarkable feature in this outbreak of small-pox is the persistence of the type. It is true many cases were severe, and some were protracted, but they lacked the essential character of genuine virulence.

That this may be and is temporary, and may at any moment be associated with cases of intense virulence, was illustrated last April in the unfortunate outbreak introduced by a traveller from Australia who, in some unknown way, became inoculated on his way to Winnipeg. Within forty-eight hours he died of hemorrhagic disease, not diagnosed until after death.

The results were most disastrous. Of persons who travelled with him in the Pullman, a number developed the disease between Winnipeg and Montreal, with fatal results in probably one-third of the cases. But besides these, travellers who occupied the Pullman after the patient was removed contracted the disease from the infected air or bedding of the car. The disease spread at Port Arthur and Fort William to several points along the C.P.R., and required the most vigorous measures to be adopted by our Board before it was finally stamped out.

It is a remarkable fact that during the past year in Ontario we have had at least twenty distinct centres of the disease. In every case the invasion has been promptly and completely stamped out, whilst in the neighboring States the disease has remained continuous for over two years. This very satisfactory showing is evidently due to the close union existing between the Provincial Board and the Local Boards of Health, whereby on the first note of danger being sounded, prompt and concerted action is taken by our very efficient Secretary and the local municipality where the disease has appeared.

In the matter of other contagious diseases the monthly reports, which are issued by our Board, show a very satisfactory state of public health, except in the case of typhoid fever. In the last issue of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY there appears a very timely article by our confrere, Dr. J. J.

Cassidy, on "Typhoid in Foul Wells." In it attention is called to the prevailing neglect of the requirements of the Act providing for the yearly cleansing of wells. Ordinary pollution by the top, as illustrated by that article, is indeed very common, and in this way doubtless the *B. coli* becomes an ordinary inhabitant of many wells, but the pollution by soakage of animal excreta is of a permanent character, and is a matter demanding more general enlightenment than at present commonly exists, especially in rural districts. The question which naturally presents itself to the mind after reading examples given in the article just referred to, as well as many familiar to ourselves, is whether the mere presence of the *B. coli* in potable waters fulfils all the conditions necessary to an outbreak of typhoid. The question of the influence of temperature and rainfall on typhoid is a matter of much importance, and one which, after the experience of the past autumn, demands to be studied yet more closely, along with the biological factors, than it has hitherto been.

Other diseases, as scarlet fever and diphtheria, have not shown any notable prevalence as a whole, and it is gratifying to find that diphtheria in 1900 has again fallen below the previous years. An exception to this general statement must be made, however, in the case of the city of Toronto, where, estimating the population at 200,000, with 149 deaths, the rate was .74 for 1,000; whereas, other cities in Ontario, with populations of 260,000, had only a death-rate from diphtheria of 60, or .23 per 1,000. This is the more remarkable, inasmuch as the total mortality from diphtheria in the Province for the year 1900 was 486, of which Toronto supplies nearly one-quarter. This new year already gives a mortality of 21.

Perhaps of all subjects which to-day press themselves upon our attention as a Board, is that ever-present one, the restriction of tuberculosis. The members of the Board cannot be unmindful of their long and continued efforts for many years to keep this disease in its many phases before the attention of the public. I learn from the Registrar's Report just published, that 1899 again shows an increase in mortality, and even the monthly reports for 1900 seem to show rather an increase than a diminution of this class of deaths. The public has become greatly agitated over this matter, and from all classes of the community the cry comes, What can be done to save our loved ones from this terrible scourge?

There can be no doubt that, if we may judge from the immunity of tribes dwelling in tents—the Bedouins of the desert, and of those peoples who live in open houses in Southern climates—the one panacea is fresh air.

Sir F. Broadbent, President of the British Association for the Prevention of Tuberculosis, has said that if people could be in-

duced to live with their sleeping-room windows partly open, the deaths from tuberculosis would be decreased by one-half in a year.

Making due allowance for such general statements, the very difference in germ percentage between out-door and in-door air illustrates the point in this remark. Hence, in the cottages of our work-people, in their work-shops, in factories, in schools, indeed everywhere, the problems of how to maintain the purity of the air precedes all others.

See what it means. Over the sea Miguel says there is but six germs per cubic metre. In a new house (in Paris), 7,000; in an old house, 37,000; and in a hospital, 78,000; and out-door air, even in cities, is always more pure than that in houses. The problem becomes at once one for municipal authorities to recognize and endeavor to solve by the enforcement of sanitary by-laws for schools, factories, and shops of every kind. From the standpoint of cure, we have as physicians quite generally accepted the new creed, and the air cure sanatorium has taken firm possession of the public mind.

The action of the Legislature last session, as embodied in the excellent bill introduced by the Hon. Mr. Stratton, whereby municipalities are aided and encouraged to erect sanatoria, must be very gratifying to this Board, as it so completely falls in line with the views which for years we have been advocating. And as further evidence of the importance which is being attached to the subject, I need only refer to the fact that a conference, under the distinguished patronage of their Excellencies the Earl and Countess of Minto, is to be held in Ottawa on the 14th inst. to take concerted action in meeting the ravages of tuberculosis, and I trust that representatives from this Board will be sent in response to invitations received.

THE MORBID ANATOMY AND PATHOLOGY OF HEMATEMESIS AND THE SURGICAL TREATMENT OF HEMORRHAGE FROM GASTRIC AND DUODENAL ULCERS.

BY G. E. ARMSTRONG, M.D.,

Associate Professor of Clinical Surgery, McGill University; Surgeon to the Montreal General and Western Hospitals, Montreal; Consulting Surgeon to the Protestant Hospital for the Insane, Verdun.

As our knowledge of the various pathological lesions of the stomach and their sequelæ increases, the frequency with which surgery may successfully come to the aid of the physician increases also. There is now a fairly well determined field in which surgery may be useful in the treatment of simple gastric and duodenal ulcers; as examples may be mentioned perforations and cicatricial narrowings.

The surgical treatment of hemorrhage from the stomach has been adopted successfully in a considerable number of cases, although as yet the wisdom of this procedure is debatable.

It must be admitted that there is a mortality from gastric hemorrhage; that there are cases where no known medicinal or dietetic treatment is sufficient to arrest the bleeding. According to Leube, hemorrhage occurs in 50 per cent. of all cases of gastric ulcer, and is fatal in 8 per cent. of the cases in which it occurs. The text-books of medicine, it seems to me, do not bring this fact out with sufficient prominence, and too much reliance is placed upon a treatment, quite satisfactory in the great majority of cases, but not so in the small minority. It is quite in order, then, to try if possible to learn when and how surgery may and should be called upon.

In a paper which I read before the British Medical Association in 1889. I gave a report of the deaths from hematemesis at the Montreal General Hospital. Among the reports of 2,000 autopsies were those of fifteen deaths from hemorrhage of the stomach. The bleeding occurred from a gastric ulcer in five cases; from a duodenal ulcer in four; from ruptured esophageal varices, secondary to portal obstruction, in two; from aneurisms rupturing into the lower end of the esophagus in two; and in two cases was secondary to leucocythemia. In some instances the opening into the vessel was easily visible, and would admit the end of a small silver probe.

In 55 fatal cases of gastric and duodenal hemorrhage, collected by M. Savariand, the sources of bleeding were as follows:

Ulceration of the Splenic Artery .....	17 cases
"    "    Coronary " .....	6 "
"    "    Arteriole .....	10 "
Branches of the Coronary Vein .....	2 "
Other Veins .....	2 "
Vessel not determined .....	2 "
No Vascular Orifice visible .....	4 "
Vessel not mentioned .....	4 "

One of the important lessons that may be learned from the above table is the fact, rather discomfoting to the surgeon, that in four cases the source of the hemorrhage could not be determined at the autopsy, with the stomach laid open.

Another fact brought out by M. Savariand (quoted by Rodman) is that death may be sudden when the bleeding occurs from surface capillaries, "or delayed for ten days when there is an opening as large as a haricot bean into the aorta." This fact should be emphasized, that fatal hemorrhage may occur from surface capillaries. In some of my cases this has been the only apparent source of the bleeding, although careful search was made for deeper ulcerations and openings in the plexus of larger vessels lying beneath the mucous membrane.

When a case of serious gastric hemorrhage presents itself which does not yield to the ordinary treatment of rest, morphia, hot water and the other remedies usually relied upon, a careful differential diagnosis should be made. Leucocythemia may be excluded by microscopical examination of the blood. A careful physical examination, together with the history of case, should exclude aneurism and conditions of the liver likely to cause portal obstruction. The bleeding in these latter cases is generally from ruptured esophageal varices, at the lower end of the esophagus, a point of difficult or impossible access, and secondary to an incurable pathological lesion.

In gastric ulcer there is generally a clinical history of indigestion and stomach distress, which helps materially in the diagnosis.

Those cases in which it is reasonably certain that the hemorrhage is from a gastric or duodenal ulcer, may as a rule be easily arranged in two groups, which have been called with some propriety, acute and chronic. In the former, the quantity of blood escaping by the mouth and the anus is large, and may be estimated by ounces, and the bleeding recurs at short intervals. In the latter, the quantity of blood is small, may be estimated by drachms, and continues to recur at intervals for months and years, notwithstanding treatment, medicinal and dietetic.

Physicians and surgeons are pretty much agreed that in the chronic form there is a time for surgical interference, and that surgery alone can save some of these cases from death, the result of exhaustion from repeated hemorrhages and the maldigestion and



assimilation that accompany them. Rodman, in a paper read before the American Medical Association at its last meeting, in Atlantic City, reported "31 operations for frequently recurring or what might be called chronic hemorrhages, with six deaths, or a mortality of 19.3 per cent. This is, under the circumstances, an excellent showing, when it is remembered that it represents but little more than the average mortality given in a large number of operations upon the stomach for non-hemorrhagic ulcers." Only one of my cases should be classed as chronic. It is included in Rodman's table of operated cases. The patient was a woman 31 years of age, who had suffered from recurring small hemorrhages for two years. In addition to the hemorrhages, she suffered almost continuously from indigestion and gastric pain. She was a most docile patient, and had conscientiously carried out her physician's instructions most carefully. In this case I did not succeed in finding the bleeding point. After carefully examining the interior of the stomach, I closed the wound, and did a pyloroplasty. Her recovery was satisfactory, and before she left the hospital she could take full diet with comfort and relish, and was gaining in weight. About a year afterwards she returned to the hospital, complaining of indigestion. She had not had any recurrence of hemorrhage since operation. Her symptoms disappeared after medical treatment, and she went home quite well. This is the only one of the five cases upon which I have operated in which I have failed to find the source of the bleeding. The propriety of surgical interference in these cases is pretty generally admitted.

The question of treating surgically acute hemorrhage is not so easily settled. It is not easy to define just what one means by acute hemorrhage, nor the exact combination of conditions and circumstances in the patient and surroundings that would render a resort to surgical methods advisable. A great deal must depend upon individual judgment in each particular case, and upon the available facilities for thorough, trustworthy technique.

According to Rodman's table, there have been "32 operations for acute hemorrhage, with 13 deaths, or 40.6 per cent. mortality; a much better showing than was made by Mr. Robson, who reported a smaller number of cases, and included also among them cases of vicarious menstruation and post-operative hematemesis, neither of which has any direct etiologic or other connection with gastric ulcer."

I have operated five times for the arrest of gastric hemorrhage. In my first case, reported in the *British Medical Journal*, there had been no gastric symptoms prior to the first hemorrhage. The patient, a lady 35 years of age, continued to vomit considerable quantities of blood at short intervals for seven days. On the seventh day I operated, the patient at the time being extremely pale

and blanched. Blood was found oozing from three fissure-like ulcers. The bleeding was controlled by the thermo-cautery, and the patient made an excellent recovery, and is now in good health. The operation was in July, 1898.

My second case, reported in the *Montreal Medical Journal*, was operated October 12th, 1899. The patient gave a history of stomach indigestion extending over a period of a year. At the time I operated she was almost exsanguine from repeated copious hemorrhages, recurring at short intervals for four days. I found a deep, excavated ulcer on lesser curvature two inches from the pylorus. I excised the ulcer, extended the incision through the pylorus, and closed as a Heincke-Mikulicz pyloroplasty. The patient made an excellent recovery.

My third case is the one already mentioned under the heading of chronic hemorrhage. My fourth case was a woman aged 31. She had a distinct history of gastric ulcer extending over a period of at least five years. She had been repeatedly brought to the hospital in the ambulance, after attacks of hematemesis, and from the reports of the medical officers who accompanied the ambulance and saw the vomited matters, I should say that in 1895 she vomited four ounces of blood; in November, 1898, 16 ounces; in January, 1899, half a chamberful, which seemed to be mostly blood; in February, 1899, 20 ounces: at this time the patient was blanched and respirations gasping; in March, 1899, 4 ounces. I operated on the 30th March, 1899. On opening the stomach, blood was found oozing from several points. At cardiac end of stomach was an area two inches square, situated on the anterior wall, which was dark, superficially eroded, and from which blood oozed rapidly and in considerable quantity from six or eight points. All bleeding and eroded surfaces were touched with a broad Paquelin point. A pyloroplasty was then done, and the abdomen closed without drainage. Recovery rapid and uneventful. These four cases are included in Rodman's table.

My fifth case was a young woman of 29, referred to me by Dr. Bazin. She gave a history of indigestion. One year ago, she says that she vomited a pint of pure blood. Since that time she says that she has suffered from distress after eating. She was a stranger in the city, and we were not able to learn much about any treatment to which she may have submitted. On Sunday, — Aug., 1900, she vomited her dinner, but no blood. On the following day she vomited 6 ounces, and passed about 10 ounces by rectum. On Tuesday there was no vomiting. On Wednesday, at seven o'clock in the evening, she vomited about 20 ounces of pure blood, which clotted in the basin. This left her thoroughly blanched, and very weak. Dr. Bazin, since Sunday, had placed her upon the most approved treatment, including, of course, rest in bed and absti-

nence from food. During Wednesday night rectal injections of saline solution were administered, and also two pints subcutaneously. Blood oozed from the rectum during the whole night. When I saw her on Thursday morning she was blanched, very weak, with a temperature of — and a pulse of 136, irregular. Although there had been no vomiting of blood for 17 hours, yet there was a constant oozing from the anus. Her condition, Dr. Bazin assured me, was becoming gradually worse. I had her removed to the Montreal General Hospital, and as quickly as possible. When brought to the hospital she seemed to be a well-nourished girl. The mucous membranes and face were very pale and blanched. Respirations sighing and pulse very rapid. Abdomen was not distended. There was no dulness in the flanks; liver dulness normal; there was some tenderness over the stomach, most marked a little to the left of the median line. A soft, systolic murmur heard at apex, most pronounced at second pulmonary, and transmitted down along the sternum to apex. On opening the stomach, I found at once a small, deep ulcer, with a spouting artery in its base. This and two other similar bleeding points were controlled by passing a round curved needle well beneath them, through all the coats of the stomach wall except the serosa. Two superficially ulcerated oozing patches were touched with the point of the thermo-cautery. No other bleeding points being discernible, the opening in the anterior wall of the stomach was closed, and the pylorus incised and closed as advised by Heincke and Mikulicz. I had two reasons for performing pyloroplasty; one was, a suspicion that there might be a duodenal ulcer. The very considerable melena present gave rise to this suspicion, and the other, that a pyloroplasty would secure more perfect rest and quietude of the stomach walls during convalescence. She recovered from the operation without an untoward symptom.

On the eighth day after operation I saw her, when making my rounds, and she expressed herself as feeling better, but very hungry and asked for something more substantial to eat. Before I got to the front door going out she was dead. She died almost instantly. I was not allowed an autopsy, but I managed to learn that there had been no hemorrhage into the stomach or duodenum, and these two large thrombi were removed from the two branches of the pulmonary artery. The thrombi were white, and had been slowly formed. One of them was said to have given evidence of advanced organization. It is possible they were in process of formation at the time of operation.

The clinical history of these cases, and the report of the lesions found at the time of operation, show that one cannot, from the quantity or character of the blood ejected from the stomach, nor from the length of time occurring between the attacks of hema-

temesis, form any very definite idea of the stomach lesions. Large, frequently recurring, and even fatal hemorrhages, may result from superficial erosions, the hemorrhage being capillary. On the other hand, death may be delayed for days, when the lesion is in one of the larger arteries, or in the aorta or heart.

This fact is well brought out by a table of cases prepared by M. Savariand (*Paris Thesis*):

VESSELS.	Number.	Death, Sudden.	Death, Rapid.	Survived for a considerable time.
Heart .....	4	1	1	2 (3 days).
Aorta .....	2	....	....	1 (10 days).
Hepatic .....	2	....	1	1 (10 days).
Splenic .....	17	3	7	7 (2 to 13 days).
Coronary .....	6	1	3	2
Pancreatico-Duodenal. ....	6	....	3	2 (8 and 15 days).
Arterioles .....	10	1	1	8 (4 to 15 days).
Small veins .....	4	1	....	2 (7 to 11 days).
Invisible vessels .....	3	2	....	1 (21 days).

An accurate diagnosis of the nature of the lesion, if such were possible, would be most helpful in formulating a course of treatment. Venous and capillary hemorrhages would be much more likely to yield to treatment other than surgical than hemorrhage from a partially divided splenic, coronary or pancreatico-duodenal artery. Until we acquire greater powers of correctly diagnosing the lesion, how are we to decide when to advise operation?

Putting aside the cases of sudden death, the "Forme foudroyante" of the French, I would suggest the following propositions for discussion:

1. If a patient vomits 20 ounces of pure blood, and another 20 ounces within four or six hours, operation should be performed if the surroundings are favorable, and the condition of the patient is such that there would appear to be a reasonable chance of recovery.

2. If smaller hemorrhages of from four to ten ounces continue to recur at intervals, and medicinal and dietetic treatment, with rest, fail to arrest in 36 or 48 hours.

3. In the so-called chronic cases that are not relieved by three months of medical treatment.

4. In any case, and at any time, when in spite of medical treatment, the patient is evidently passing into such a condition of anemia, that any operative measures could not be undertaken with any degree of safety.

As to the operation itself, I have found it best to first examine the walls of the stomach for external evidences of an internal

lesion. Failing to find any guide, it is well to open the anterior wall sufficiently to enable a thorough exploration to be made of the whole of the mucosa. If the bleeding point cannot be found, then a pyloroplasty or a gastro-enterostomy should be performed, with a view to the securing of such a degree of rest to the stomach walls as will favor the formation of clot and the subsequent healing of the ulcer.

If the bleeding point is found, then the treatment most appropriate will depend upon its nature and locus. If the hemorrhage is from the side or base of an excavated, hard-bordered ulcer, excision is the most radical and satisfactory, if feasible. If an artery is seen spouting from a small-fissured ulcer, a ligature passed around it by means of a round curved needle, has proved sufficient in two or three of my cases.

If there is oozing from one or more superficially ulcerated patches, it can be completely checked by the thermo-cautery. The plan of throwing a ligature around a portion of inverted stomach wall has never commended itself to me, and I have not yet met a condition which seemed to demand it. The ligature of the artery outside the stomach wall has been practised successfully, but the cases in which it is possible are not met with very frequently. Curetting and cauterizing have been followed by subsequent perforation.

After any method of control has been successfully adopted, it seems to be generally conceded to be good practice to perform a pyloroplasty or gastro-enterostomy. I have done one or the other in each one of my cases. I have never practised lavage of the stomach before operating, fearing an increase of the bleeding from disturbance of clot, or possibly the perforation of an ulcer with a thin base. The washing out of the stomach with saline solution, after all bleeding points have been controlled, tends to lessen if not arrest totally the after nausea and vomiting.

After operation, rectal feeding and salines are indicated. I have always begun feeding small quantities of peptonized milk by the mouth, in 24 hours, and found it to be good practice, if nausea or vomiting be thereby not induced.

*Medical Jurisprudence and*  
... IN CHARGE OF ...  
N. A. POWELL, M.D., AND W. A. YOUNG, M.D. *Toxicology.*

THE LATE B. B. OSLER, K.C., A MEDICAL JURIST.

DEATH has removed from us, in Mr. B. B. Osler, one of the brightest minds that ever adorned our country, a lawyer of pre-eminent ability, and a citizen who was a credit in our midst. Owing to the number of criminal trials with which he was connected, sometimes as crown counsel and sometimes retained for the defence, he had the opportunity of coming into contact with as witnesses, a large number of medical men. Mr. Osler had a wonderful grasp of medicine in its different phases, and no matter how intricate the case was from a medical aspect, he could at once take hold, and woe betide the medical witness who proved at all contrary while in his clutches in the box. We are indebted to Mr. A. R. Hassard for the following few sentences used by deceased in addressing juries, sentences which are unique and fascinating and at once show what a control he had, at all times, of his subject, and which must be of interest especially to coroners:

There are men whose word on oath we'll take, while their notes are going to protest every day.

If an accident couldn't have taken place, look for the motive and look for the murderer.

The same person who got the pistol was particular to get all the articles that went with the pistol. Was that the man at whose place they kept the horse? He says it was. Do you accept the responsibility of rejecting his statement? Why should he come and tell what is not true? Men hesitate rather than volunteer evidence in a murder case.

Did not the stitches in the small tear look like those that would be made by a woman, while the large stitches were those you would expect boys to make in using a needle and thread?

Why did he, on a winter's day, come back with only a pair of overalls, when he had the tweed?

They were fleeing that night when no man pursued; yet, feeling that behind them was the horseman reaching for them—the horseman that is always pursuing the guilty.

You must do your duty to the community as well as to the prisoners. A lax administration of the law is one of the greatest evils a country can have.

A man who contemplates a crime always does it skilfully, to make sure; so always look for an appearance of innocence when the crime is one of skill. The dangerous criminal is the scheming criminal, who never, if possible, lets his hand be seen. Circumstantial evidence is the only thing that brings the crime home to him. It was hard to say which was the more dangerous to the community, the man who had the brains to scheme, but not the courage to kill, or the man who had not the brains to scheme, but will take an axe at another's bidding and do the murder.

It is nonsense to say that a man running from danger would have more care of himself than for his watch. If there was any danger to the watch there was also danger to the man.

Greed tempts many a man to his death.

You may say "circumstantial evidence is not reliable. Men have been innocently convicted on circumstantial evidence." But, remember, all calculated crimes—all crimes that are not of the impulse of the moment—are brought home by circumstantial evidence alone. The man who plots a crime plots it with no one to see him. Is the arm of the law so short that only the man who openly commits a crime can be convicted? If the stake is lost, you must find the spot with pointers.

Where you find memory keen on events that do not concern a man, and memory gone on events that do immediately concern him, what can you say of him?

Justice has to be administered to all sorts and conditions of men.

Honest men need never have any fear of detectives.

Was it natural that the prisoner should avoid the nearer houses and go to the more distant ones to tell the tale?

They say that the prisoner was never in the woods—never in the swamp on that fatal day. What do the mud on the boots and the turned-up trousers mean?

Paying five per cent. a month was ruinous. Where was the money to come from? Over the dead body of ———.

What compelled the woman to go into the box and realize that her brother was the dead victim of these men, and that she was the living?

W. A. Y.

**He is no Woodenhead.**—Senator Wood, of Indiana, introduced a bill in the State Legislature on February 7th, making it a felony punishable by imprisonment in the penitentiary where Christian Scientists treat cases of illness and death results. The purpose of the bill is entirely to exclude the practice of Christian Science in Indiana.

## Selected Articles.

### THE URIC-ACID DIATHESIS FROM A CLINICAL STANDPOINT.

BY JAMES TYSON, M.D., PHILADELPHIA.

IN being asked to take part, from the clinical standpoint, in a discussion of the question, "Is a uric-acid diathesis an important factor in pathology?" I take it for granted that it is desired also that I do so as far as possible from the standpoint of personal experience. To such expectation I shall endeavor to conform. On this account it may happen also that I shall pass by some of the conditions which are supposed to illustrate the office of uric acid in the respect queried after. Should this be the case, it will be because I have not had sufficient experience with such conditions to justify their treatment at my hands. I shall endeavor, too, as far as possible, to deal with actual conditions.

At this point I will state also what I have come to regard as the sign of the uric-acid diathesis, interpreting my own observations by those of contemporary and previous observers. I regard that person as the subject of the uric-acid diathesis who secretes habitually, or more or less habitually, a scanty, high-colored urine, of high specific gravity and decided acid reaction, a urine which promptly deposits, either at the temperature of the body or at a slightly lowered temperature, a copious sediment of uric acid and mixed urates, to which oxalates may be added. Such a urine may contain a trace of albumin and even a few hyaline casts. I do not say that this constitutes the uric-acid diathesis. It is rather its sign, or perhaps one of its consequences, whence we may infer its presence. It matters not, from the clinical standpoint, whether such person ingests more uric acid, manufactures more uric acid within his organism, or does not take in enough water to hold the uric acid in solution, he is the subject of a condition which produces this result. It may also be well to say at this point that when the word uric acid is used, not only uric acid and its compounds, but also all the oxaluric bodies of modern chemistry are intended. I will not attempt to differentiate them, leaving this to the chemical referee.



1. The most manifest of the results of this diathesis is the tendency to uric-acid *gravel* and uric-acid *calculus*, a result so commonly recognized that it is scarcely necessary to make any extended reference to it. Less manifest, though scarcely less unanimously conceded, is an irritative effect of the urine of such cases on the kidneys and urinary tract, as the result of which arises in the course of time a nephritis of the chronic interstitial type, and in the larger urinary passages a catarrhal inflammation, of which cystitis is the commonest form, a cystitis rarely of high degree.

2. It is, however, true, as already intimated, that it means something more than a scanty urine readily depositing urates and uric acid. It is something of a less tangible character. As to what constitutes this condition more precisely, I also leave the chemical referee to decide. It, however, leads to some results that are scarcely less tangible than gravel and its effects, and one of these is *gout*. Whatever may be the reasoning as to the sources of uric acid, it is commonly acknowledged that it is this substance, either within or without the blood-vessels—that is, in the adjacent tissues—which is the direct cause of true gout as constituted by an attack of podagra or gout in some other joint. It has not, however, been clearly settled whether the painful symptoms are due to uric acid within or without the blood-vessels. For although a deposit of urates in the vicinity of joints without the blood-vessels is acknowledged to be the most infallible sign of a gouty process, yet such deposits are well known, at times at least, to be absolutely painless.

The frequent association of chronic interstitial nephritis with gout is due also to the irritative effects of the same agent, which operates from within the renal vessels and superadds its effect to that of uric-acid-charged urine already referred to. This is also a matter of general acknowledgment. I do not forget that with the supervention of nephritis in gout the urine is increased, its specific gravity is lowered, and uric acid may cease to be a sediment, being held in solution by the more copious urine.

3. As undoubted in my own mind as that gout is the result of uric acid, is it that the uric-acid diathesis is frequently responsible for any idiosyncrasy in which depression of spirits is a constant symptom. Extreme modesty, a want of self-reliance, and a disposition to avoid society, in addition to moodiness, irritability, and bad temper, are a part of the same condition. To this is often added what is called biliousness, and we commonly say the liver is torpid; but when we say this we do not always have a definite notion of what we mean. It is certain, however, that there is often constipation, and the pulse is frequently slow. This, with scanty, darkened urine and copious sediment, already alluded to, constitutes the well-known condition to which the word *lithemia*, in its more limited sense, is applied, the word *lithemia* being also used

as synonymous with uric-acid diathesis. The symptoms of this well-known condition I assign to an accumulation or retention of uric acid and allied substances in the blood. This proposition has its most satisfactory proof in that which constitutes its successful treatment—viz., measures to increase the elimination and diminish the ingestion of uric acid.

4. That uric acid is responsible for certain cases of *migraine* I am also ready to admit. I could cite many cases from my own experience which attest this, of which the following may be regarded as a type, being one tolerably well studied:

F. R., a gentleman of large means and abundant leisure, but leading an active life, consulted me when he was fifty years of age. His father had had sick headaches almost all his life, although toward the close of it they disappeared. The attacks lasted a day or two, during which he was also sick at the stomach.

Mr. R., Jr., began to have similar attacks after he was thirty years old. He would rise in the morning with a headache, which gradually grew worse, until by noon he was compelled to go back to bed. He would finally fall asleep, and sleeping until nine or ten o'clock at night, would wake and find the attack gone. The pain would be behind the eyes and in the temples, and he could stop it for a moment by yawning, and by pressing the great vessels of the neck. The attacks were associated with nausea and accompanied by pains in the legs and stiffness—a sort of ache or tired feeling, with inclination to stretch the legs out. This sensation would come on rather toward the end of the attack. The next day he would generally feel uncommonly well, although there would be a little sore feeling remaining in the head. He would also have a little tenderness over the submaxillary glands when he had the headache. For five or six years, or since he was forty-five, these attacks had been so far modified that he had no nausea, which was replaced by a tendency to looseness of the bowels. Before the attacks became milder they lasted longer, generally extending over two days. Until the last five years he perspired very little, even with active exercise, but lately the tendency to perspiration has increased somewhat. He had four or five attacks a year, and was sometimes awakened by them at night. He is very temperate, almost a teetotaler; alcohol in any quantity brings on the attacks, especially champagne. In 1873, while in England, he experienced a painful sensation in the urethra, a sensation which extended to the end of the penis.

The urine at all times was typically lithic, the specific gravity ranging from 1021 to 1032, while it deposited a copious sediment of uric acid and urates. It contained no albumin or casts, and usually no sugar, though occasionally a feeble reaction for sugar was obtained. The quantity was always small, commonly about

32 to 34 ounces in twenty-four hours. On two occasions the urine was purified by the lead process, subsequently to which sample No. 1 contained one-sixteenth of one per cent. of sugar; No. 2, one-fourth of one per cent. of sugar. Neither of the specimens contained any sediment at the time of their examination. No quantitative analysis for uric acid was ever made, but the characters of the urine were typically those described as representing the uric-acid diathesis.

After some preliminary treatment with alkalis he was ordered to use the true French Celestins Vichy as an habitual drink; never to take less than a quart a day, and often more. Under this treatment the headaches grew less and less frequent, until they have practically disappeared. Mr. R. is now about sixty-five years old. It has been a year or two since I heard from him, but when I did hear from him he was in excellent health, but continues to take his Vichy as originally ordered, feeling safe as long as he does so.

By no means every case of migraine is, however, due to uric acid. It is commonly admitted that eye-strain is the cause of a larger number. After this, reflex causes of various kinds, especially of pelvic organs, are active factors.

5. I believe, also, that uric acid in solution may be the cause of high tension in *blood-vessels*, causing contraction of the arterioles and capillaries; also that its continued presence in the blood may produce *endarteritis*, with *degeneration* and *sclerosis* of the vessel-walls, together with the accidents which grow out of such degeneration—viz., rupture and apoplexy, as well as renal disease, and hypertrophy of the left ventricle. The latter I regard as partly compensatory, produced in order to make up the lost propulsive power derived in health from the contractile arterial walls.

6. *Vertigo* in most distressing forms is also at times a result of the presence in the blood of the oxaluric bodies. It may be alone or associated with other symptoms.

In all these conditions, save lithiasis and gout, and possibly in the latter also, I believe that the offending uric acid or allied substances are operating in solution through the blood, it may be in concentrated solution, but nevertheless in solution.

In the causation of the processes above described I believe that uric acid and its congeners play a decided role; but leaving them, we enter upon more debatable ground. Does uric acid produce rheumatism as something distinct and separate from gout? Does it produce sore throat, asthma, and bronchitis? Does uric acid produce gastric and intestinal symptoms? Does it produce glycosuria and diabetes?

First. Does uric acid produce rheumatism as something separate from gout? At this stage we enter on a question most difficult to treat satisfactorily, indeed, impossible to discuss in such a way

as to meet all objection. The chief difficulty lies in the absence of a generally accepted notion as to what constitutes subacute and chronic rheumatism. I say subacute and chronic rheumatism, because it is these as to which the difficulty lies. At the present day acute rheumatism is generally acknowledged to be an acute infectious process, and I am unable to recall from my own experience, at least, any influence of the uric-acid diathesis on its causation. I therefore omit it from my part of the discussion.

The question hinges further on the diagnosis between gout and rheumatism. Everyone who has had experience knows that there is a class of cases, not at all rare, including especially well-to-do persons past forty, in whom attacks of arthritis, and even muscular pain, succeed on errors of diet. Such a diet may include an excess of proteids, or it may be acid fruits, or wine and beer, which cause the mischief. I acknowledge that I have seen many cases of so-called rheumatism, especially muscular rheumatism, among my friends as well as my patients, who, as they grow older, have had to substitute whiskey for wine and beer, because they found the latter produced lumbago and even articular rheumatism. In some of these the urine presented the characters constituting the uric-acid diathesis; in others not. In others a gouty ancestry was their portion, or a history of an attack of true gout existed. I do not know how these causes act. Alexander Haig alleges that beer and external cold act alike in diminishing the alkalinity of the blood and driving the uric acid out of it into the joints and tissues ("Uric Acid," 3d ed., p. 305). There are many objections to this reasoning, and Haig's statements themselves are conflicting. Thus he says also: "The urates which cause acute arthritis are in solution, not in suspension, and they are deposited from solution later on when they are unirritating." Again, on p. 469, he says: "When uric acid fails to be excreted it is retained in the joints and irritates them." Also, "that the absence of uric acid from the joints after death is no reason why it is not present before death." I prefer to call these cases gout rather than rheumatism, but not on such reasoning as this. Proof as to the local presence of uric acid is practically wanting. I call them gout because they fulfil the conditions of gout, either by hereditary, by the previous presence of undoubted gout, or by presenting the conditions defined by the uric-acid diathesis. I know this reasoning is not invulnerable, but I can adduce no better. The term rheumatic gout, which has recently been reapplied to some of these cases by one of our members, Dr. Rachford, seems not an inapt one. On the other hand, the term has been of late so generally associated, though with much less foundation, with that other chronic rheumatoid condition—viz., rheumatoid arthritis—that I fear an attempt to restrict it to the cases in question would lead to more confusion.

In strong contrast with these is another class of chronic cases found among the poor, in which no such cause brings on acute attacks. In these cases there is no hereditary history of gout, and there has never been an attack of gout. Nor does the urine present the characters of the uric-acid diathesis. In these cases it has not been my experience that a meat diet interferes with a cure or causes relapses in cases in which convalescence has set in. Nor do wine and beer interfere with their recovery. On the other hand, I believe that chronic rheumatism in such forms is a disease that should be well fed, and for this class of cases I would rather have good food than medicine. My experience justifies this conclusion. It is, of course, not always easy to separate these two classes of cases. They sometimes so shade into one another from the standpoint of symptomatology that it may be impossible to tell to which category they belong, but I am sure that the latter group has nothing to do with the uric-acid diathesis as I understand it.

A word as to rheumatoid or deforming arthritis, also known as rheumatic gout. This disease I also believe is something quite apart from gout and the uric-acid diathesis, the conditions of which are not commonly associated with it. It is a disease of definite morbid anatomy, consisting mainly in the destruction of the inter-articular cartilages, and in new formations about the joints, associated with trophic changes, manifested most strikingly in muscular atrophy. Deposits of sodium urate constitute no part of it. It is much more closely allied to true chronic rheumatism than gout. Occurring more frequently in my experience among the poor, it is a disease of comparatively early life, setting in usually between twenty and thirty, and even at an earlier age. Acute rheumatism and gout rarely precede it, while worry, grief, and anxiety do. The studies of our member, Stewart, of Montreal, have shown that in fully 50 per cent. of cases it succeeds upon infective processes, while the nervous origin, originally suggested by J. K. Mitchell, and further elaborated by Remak and by Ord, has much to support it. It is, however, wanting the support of anatomical changes in the spinal cord, though Pitres and Vaillard claim to have found them in peripheral nerves.

Second. Does the uric-acid diathesis produce sore throat, bronchitis, and asthma? So far as these conditions are associated with the requirements of the gouty diathesis, it may. But there is no proof of it, except that derived from analogical reasoning. It is *prima facie* unlikely. Yet if they occur in persons who are hereditarily gouty, who have had true gout or fulfil the conditions of the gouty diathesis, and are not otherwise explainable, they may be thus caused. On the other hand, there is nothing so peculiar in their symptoms that a diagnosis of gout dare be made from the presence of such sore throat, bronchitis, and asthma. The same is

true of numerous other conditions ascribed to gout, such as the gastric neuroses, what is known as gout of the stomach, gouty diarrhoea, and the like. Their relation to the uric acid diathesis is an assumption justified when the conditions named are fulfilled, but there is nothing in these conditions themselves which is in any way distinctive of indicative gout, or of the uric-acid diathesis.

With epilepsy depending in any way on the uric-acid diathesis I have no experience, nor with neurasthenia, alleged to be due to the same cause.

Now as to the relation of uric acid and diabetes. It is one of the best recognized clinical features of the latter that uric-acid sediments are frequently found in diabetic urine. But here the resemblance between typical diabetic urine and the urine of the uric-acid diathesis ceases. For, although the specific gravity of diabetic urine is high, yet it is high not from the presence of uric acid and urates, but from sugar, and, instead of being scanty as the urine of the uric-acid diathesis, it is copious. I have always regarded the sediments of uric acid in diabetic urine, which, by the way, are almost always limited to the early stages, as a result of the rather marked acidity of these urines, which decomposes the urates and deposits the uric acid.

On the other hand, it cannot be denied that there is a certain relation between diabetes and gout, shown by the fact that at times these two affections are present in the same subject, either successively or simultaneously. Most frequently, perhaps, the gouty patient acquires glycosuria and the gouty attacks may cease. In other cases attacks of gout and glycosuria alternate. In other cases still gout and glycosuria are simultaneously present. Least frequently, gout supervenes on diabetes. A case illustrating the first category has been under my care nearly twelve years. It is accompanied by a mild degree of interstitial nephritis. It is, moreover, commonly conceded that these cases are almost invariably of the mild form, easily controlled, as a rule, by a dietetic treatment only. In my experience, the number is not as large in this country as it appears to be in Germany, England, and France, or as noted at least at the Spas where diabetics and gouty patients resort. Furthermore, I believe that a certain number of cases are supposed cases; by which I mean cases in which the reduction of cupric oxide is due to uric acid and allied substances, and not to glucose. This is such a frequent event in my experience, and I so often find mistaken conclusions drawn from it, that I am of late confident it is true. Admitting, however, the occurrence of gout and diabetes in the same person in some one of the ways described, does it follow that uric acid is the cause of both? On no grounds except the reasoning of Haig, that which he calls uricacidemia, or an excess of uric acid in the blood, due largely to its alkalinity,

causes enlargement of the liver, derangement of function, and consequent glycosuria. Gout and diabetes are both nutritional disorders, and may be the result of the same cause, but that cause is not uric acid in the case of glycosuria.

This is further seen in the absence of like consequences of the two diseases. Nephritis is a very common affection in gout, manifested almost exclusively in the granular atrophic form, and very rarely the same form appears in diabetes; but it is only in the obese and gouty and in the last stages of the disease in these that it is met. The renal changes which may be said to be so characteristic of diabetes are functional and hypertrophic, the result of extreme work thrown on the kidney in eliminating the water, sugar, and salts. These are never found in gout.

Cardiac changes are rare in diabetes. When present they are hypertrophic, but moderate. They are very common in gout and of the same kind. In both diseases they are probably due to the same cause—viz., extra work thrown upon the heart, partly to overcome irritative contraction of the blood-vessels, to which is superadded in gout arterial sclerosis. The latter is very rare in diabetes except in the form associated with gout. The irritant in gout is uric acid and its congeners; in diabetes, sugar, acetone, and similar substances. These may rarely be a cause, too, of arterial sclerosis occurring late in diabetes. When sclerosis is present, as already intimated, the cardiac hypertrophy is partly compensatory. When sclerosis occurs early it is a question, as suggested by Van Noorden, whether it is not primary, possibly of syphilitic origin, and itself the cause of diabetes through nutritive disturbances in the pancreas and nervous system. Finally, the very fact that when the uric acid asserts itself the diabetes subsides, and *vice versa*, is, in my judgment, a strong point against uric acid being the cause of both.

Admitting, therefore, as every one must, a somewhat intimate relation between the two conditions, it would seem at present that we must admit, with Van Noorden, who has given us, by general acknowledgment, the most satisfactory treatise on diabetes yet written, that an insight into it has not yet been vouchsafed us.

## THE NEWER LOCAL ANESTHETICS—HOLOCAIN, NIRVANIN AND ORTHOFORM.

BY AIME PAUL HEINECK, M.D.

THE popularity of these agents is increasing. Laboratory experiments show that they are, when properly employed, of value as local anesthetics. Their toxicity, holocain excepted, is less than that of cocaine. They have a sphere of usefulness the exact extent of which is yet to be determined. It can only be determined by actual clinical use. It can be objected to them as it can be objected to all other local anesthetic agents, that the anesthesia which they procure is not as complete as that secured by general anesthetics. To employ them to good advantage one must know their possibilities and also their limitations. When given in excess of the therapeutic dose they are capable of exciting annoying accidents.

“Holocain is the ideal local anesthetic for removing foreign bodies from the conjunctival sac.” (*Holtz.*) This agent is freely soluble in boiling water, sparingly in cold water. It is neutral in reaction. The drug having germicidal properties, solutions of holocain do not need sterilization. “Boiling does not change it chemically or reduce its efficacy, but as a one per cent. solution is decidedly bactericidal sterilization by heat is unnecessary.” (*Louis G. Deane.*) In making a solution of holocain dissolve the latter in a porcelain vessel, as it causes glass containing an alkali to lose a portion of the latter, which clouds the solution. It is a stable agent, a one per cent. solution remaining clear for two months. It is useless to associate any antiseptic to its solutions with a view of preserving them aseptic. Germs can not live in solutions of holocain of one per cent. or more. Applied to mucous membranes it causes no constitutional symptoms. Administered subcutaneously it is a decided poison. Its toxic dose when administered internally is one centigramme. No local poisonous effects from the use of the drug have been reported. This agent is used and has been found to be an efficient and local anesthetic in ophthalmic practice. It seems to act simply by producing a paralysis of the sensory nerve-endings. Outside of rendering it anesthetic, holocain seems to have no effect upon the eye. It excites a hyperemia of the conjunctival vessels.

The one per cent. and two per cent. solutions are the ones most commonly used. A few drops of either of these instilled in the conjunctival sac will secure an anesthesia of that membrane and of



the superficial structures of the eye, in from one to three minutes (from this standpoint in comparison with cocaine a very considerable saving of time is effected), and of ten minutes' duration. Two or three instillations at one minute interval may be required. "One or two drops of one per cent. solution generally brought about entire anesthesia in from one to fifty seconds. When a second application was made forty seconds after the first, entire loss of sensation invariably followed in thirty seconds more." (*Hasket Derby.*)

Advantages claimed for holocain in ophthalmic surgery:

(1) Rapidity, promptitude of action. It acts with equal rapidity in contact with a hyperemic or granular conjunctiva, as in the presence of a normal conjunctiva.

2. It does not enlarge the pupil.

(3) It does not affect the accommodation. No unpleasant blurring of vision follows its use.

(4) It does not increase the intraocular pressure. Holocain not contracting the conjunctival blood-vessels, it does not bleach the eye nor lessen the lachrymal secretion, nor dry the corneal epithelium.

(5) It does not impair the integrity of the corneal epithelium. In ulcer of the cornea it is to be preferred to cocaine, as it relieves pain equally well, and unlike cocaine it does not unfavorably influence nutrition.

(6) There are no after-effects. "It does not interfere with nutrition of tissues, but rather increases the blood-supply and hastens healing." (*Wurdemann and Black.*)

Immediately after instillation in the eye, a slight burning, smarting sensation occurs. This is not lasting. It rapidly passes off.

(7) May be used when cocaine is contra-indicated, as in operations upon the cornea and in glaucoma.

The vaso-constrictive action of cocaine is useful in operations upon vascular tissue, but it is harmful in those performed upon the cornea because of the peculiar way in which it takes away nourishment. In the performance of iridectomy holocain has been shown to be of special value. "In glaucoma, dilatation of the pupil increases, and contraction of the pupil diminishes intraocular pressure. This long since led to the observation that atropine, homatropine, cocaine and other drugs dilating the pupil, might produce an attack of glaucoma in an eye predisposed to the disease." (*Hasket Derby.*)

(8) It can be used when we wish to avoid the shrinking effect of cocaine, as in the removal of eye and ear granulations, turbinal hypertrophies, polypi, etc.

(9) Stability and bactericidal quality of solutions. When

solutions become turbid it is not due to growth of bacteria. Such solutions are not spoiled. They can again be rendered clear by filtration.

A one per cent. solution stops fermentation and putrefaction entirely. (*Heinz.*) "Germs cannot live in solutions of holocain, for it actually kills these organisms." (*R. L. Randolph.*)

Holocain, owing to its poisonous nature, should never be used subcutaneously. Even in minute doses when administered internally it is highly poisonous. Symptoms of intoxication due to the internal use of holocain simulate those observed in strychnine poisoning. As it does not contract the vessels, operations under its influence are likely to be attended by more hemorrhage than those performed under cocaine. In muscle operations, in pterygia and in deeper operations upon the globe of the eye, the tendency to free hemorrhage under holocain anesthesia is disadvantageous. Hemorrhage impedes the operator and obscures the field of operation. It also seems to lessen the anesthesia. This is probably due to washing out of the anesthetic by the overflow of blood.

#### NIRVANIN.

Nirvanin is a local anesthetic agent only one-tenth as toxic as cocaine. It has been used in children without ill-effects. Its use is not attended by any excitement, by any influence upon the respiration, or by any weakening of the heart-action. Owing to its relative non-toxicity this drug is of especial value to secure local anesthesia of parts the circulation of which cannot be easily controlled; as in operations upon the anal region. Nirvanin anesthesia lasts longer than cocaine anesthesia. Its effects are prolonged. Nirvanin does not irritate wounds, does not interfere with healing by first intention.

Sterilization by boiling does not decompose solutions of nirvanin, does not impair the anesthetic properties of the latter. The most commonly used solutions for hypodermic injection anesthesia are the one, two, three and five per cent. aqueous solutions; for infiltration anesthesia, a one-quarter to one-half per cent. solution. Luxenburger recommends that the nirvanin be dissolved in sterilized salt solution.

For the ophthalmic surgeon nirvanin is not a suitable anesthetic. It is generally irritating to the eye. However, in wounds and ulcers of the eye, it can be advantageously used with cocaine to prolong the anesthesia. Applied to the unbroken skin, it does not anesthetize it. Applied to the mucous membrane, it is not to be recommended when it is intended that anesthesia should reach deeply, as in nose and throat surgery. A five per cent. solution applied to mucous membranes, the conjunctiva excepted, does not

produce an anesthesia deep reaching enough to allow of a painless operation upon the underlying parts.

The field of nirvanin is in subcutaneous and in infiltration anesthesia. Luxenburger commends this agent highly for regional anesthesia. When you wish to employ subcutaneous or submucous nirvanin anesthesia, you can secure it by employing the same technique that is employed for securing infiltration anesthesia by the aid of Schleich's formula. Anesthesia is complete as soon as the tissues are completely infiltrated when you use the Schleich formulas, while with nirvanin solutions five to eight minutes elapse before anesthesia sets in.

Nirvanin is being increasingly used by the dental profession. Its comparative non-toxicity and its antiseptic properties especially commend to them. For tooth-extraction inject your solution of nirvanin on both sides of the tooth down to the periosteum. Place the fingers over the punctures to prevent the solution from running out, and then by gentle pressure assist in dispersing the liquid in the surrounding tissues. Wait three or five minutes. "Careful attention was given to the condition of the gums to note whether any irritation was produced and in every case the gums rapidly returned to a normal condition without edema or sloughing." (*Kyner.*)

It is not bactericidal to the germs of suppuration.

#### ORTHOFORM.

Orthoform is a tasteless, odorless, whitish powder. It is but slightly soluble in water. It is very soluble in alcohol, also in ether. This insolubility in water unfits it for hypodermic use, unfits it for use in infiltration anesthesia. It is sterile. No germs are found in it as it leaves the factory, and the few germs that may accidentally gain access to it through careless exposure or unclean contact are either destroyed or lose much of their virulence. In cases in which an antiseptic as well as an anesthetic action is desired or required, orthoform can be combined with any of the following antiseptic drugs: Iodoform, dermatol, zinc oxide, aristol, or calomel. These agents are not chemical, pharmaceutical or physiological incompatible of orthoform.

The drug when used in the therapeutic doses is non-toxic. It has, in a few reported cases, when applied too profusely, caused an eczematous condition of the skin surrounding the wound with which it had been maintained in too prolonged contact. This accident I have never personally met. Should eczema occur after its use, stop using the preparation for two or three days. If on second trial eczematous lesions are again provoked the drug is not suited for use in that individual case. Orthoform has been given

internally in doses of from gr. xv—xxv. daily, without inflicting any injury upon the organism.

Orthoform does not act upon the unbroken skin. "The substance will not act upon unbroken skin, nor with certain reservations on intact mucous membrane." (*Yonge.*) To produce anesthesia it must come in contact with terminal sensory nerve-endings. It then produces in from three to eight minutes an anesthesia of the surface to which it has been applied. This anesthesia is complete to pain only. This agent is chiefly used to secure an absence of pain in painful non-operative conditions, and after operations in hyperesthetic areas. Its anesthetic action is prolonged for hours.

On the unbroken mucous membranes of the mouth, nasopharynx and larynx, orthoform does not anesthetize sufficiently to allow of surgical action.

We can use orthoform, either pure or diluted, as a dusting powder applied directly to the open surface which we wish to anesthetize. It can be used in the form of an alcoholic solution; in the form of an ointment, 10 to 20 per cent. with lanolin; in emulsion with yolk of an egg; in 10 per cent. solution with colloidion.

*Indications for Use:* (1) To relieve pain or ulcers, be they chancroidal, syphilitic, tubercular, carcinomatous or simple chronic ulcers. Apply the powder to the surface of the ulcer and secure its retention there. Orthoform coming in contact with the exposed nerve-endings secures a marked and often a complete suppression of the pain. It does not interfere with regeneration of the tissues, and it exerts no unfavorable influence on the economy. It secures a prolonged anesthesia. If exudation be abundant, use it in the form of an ointment. An abundant exudate washes off the powder. Owing to the innocuousness of orthoform repeated applications are not harmful. In rectal carcinoma and rectal chancroids a ten per cent. orthoform suppository will do away with the pain, and will enable the patient to dispense with the use of opium with its allied constipating effects and antagonism to assimilation. The non-poisonousness of orthoform is demonstrated by the fact that in a case of inoperable carcinoma two ounces weekly were applied without any ill-effects.

As a local application to corneal ulcers, to canker sores and herpetic ulcers, it is very satisfactory. It may be used in carcinoma of the tongue to make eating painless. Dusting orthoform on painful, indolent ulcers renders them comparatively comfortable. Avoid eczema by not using orthoform too freely in the beginning, and by the application of a thick zinc-oxide paste around the ulcers.

(2) To relieve the soreness and pain resulting from cutting,

snaring and cauterizing operations upon the nasal cavities, the powder can be applied to the field of operation, or orthoform gauze can be packed lightly in the cavity.

(3) In tubercular laryngeal ulcers orthoform is of value to relieve pain and to cause a disappearance of the difficulty of swallowing. In the larynx, orthoform is best used by means of an insufflator. Use about five grains at each insufflation. It enables tubercular patients to take nourishment, thereby retarding the progress of the disease.

(3) The following emulsion for use in laryngeal ulcers is recommended by Freudenthal:

R	Menthol.....	10
	Ol. amygdalæ dulc.....	30
	Aq. destill, q. s. ad.....	100
	Vitelli ovi.....	30
	(About 2 yolks.)	
	Orthoform.....	12.5
M.	et fiat emulsio.	

In using this emulsion in the larynx use an ordinary laryngeal syringe.

(4) As an application to burns, when there is an exposure of nerve-terminals, be the burns thermic or chemical, it secures an immediate cessation of pain. This anesthesia lasts about twelve hours. "Almost immediately after its application to burns, even if they be deep, the pain ceases." (*Maygrier.*)

(5) As an application to operation wounds to lessen the after-pains of an operation. After the removal of faucial tonsils, if orthoform be applied to the cut surfaces the patient can eat solid food without pain being excited. After circumcision, after cauterization, after operation for hemorrhoids, etc., for the relief of severe pain following the application of the various caustics or the actual cautery, orthoform powder or ointment applied to the raw surface and covered with a gauze dressing is efficacious.

(6) Upon excoriations, as those that are present around an artificial anus, as an application to bed-sores. In painful hemorrhoids a ten per cent. ointment applied fifteen minutes before going to stool makes the latter painless. In cases of anal fissure, excoriated hemorrhoids and other painful lesions of anus and rectum, orthoform relieves the pain. Painful sinuses can be tamponed with orthoform gauze.

(7) Upon lacerated and contused wounds I have used it very frequently, and with much satisfaction in crushing wounds of the fingers. It has also been used in perineal and vulvar lacerations after delivery.

(8) Upon the exposed pulp of carious teeth and after teeth-

extraction. For dental caries introduce into the dental cavity, previously dried, a plug of cotton impregnated with the following preparation:

R Orthoform .....	gr. xv
Acid. carbolic.....	gr. xv
Camphore	
Choral hydrate.....	ʒā gr. lx

(9) In fissured nipples. Apply to the nipple for ten minutes previous to putting the child to the breast, a pledget of gauze impregnated with a saturated alcoholic solution of orthoform. After several applications nursing will, in most cases, cease to be painful. You get the anesthetic effect of the orthoform in connection with the undeniable antiseptic action of the alcohol. Maygrier used this treatment in forty cases of fissured nipples. In all, he secured complete analgesia of the breast while at rest. Pain during nursing was in all cases markedly diminished; in the majority of the cases it was nearly abolished.—*The Alkaloidal Clinic*.

Chicago, Ill.

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### IODIPIN.

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IODIPIN is not a mere solution of iodine, but it is a chemical compound of this element, just as are the iodides of potassium and sodium. In this case, however, the iodine is united with the fatty acids of sesame oil, whereby it loses its characteristic odor, taste, color, and irritating properties, and yields a compound very bland and acceptable to the stomach. When iodipin is taken into the system it is said to be carried even to the remotest tissues, where it is stored up, and the iodine gradually and continuously liberated and converted into iodides in the blood. On this account it is claimed that iodipin can be administered for long periods of time without disturbing the appetite, interfering with digestion, or producing the slightest "iodism." The fat, too, is absorbed, and is highly nutrient. These advantages in the treatment of chronic conditions in which iodine medication is indicated, can readily be appreciated.

Iodipin may be administered by mouth or hypodermically. The 10 per cent. iodine strength is employed for the former purpose, while for the latter the 25 per cent. iodine strength is usually preferred.

Klingmuller (1) reports the results of some observations made at the clinic of Neisser, at Breslau, upon the use of iodipin by subcutaneous injection. Such a mode of treatment is a special advantage for patients who will not or cannot take iodine by the

mouth, especially the insane. Thirty-six patients were treated, and received 220 injections of a ten-per-cent. preparation. No unpleasant effects were observed, even when 20 Cc., the equivalent of 30 grn. of iodine, was injected daily. Five injections were made on successive days in cases in the hospital, but with longer intervals in ambulant cases. Subsequently additional injections of a 25 per cent. preparation were made, with equally satisfactory results. Not only was the iodine deposited in the subcutaneous tissues, slowly absorbed and distributed, but all of it was necessarily taken up and rendered active. Iodine appeared in the urine in from three to five days after the treatment was begun, and its excretion continued for several weeks, while with other preparations the iodine appears earlier and the period of elimination is much shorter. To overcome objection to the lateness of appearance, the slowness of absorption, and tardiness of elimination of the drug when given subcutaneously, when a speedy effect is desired, it may be given by mouth simultaneously. The subcutaneous method of injection of iodipin has the further advantage of being painless, convenient, and inexpensive. The injection is best made strictly into the subcutaneous tissues between the skin and the muscle, and preferably into the gluteal or interscapular tissues. The specific activity of iodine was manifested after subcutaneous injection of iodipin in the same degree as when other iodine preparations, and especially iodipin, were administered by the mouth. The results in typical cases of gummatous destruction were most favorable.

Finally, the subcutaneous use of iodipin was unattended with symptoms of iodism.

Klingmuller (2) warmly commends the use of iodipin for the following reasons:

1. It exerts the specific action of iodine upon tertiary syphilis.
2. The organism is kept for a longer time under the influence of the action of iodine than with the use of hitherto employed preparations of iodine.

The subcutaneous administration has the following advantages:

1. None of the drug is lost.
2. The organism absorbs the iodine introduced slowly and regularly.
3. Iodism does not occur.
4. Absolute dosage is rendered possible.
5. The treatment is rendered possible for patients who, for any reason, will not or cannot take iodine—the insane; after operations; the unconscious.
6. The body may be kept under the influence of iodine for weeks, or even months, by repeated courses of a few injections.

Iodipin has been tested by Drs. Ferdinand Winkler and Con-

rad Stein (3) with a view of ascertaining the rapidity with which it is absorbed into the system. They report as follows:

"To this end tests were carried out in forty-six cases, comprising neurasthenia, duodenal ulcer, tuberculosis, nephritis, carcinoma, hepatitis, and ventricular sciatica, parametritis, gastritis, chlorosis, enteroptosis, etc. The patients were provided with test papers of starch impregnated with a 5 per cent. ammonium-per-sulphate solution, which were to be moistened with saliva at definite intervals. From tabulated results it appears that the reaction indicated by a more or less pronounced blueing of the test-paper by the iodine in the saliva, occurred in from fifteen to thirty minutes ordinarily, sometimes forty-five minutes. In very serious gastric affections, as for instance, gastric cancer, the reaction was first observed in four hours; hence the absorbability is directly due to the efficiency of the gastric functions, and a disturbance of the latter is indicated when an hour or more is required to obtain the reaction."

Dr. Kindler (4), of the City Hospital, Moabit, used iodipin per os, subcutaneously, and also in the form of an oil-pack. He says:

"In several cases of gonorrhoeic articular rheumatism no better results were obtained than when other warm oil applications were made. The iodipin was inferior to salicylated-oil and alcohol applications. The internal exhibition of iodipin was soon given up also, not because of any inferiority of action, but because of the objection to the oleaginous taste on long-continued exhibition. The subcutaneous injections were chiefly relied on, 10 Gm. (2 1-2 fl. dr.) being injected daily, with a pause after every ten injections. The place where the injection was to be made was first anesthetized with ethyl chloride. Of eight cases of asthma in which iodipin was given, not one complained of any by-effects. Five were very soon improved, the bronchitic symptoms in particular being very rapidly suspended. In the three remaining cases the results were unsatisfactory. Iodipin was also used in five cases of tertiary syphilis which had been previously treated with large doses of potassium iodide without in any way influencing the symptoms. After iodipin had been taken in teaspoonful doses twice daily for five days, a remarkable improvement was observed. In one case of cerebral syphilis iodipin was well borne, but afforded no improvement. One case of spinal syphilis, in which many inunction cures and large doses of potassium iodide had been ineffective, was also treated with iodipin, because of constantly-recurring backaches, increasing spasms of the right limb, and the development of incontinence; 10 Gm. of the remedy were injected daily for ten days. On the fifth day the incontinence was diminished, and shortly after the spasms and backaches also. No by-effects were



observed. In one case of extended serpiginous syphilides, with deep ulcerations on the nose, injections of 10 Gm. of iodipin daily for ten days brought about the healing of the ulcers."

Scipione Losio (5) reports that he has used iodipin in two cases with the following results:

"One case of adenoma near the left carotid, in which, by the use of iodipin, the tumor was reduced in two months from 5 x 3 1-2 Cm. (2 x 1 2-5 inches) to 4 x 2 1-2 Cm. (1 3-5 x 1 inch); and also one case of cold abscess of the left radio-carpal joint, with fistula. Daily injections of iodipin—about 50 Gm. (13 fluid drams) being employed in all—effected a cure in both cases in about ten days."

BIBLIOGRAPHY: 1 and 2. Klingmuller, *Jour. Am. Med. Ass.*, xxxiii, p. 492. 3. Winkler and Stein, *Centralb. fur innere Med.*, xx, 1899, p. 849. 4. Kindler, *Centralb. fur die gesammte Therap.*, xviii, p. 89. 5. Losio, *Gaz. med. delle Marche*, 1899, Nos. 1 and 2.

## NEW THERAPEUTICS IN HAY FEVER.

BY ALEXANDER RIXA, M.D., NEW YORK.

For a number of years I had the opportunity of paying particular attention to a case of hay fever of the worst kind. The case was in my own family, a brother-in-law, who is living in my house. He is forty-five years of age, weight about 220 pounds, and is a six-footer. He contracted the disease about fifteen years ago, in Chicago, while attending a camp meeting of the Knights of Pythias. Since then it has appeared every year with the punctuality of good clock-work, on the nineteenth of August. Early in the morning, rain or shine, the sneezing commenced with the vehemence of a volcano in full eruption, as the first symptoms of the disease. The eyes are usually swollen and suffused in the inner canthus. There is a feverish, accelerated pulse, and a rise of temperature to 101 5-10 degrees or more. However, it is not my intention to give you the etiology, pathology, symptoms, etc., of the disease; my object is to impart to you my successful treatment.

I recollect my first experience with the case. I was called to the patient late in the night, at the period of the hay asthma. He returned from the White Mountains where he used to spend the season, too soon, and got this attack. I found the gentleman standing at the foot of the bed holding on to the woodwork, and breathing like an aggravated bellows. Having no experience in the treatment of the disease, being my first case, I ordered a wash-bowl of hot water, in which I placed his hands. After a short while the intense dyspnea was relieved, the respiration easier, so that he could sit down on the lounge. I now ordered a hot drink, hot water with brandy, almost half-and-half, still keeping his

hands in the warm water. After a while I had the hot drink repeated, and in an hour he fell asleep on the lounge. The next morning he was surprised at the efficacy of my remedy, which gave him several hours of rest.

Before I visited my patient I stormed all the hand-books on the subject, and took along a vast amount of prescriptions, which were recommended by the great authors, but they all failed to help the asthma. The paroxysmal attacks returned upon the slightest change in the weather, and the asthma ran its self-limited course, in spite of all my remedies. That was six years ago. Since then I experimented with the good man, who was a patient subject, with all available drugs and medicines. I cauterized his nostrils, burned it with the thermo, and galvano cautery, brushed it, washed it, pencilled it, and still the next year the hay fever returned with the same vehemence and on the same day. Certainly I gave him relief, every year more, but to stop the outbreak of the disease, I succeeded but for the last two years.

My mode of treatment to prevent or abort the disease, consists of the following: Three days before the onset of the disease, I commence to wash the inner nares with a solution of Peroxide of Hydrogen (Marchand's) *one* part of hydrogen, and *two* parts of boiled water. This year I used *Hydrozone*, a new preparation, which has the double strength of the former, and is one of our best germ killers. I took *one* part of *Hydrozone* to three or four parts of water, according to the indication, three or four times a day. I use a nasal douche holding one pint of the fluid. By this process I managed to prevent the onset of the disease in all my cases. There is but very little irritation of the nose present, which causes the patient hardly any trouble. However, for those most sensitive I have the following prescription:

R Acid. boracic..... gr. viij.  
Sol. cocaine hydrochlor..... ̄ ij.

(Five per cent.)

M. Sig. Use in atomizer.

The nasal symptoms, or the hay fever, proper, has a duration according to my observation, of about two weeks. After the expiration of this time, the hay asthma sets in, and two days later the hay bronchitis follows. Up to the past year I have not succeeded, in spite of all my efforts, to prevent this stage of the disease. Last year and this season, however, I succeeded rationally with the following remedies: My observations of former years taught me the lesson that when this period approaches, certain branches of the bronchial tubes get clogged up with tenacious mucus, which none of our expectorants could dislodge in a hurry. I succeeded but once with a desperate dose of apomorphia to remove this obstruc-

tion, and the asthma disappeared like magic. However, in a short time it re-established itself and kept tight for some ten days, and sometimes to the end of the season, of course with more or less severity. Considering this pathological condition, I started in right at the time when the hay fever should appear with the administration of the following prescriptions:

R. Iodide of ammonia.....	ʒj.
Fl. ext. grindelia robusta.....	ʒiv.
Fl. ext. yerba santa.....	ʒiv.
Aq. q. s. ad.....	ʒij.
M. Sig. A teaspoonful four or five times a day.	

For the first week, while the second week I ordered to be taken every three hours in teaspoonful doses adding yet the following medication:

R. Terpin hydrate.....	ʒj.
M. Fiat capsule No. xii. Sig. Two capsules every two to four hours.	

These medications acted like a charm, and prevented the asthma during the entire season. It seems to act in the way of preventing any accumulation of the discharges in the bronchial tubes and branches. The last stage of the disease, or the period of the bronchial catarrh, I have, thus far, not succeeded to avert, notwithstanding that there is no accumulation of mucus. However, as it forms the mildest part of the disease, the patient cares but little for the cough, which can easily be controlled by small doses of codeine or morphia. Stimulating drinks are beneficial. Groggs and punches, as well as good wines, are advisable, all through the different stages of the disease. The intestinal tract should be kept in order, and late or heavy suppers prohibited. In some of my milder cases patient attended to his business during the whole period, and was not compelled to stay in the house like in former years.—*Medical Summary.*

### THE QUEEN'S DOCTORS.

It will have been noticed that the early bulletins from Osborne were signed by Sir James Reid and Sir Richard Douglas-Powell. These two men were the primary doctors of the Queen, and with the addition of Sir Francis Laking, make up the complete royal medical bodyguard. The underlying principle of the appointment is, that it is the most confidential that a medical man could occupy. For the most part this trio, says *The Pall Mall Gazette*, "are true disciples of the Jennerian school, and one of the first principles of Dr. Jenner, who was for thirty years the Queen's doctor, was the preservation of the secrecy of the sick-room.

"Jenner still lives in his royal medical successors. It became

a principle that his system in regard to Her Majesty must be carried on unbroken. Twenty years ago Dr. Reid was appointed Resident Physician almost for that purpose. He was a local Aberdeenshire man, whose medical brilliancy had been brought to the notice of Jenner. The latter soon satisfied himself that he was just the man he wanted; he proposed to Her Majesty that Dr. Reid should become the resident doctor, and his appointment followed. All through those early years of Dr. Reid's service Jenner exercised a close supervision, and thus it came about that the former was thoroughly tutored in the Jennerian system, and adopted it. Moreover, he seemed to absorb many of Jenner's characteristics.

"Sir William was the embodiment of reticence; but Sir James has proved quite his equal in this respect. He is a silent Scot, who never speaks two words to patient, nurse, or acquaintance if one will do, and has never been known in his life to speak of the Queen's health and any peculiarities it might possess. In more senses than one has he followed in Jenner's footsteps. The Queen became closely attached to him, and in many ways displayed the fact. Mark that he married a maid of honor, a circumstance of no small significance, whilst within the last few weeks Her Majesty provided him with a house within the precincts of Windsor Castle. He occupied apartments in the castle before he was married.

"We get Jenner again in Sir Richard Douglas-Powell, who was one of his pupils, most of whom have risen to distinction. It must be noted that the resident physician could not be Jenner's successor as first physician-in-ordinary to the Queen. No appointment in this respect was made till Jenner had passed away, and then Sir Richard received the call. His skill and discretion are proverbial in the profession, and he is one of the first authorities upon consumption treatment. His eyes are clear and penetrating, his face clean-shaven and dignified, and there is a look about him which somehow brings the Sherlock Holmes of fiction to one's mind.

"Sir Francis Laking is quite of a different mould from either of the others. Probably he is the least Jennerian of the three, but he is the greatest exponent of medical common-sense, and his vivacity and cheerfulness are in themselves acquisitions to any sick-room. One of the first principles of his medical teaching embraces the manifold virtues of rest, and another is that of doing unto the constitution what the mind feels most inclined to. Neither he nor his colleagues are to any extent faddists, nor even prone to experimentation in a case of illness; in this respect they are quite conservative. They have always regarded the Queen as an excellent patient, principally because of Her Majesty's optimism in regard to her own constitution and its capacity for endurance."

## *Proceedings of Societies.*

### THE CONGRESS OF TUBERCULOSIS.

THE Congress of Tuberculosis, to which so many, not only of the medical profession, but lay public, looked forward with peculiar interest, took place at Ottawa on February 14th, and was a magnificent affair.

The gathering, which was held in the Convocation Hall of the Normal School, was a great success, being attended by representatives from every part of the Dominion. The Conference was opened by His Excellency, there being also on the platform Dr. Borden, Minister of Militia; Mr. Fisher, Minister of Agriculture; Dr. Roddick, M.P., Senator Sir Wm. Hingston, Mayor Morris, Hon. S. Shimizu, Japanese Consul-General, and others.

Mayor Morris read an address on behalf of the City Council, welcoming the Conference to the capital, and hoping their deliberations would have practical and successful results.

The Governor-General said he hoped the expert information brought to bear at the discussions might not only assist the public to some knowledge of the dread disease which besets them, but would encourage the public to unite in one body to try and repel its ravages. Success must to a very large extent depend upon the assurance and good-will of the public at large.

Ten years ago the annual deaths from consumption in Ontario numbered 2,400. In 1899 they had gone up to 3,405. Of course allowance must be made for an increase of the population, but even allowing for this, it was a very considerable increase. From 1887 to 1898 the total deaths from consumptive causes were 31,699, while the annual estimate for the Dominion was now between seven and eight thousand deaths a year. In the period from 1887 to 1898 the deaths from small-pox were only 21. The small mortality from small-pox was very encouraging, as showing what can be done by preventive measures.

Sir James Grant delivered a brief address, in which he pointed out that this was the twentieth year of the discovery of the tuberculosis germ. The yearly death-rate in this country was estimated at between seven and eight thousand, and in the neighboring Republic about 150,000 annually. In Great Britain and the Continent of Europe, the results from this malady were not encouraging.

The first resolution, which urged upon every Government municipality to adopt organized efforts for lessening the spread of consumption, was moved by Sir William Hingston. He took strong grounds that tuberculosis is not an hereditary disease. "If it is, we may simply fold our arms and lie down and die. Consumption is not confined to the lungs; we may have it in the liver, the kidneys, the bones, in the knee-joints." He had seen it on the lips of a young lady teacher who scratched her lip with a pencil. The bacillus enters the lungs from the air. People are not careful. They spit indiscriminately. The germ in the sputum lives for months, and is disseminated by the atmosphere. It is scattered by ladies with long skirts, by much-handled bank bills, etc. It is not hereditary; it is preventable; it is curable, not in the last stages, but in the early stages. For the consolation of those who could not afford it, he said change of climate was not so important, and friends should never consent to people going to Florida, and afar off, to die away from home.

The motion was seconded by Dr. Lafferty, of Calgary. He said the disease is curable, and emphasized the importance of the duty devolving on Governments to establish sanitariums properly located in parts of the country where the climatic conditions were favorable. The Alberta district, where he came from, was being over-run by outsiders suffering from this disease looking for health, and unless restrictive measures were taken by the Government the district would have to take strong measures to protect itself. He thought the Dominion Government should pay for the erection and controlling of sanitariums.

Dr. Fagan, of Victoria, B.C., supported the motion. He was a delegate from the British Columbia Government, and he felt sure it would do its part in carrying out the wishes of the Association. If proper preventive measures were carried out the ravages of the disease would be reduced fifty per cent. in five years. He appealed to the ladies to reform their dress, as their train-skirts stirred up more germ-infected dust than any other agency. He refused to believe that fashion would prevail over humanity.

Hon. Dr. Guerin, representing Quebec, followed. He said all doctors knew how curable the disease was. The fresh air and God's sun were the great curative agents, and these could be had anywhere. Sanitariums should be located so that the poor would not have to send members of their families far away. In so far as the Quebec Government was concerned it was quite alive to its duty, but he thought the Dominion Government should assume some responsibility.

Prof. James Stewart, of Montreal, followed, strongly urging Governmental assistance.

Hon. Dr. Borden urged the teaching of young teachers at Nor-

mal schools, etc., the truths concerning the curability of consumption, so that they might disseminate the information through the school children.

Hon. Sidney Fisher, who has charge of the subject of public health in his connection with the Federal Government, said the first duty was to educate the people as to the facts, and thus create a sentiment which would demand legislation at the hands of the proper bodies. Legislation of the kind would require strong moral support.

Mr. Fisher said his department had sent out 50,000 copies of Dr. Farrell's pamphlet on tuberculosis, chiefly to doctors and teachers.

Dr. Dube, Montreal, strongly supported the theory of the non-heredity of the disease, as was proved by the examination of a large number of foundling children. In only two cases were traces of tuberculosis found.

Dr. A. Laphorn Smith, Montreal, suggested the desirability of printing the facts regarding the disease and its prevention, on cards, which should be read to school pupils by the teachers at least once a month.

Dr. T. G. Roddick, M.P., moved the second resolution, which called for legislation encouraging the notification of cases of tuberculosis, and to prevent the spread of infection through expectoration, extend the inspection of workplaces, prevent the spread of the disease through milk, and aid in providing some scheme whereby Governments or municipalities might assist in establishing homes or sanitariums.

Dr. Roddick, in speaking to the resolution, favored cremation in the case of death from all contagious diseases, and said it should be insisted on by law in the case of tuberculosis. Dr. Roddick spoke strongly on the carelessness shown in protecting the public from expectoration on the asphalt pavements, in street cars, and railroad trains. He favored the establishment of a Dominion Health Bureau.

The resolution was seconded by Dr. A. P. Reid, Halifax, Secretary Provincial Board of Health, Nova Scotia. He thought the subject should be educated to treat the human race, as well as cows or the lower animals are treated. Every emigrant should be compelled to pass the tuberculin test.

Dr. E. P. Lachapelle, Chairman Provincial Board of Health, of Quebec, was the next speaker, and suggested amendments to the motion to strengthen it. He would like to see the principles of sanitation taught in the schools.

At the afternoon session, Sir James Grant again presided. Dr. Hamilton, of Montreal, continued the discussion of the second resolution. He favored education rather than drastic measures

of legislation. If special local boards would get churches to set apart an evening in the week to the subject, people would be reached who could not be reached otherwise. Schools and clergy can help infinitely in this matter of education.

Dr. Macdonald, of Brandon, Man., thought an amendment should be made to the resolution, including the Federal Government. The experience of doctors who have treated consumption with sunshine and pure air, good food, etc., proved that this was the proper mode, and followed to its logical conclusion will greatly mitigate the disease.

Lieut.-Col. MacRae, of Guelph, said he wondered that no expression had been given as to the reason of the largely-increasing generality of tuberculosis in Canada, when the rate in other countries was decreasing. This point ought to be taken up. He was also surprised that no remark was made about crowded dwellings. A point he would like to get information upon was when a tuberculosis patient became dangerous. He protested against the harm done to Canadian cattle traders by imputations against the meat of tuberculous animals, and quoted Dr. Osler as saying that it was very doubtful whether contagion ever spread in this manner. He pointed out that all domestic animals had the same disease.

Dr. Fraser, of Brandon, spoke of tuberculosis among the Indians. None fell so easily a prey as the North American Indians. Fully 95 per cent. of disease among them was of this nature. There was probably no family where consumption was not present in every form.

Dr. Cleroux, of Montreal, spoke in favor of the resolution.

Rev. Canon Hannington, of New Edinburgh, advocated a hospital to nurse those having the disease. While the germ may not be inherited he thought the soil on which the germ fed was inherited.

Dr. O'Reilly, of Toronto, who has had charge of the General Hospital for twenty-five years, spoke in defence of not admitting tuberculosis patients to hospitals. He was pleased with the remarks of Lieut.-Col. MacRae. The domestic animal question was an all-important one, and ought to be looked into. There was now no place to send patients in the first, second, and third stages of consumption, and he suggested a hospital something like a Red Cross, with cottages on each side, putting about four patients in each, have cooking, heating, etc., in centre building, and allow, not for a temporary structure, but one that might be extended and enlarged. It was a disgrace that there should be no place to send patients. It was cruel to send them miles and miles away to die, and the hospital ought to be near town, so that friends could visit them.

Dr. R. W. Powell, of Ottawa, corroborated Canon Hanning-



ton's remarks *re* the hereditary or lessened power of resistance. He explained that consumption was quite curable, as evidenced by thousands of autopsies. A proper arrangement for treatment of sick was to a certain extent barred by the Ontario Statute, which prohibits building infectious disease hospitals less than 450 feet from other structures.

The second resolution was carried unanimously.

The next resolution dealt with the question of immigrants and cattle infected with the disease, a system of Federal statistics of deaths, establishment of provincial sanitariums, and grants for the distribution of literature on the subject.

Prof. J. G. Adami, of McGill, opened the discussion. He quoted King Edward's words on a former occasion, when as Prince of Wales he addressed a gathering of great men. If the disease was preventable, why not prevent it. The cattle-breeding class was the mainstay of Canadian prosperity, and it was to their interest to get action taken in the direction of betterment. Bovine tuberculosis could be practically eradicated. When it goes into a country it tended to spread, and must be stopped. He took exception to Dr. Roddick's statement *re* compensation to those whose animals were infected. Isolation was all that was necessary. He strongly opposed Mr. Fisher's idea that health matters should be provincial. They should be national. Should one or more provinces refuse to enter such statutes for health as are fitting, it was useless for the others to take action. Banishment was not necessary. Local sanitariums could be established on the outskirts of our cities. Still, altitude and dry climate, without extremes of heat or cold, were generally better than moist or low-lying localities.

Dr. Montizambert, Director of Public Health, stated that the propositions of communicability and preventability of the disease were unassailable. But where were the Government? If some criterion was not accepted how were tests to be applied? Were vessels to be held till chests were examined, etc.? The matter applied not only to seaports, but to every international point of the United States frontier. Instead of coming to Halifax people would come to Portland, and similarly on the Pacific coast. Much better work could be done at the port of departure than at the port of arrival. Less trouble in every way would be caused. He expressed his personal belief and hope that we would one day have a Canadian department of health in every civilized country, whose duty it would be to stop those intending immigrants who were tuberculized.

Dr. D. McEachern, of Montreal, read a paper giving statistics of Canadian Cattle and their value, and the value of all the commodities connected with live stock, and showing the importance of preventing disease by testing and in quarantining.

On motion of Dr. Lachapelle, Montreal, seconded by Dr. Chown, of Winnipeg, it was decided to ask the Federal Government to establish a Department of Public Health.

The night session started off with the nomination of Dr. Fagan, British Columbia; Dr. Lafferty, North-West Territories; Dr. Chown, Manitoba; Dr. Armstrong, Dr. Roddick, Quebec; and Dr. Reid, Nova Scotia; as a Special Committee to nominate officers for the proposed new association. Short addresses supporting the new association were delivered by Dr. Robert Wilson, Mr. H. A. Calvin, M.P., Dr. H. B. Small, after which the Conference passed an address to His Excellency the Governor-General on the death of the Queen, and accession of King Edward. The Conference then proceeded to discuss and adopt a constitution, the name decided on being "The Canadian Association for the Prevention of Tuberculosis."

Honorary life patrons will pay \$100, honorary life members \$50 yearly, members \$1.00. The next meeting of the Association will be held in Ottawa at a date to be fixed by the Executive.

The officers elected were:

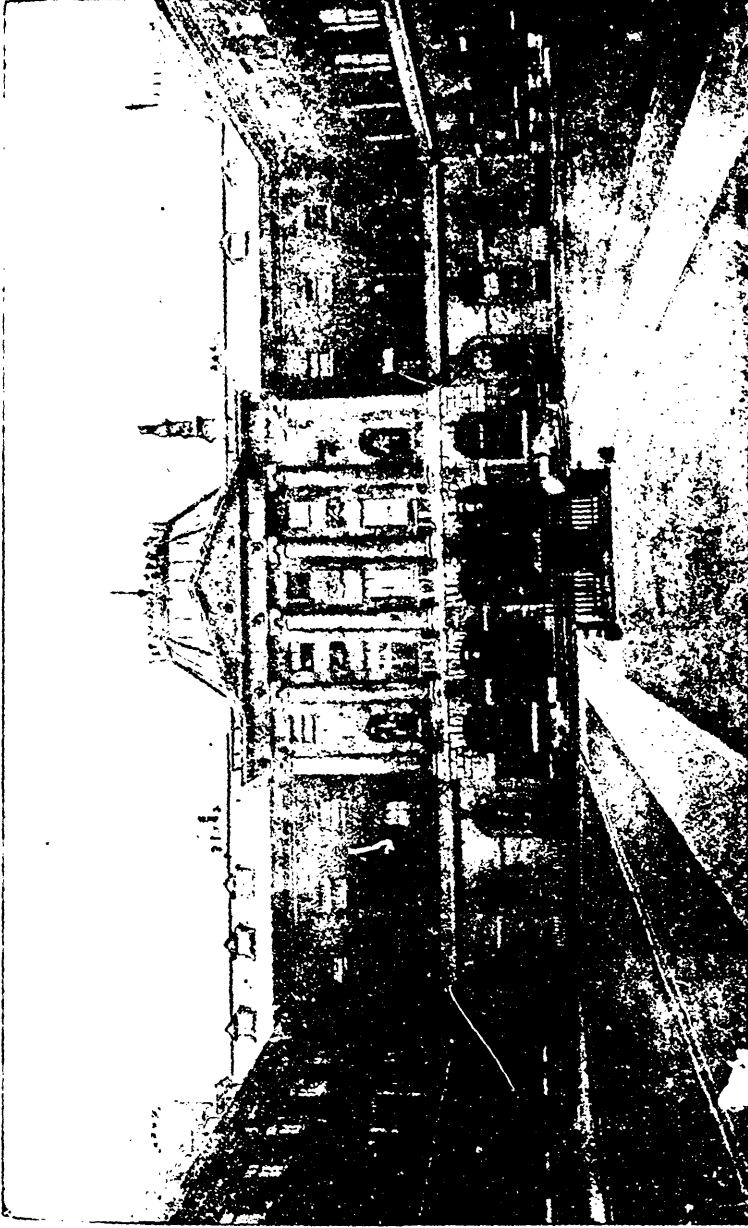
Hon. President, the Earl of Minto; President, Sir Jas. Grant; Vice-Presidents—Quebec, Dr. Lachapelle, Hon. Senator Drummond; Nova Scotia, Dr. Reid; Halifax, Hon. Mr. Murray; Prince Edward Island, Dr. Blanchard, Hon. Mr. Ferguson; New Brunswick, Dr. Thomas Walker, sr., Hon. Senator Ellis; Ontario, Dr. Johnston, M.P., W. C. Edwards, M.P.; Manitoba, Dr. Blanchard, Hon. Mr. Roblin; North-West Territories, Dr. Lafferty; Calgary, Hon. Mr. Haultain; British Columbia, Dr. Fagan and Premier Dunsmuir. Secretaries, Dr. Richer, Montreal; Dr. Eby, Vancouver; Treasurer, Dr. H. B. Small, Ottawa.

Members of Executive—Ontario, Dr. Barrick, Toronto; Quebec, Dr. Roddick, M.P., Montreal; British Columbia, Dr. Davy, Victoria; North-West Territories, Dr. Bain, Prince Edward; Manitoba, Dr. Macdonald, Brandon; Nova Scotia, Dr. Sinclair; New Brunswick, Dr. Daniels, St. John; Prince Edward Island, Dr. McNeill, Charlottetown.

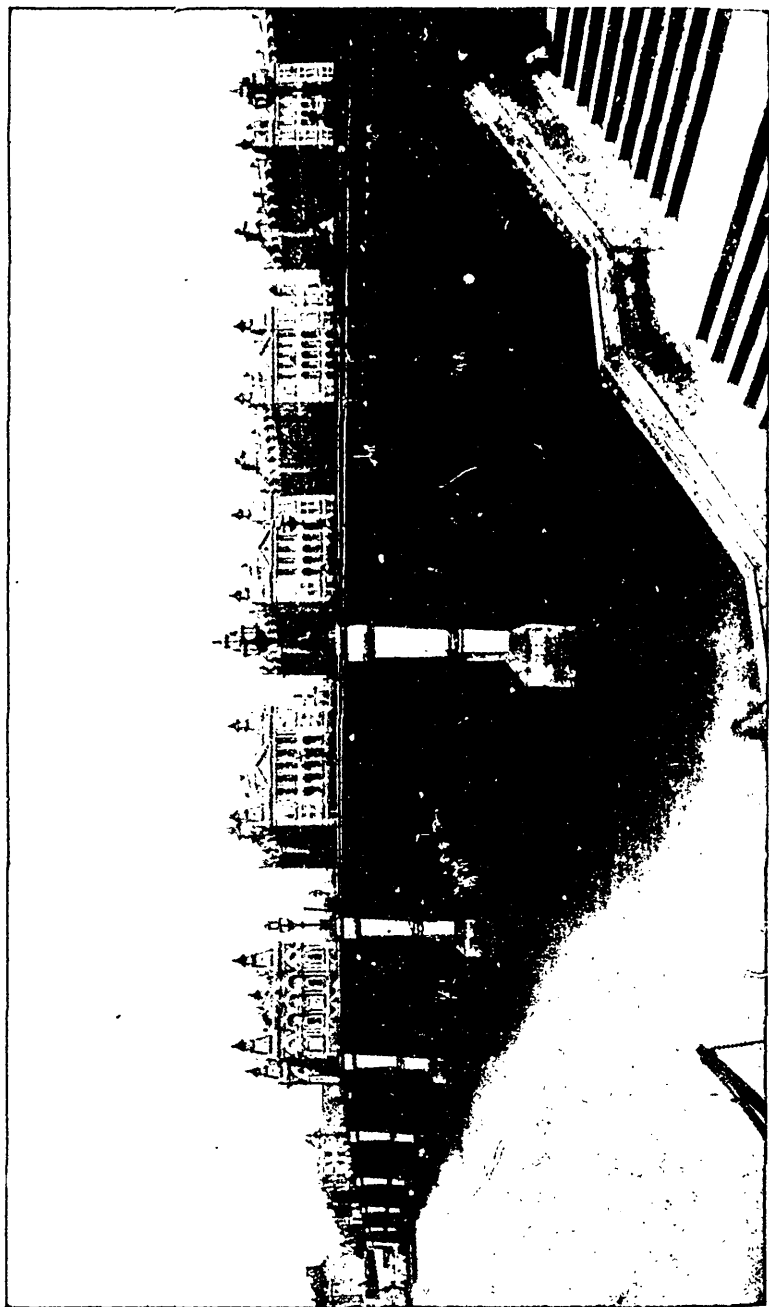
It was decided to hold the next meeting in Ottawa during the session of Parliament.

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**The Railroad Surgeons.**—The International Association of Railroad Surgeons meets in Milwaukee, Wisconsin, on the 10th, 11th, and 12th of June next. We hear that it is going to be a very large and enthusiastic convention, and that particular attention will be devoted to the entertainment of the visitors. You know, Pabst and Schlitz are there, and they make the finest beer in the world, "the beer that made Milwaukee famous."



GUY'S HOSPITAL, LONDON, ENGLAND.



ST. THOMAS' HOSPITAL, LONDON, ENGLAND

# The Canadian Journal of Medicine and Surgery

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Doors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the fifteenth of the month previous to publication.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the tenth of the preceding month.

VOL. IX.

TORONTO, MARCH, 1901.

NO. 3.

## Editorials.

### THE DISINFECTION OF RAILWAY CARRIAGES.

The disinfection of railway carriages, more particularly sleeping-cars, is a matter of considerable importance, which is occasionally brought to the notice of physicians and sanitarians. Health authorities in Canada nowadays would not permit a patient known to be affected with small-pox, scarlatina, diphtheria, measles or cholera, to travel by day-coach or sleeping-car, and if by mis-

chance such a calamity were to occur, the cleansing and disinfection of the car would be expected to follow as a matter of routine. Recently a case came under the official notice of a coroner of Toronto, in which the evidence showed that a patient in the last stage of pulmonary consumption had occupied a berth in a sleeping-car and had died there. An autopsy was made, and it was found that, in addition to other *post-mortem* evidences of phthisis, the lungs of the deceased were riddled with tubercular abscesses. Evidently such a person should not have occupied a berth in an ordinary sleeping-car, and if physicians really believe in the infectious nature of the expectoration of a consumptive, they should loudly protest against such a violation of rudimentary hygienic law. Daily experience, however, shows that consumptives do occupy berths in sleeping-cars. This practice may be partly due to a survival, even in the medical mind, of the old-fashioned view that phthisis is only a constitutional disease, coupled with the allied fact that the abuse we refer to is not explicitly condemned by our sanitary law. In the instance of a person affected with one of the acute exanthems, no one fancies for a moment that any privation is inflicted if permission to travel in the company of healthy people is refused him, and in the light of modern medical science consumptives, especially those who neglect to dispose of their expectoration in a proper manner, do really endanger the health of their fellow travellers. The conclusion is obvious. As consumptives often travel long distances, in order to reach health resorts, the railway companies should feel it incumbent on themselves to supply special sleeping berths for consumptives, so constructed that cleansing and disinfection may be rapidly accomplished.

It will be difficult to induce consumptives to isolate themselves from healthy people when travelling, and the consensus of medical opinion being that the germs of tuberculosis are conveyed principally by the expectoration of a patient, as long as the consumptive disposes of his expectoration in a pasteboard box, which is subsequently burned, isolation is not required. While a precaution of this nature may suffice during the day, it cannot be enforced during the night. Hence the necessity of providing sleeping-cars for consumptives. However, before any changes in sleeping-cars are introduced, medical and public opinion will have to be educated to believe in the necessity of the change, and consumption, in its

open form at least, should be declared to be a notifiable disease, in keeping with the resolution unanimously adopted at the International Congress of Hygiene, held at Paris, August, 1900. When the opinion that the isolation of the travelling consumptive is in the public interest is generally received, special provision for consumptive travellers will easily follow. Even the patients themselves will, in many cases, acquiesce in the propriety of such action. It would be unnecessary to isolate all forms of tuberculosis. Let the line be drawn at open tuberculosis of the lungs. Physicians, no matter what their views may be on the isolation of the sick, can scarcely refuse to recognize the propriety of isolating open cases of consumption, and cautioning railway companies against allowing such patients to occupy berths in ordinary sleeping-cars.

Until the necessity of such a law is generally recognized, railway companies should be obliged by law to disinfect berths occupied by persons known or believed to have open consumption. In disinfecting a carriage, the washable surfaces in and about the berths should be wet with a solution of bichloride of mercury, one part to a thousand of water, and subsequently scrubbed with hot water and soap. The soiled bed-linen and blankets, after immersion in a mercurial solution of similar strength, should be boiled for at least an hour. The mattress and pillows, if soiled by discharges from the patient, should be disinfected by superheated steam. The curtains may also be disinfected by steam. If steam is not available, the curtains, pillows, mattresses, and the woollen stuffs of the seat-covers, should be disinfected by a hand-pump spray, such as is used on the French railway lines when dealing with similar cases. This pump can be wheeled up to a railway carriage, and while one attendant works the pump-handle, another with a hose directs a strong spray on the cushions, seats, etc. This spray generally consists of an antiseptic solution of sixty grains of bichloride of mercury to the gallon of water. A carbolic solution, carbolic acid (90 per cent.) seven ounces to one gallon of water, would be equally effectual. One great advantage of the spray system of disinfection is that the work can be done very rapidly. The 40 per cent. solution of formaldehyde can also be depended on to act as an effectual disinfectant of railway carriages, and it destroys the bacillus tuberculosis rapidly. Besides, it does little or no injury to delicate fabrics, whether dyed with inorganic or organic colors. It is cheap. It can be applied in

the form of fumes, evaporated from a common bed-sheet, as has been demonstrated by the health department service of Chicago or in one of the lamps used for the purpose, which are now on the market.

We thank the Canadian Pacific Railway Company for the information conveyed in their reply to our queries, which shows that they are indeed alive to the necessity of the strictest cleanliness and, if necessary, the disinfection, of their sleeping cars. When a matured public opinion shall call for the isolation of consumptives travelling in sleeping cars, we have no doubt that they will respond with alacrity. In the meantime, greater simplicity in the furnishing of the interiors of sleeping cars would facilitate and cheapen the process of disinfection when employed. All surfaces in and about the interior of a sleeping car should be washable. Leather should be substituted for woollen stuffs in seat-covers and backs, and washable goods for draperies. J. J. C.

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#### ANTI-ETHYLENE.

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WE feel great pleasure in placing before our readers some views on a recently discovered agent, anti-ethylene, which may prove of great value in the treatment of inebriety. The views we refer to appear in a work, entitled "Alcohol and Alcoholism," which has recently been placed before the profession by Drs. Triboulet and Mathieu. The authors say that during the last two years efforts have been made to utilize the data of sero-therapy in treating alcoholism.

In 1897, Dr. Toulouse had made some experiments with the blood-serum of dogs, which had been poisoned with alcohol. Recently Sapelier, Broca, and Thibault, have taken up the study of this subject, and though it would not be permissible to draw conclusions as yet, it is very interesting to explain the principles of the method, as laid before the Academy of Medicine, Paris, May 13th, 1899. May 22nd, 1900, Sapelier presented a statistical table of the results obtained, which show almost 60 per cent. of cures by sero-therapy.

In chronic alcoholic intoxication, say these experimenters, there is a latent period, during which, before producing the lesions of chronic alcoholism, alcohol only acts as a nerve poison. During



this period, like other poisons of the nervous system, alcohol shows its action by only two signs, habit and craving. Looked at in this fashion, alcoholic intoxication imitates morphine intoxication. From this resemblance to morphinomania, the authors propose to call the latent period of chronic alcoholic intoxication, alcoholomania.

A certain number of experimenters (Roux, Borel, Besredka, Jubini, Gioffredi, Arnozan) have discovered that, similarly to microbe poisons, certain non-microbic poisons, animal, vegetable, or mineral in origin, especially those to which the organism becomes rapidly accustomed, develop in the blood antitoxic substances or stimulines (Metchnikoff).

Each of these stimulines, injected with the serum into another organism, places it in a condition of greater resistance with respect to the corresponding poison.

The analogy between the action of alcohol and that of morphine on the nervous system, on the one hand, and experiments made with microbic poisons, on the other, have induced the authors to make with alcohol experiments made by others with morphine. They have produced in the horse the habit of willingly drinking alcohol. The blood of the animal has furnished a serum which, after having been injected into animals, which had previously acquired a habit, and even a taste for alcohol, has produced in them such a disgust for alcohol that they have preferred to abstain from food or drink, rather than continue to take alcohol.

The authors propose to give to the unknown, undefined substance contained in the serum collected under these conditions, the name of anti-ethylene. They have found it impossible to provoke any accident, local, general or toxic, in the animals experimented on, even by subcutaneous injection of excessive doses of this serum.

Clinical trials made on drunkards, or persons given to the general use of alcohol, have confirmed the experimental results obtained in animals.

The alcoholomaniac, treated with anti-ethylene, loses taste for strongly alcoholized drinks, such as absinthé, brandy, rum; he may even acquire a disgust for them, and lose the habit of taking them. He preserves a taste for wine; he regains his appetite and his strength. The action of anti-ethylene appears to be confined to the latent period of chronic alcoholic intoxication, called by the authors

alcoholomania. Up to the present time, anti-ethylene has shown itself powerless to cause the retrocession of the organic alterations which are due to alcohol.

The views expressed by the authors as to the action of anti-ethylene seem almost too good to be true. It will be easily conceded, however, that if these experiments should be confirmed by other observers, and it is only by the experimental method that a decision can be arrived at in this matter, the prognosis of inebriety will be brightened and its treatment simplified. J. J. O.

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### THE RECENT PROSECUTIONS FOR INFRINGEMENT OF THE MEDICAL ACT.

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Our friends, the retail druggists, are raising a great howl on account of the fact that some of their number were subpoenaed recently to appear before Colonel Denison for infringement of the Medical Act by prescribing over the counter. We think that we are safe in saying that, in few large cities, does there exist a better feeling between physicians and druggists than is prevalent in Toronto. There is a certain amount of truth in what the average retail druggist in Toronto claims as to counter prescribing when he states that it is a very difficult matter, especially now when the drug trade is so cut up, to know how to act when a customer walks in, perhaps complains of a pain in the stomach or elsewhere, and asks that she be given something to relieve her suffering. The druggist does not want to deliberately turn a good purchaser away, in place of punching up fifty cents or a dollar on his cash register, when the opportunity offers; but he must remember that, just as he is protected by the Ontario College of Pharmacy, so are medical men by the Ontario College of Physicians and Surgeons. It is the patent medicine trade, we think, which originally led druggists so often into this sort of a dilemma. If his customer asks straight for a bottle of this, that or the other patent medicine, the druggist has a perfect right to sell it him. He has, however, no right to dilate extensively to his purchaser as to the use of any certain remedy for the treatment of any particular condition. As to the habit that some retail druggists in Toronto have, druggists who advertise that they make a specialty of dispensing physicians' prescriptions, of deliberately putting up bottles of medicine, which

they, in their wondrous wisdom, think should cure the complaint, in many cases telling their customer, as they rake in his good cash which should have gone to the doctor, that it will save them paying the doctor a fee, it is simply unpardonable. We have heard druggists say, in answer to this, that as far as prescriptions are concerned, they might go to the poor-house if they depended upon them for their livelihood. That in some instances may be true enough, but that is no excuse for their encroaching upon the domain of, and by that means antagonizing, the physician. Another will tell us that it is the habit that some medical men have of dispensing their own prescriptions that is forcing the druggist to resort to methods such as counter prescribing. We beg to remind him that a physician's license gives him the right to put up his own prescription if he so desires, whereas the druggist's license does not permit of his contravening the Medical Act.

We consider that medical men have a perfect right to raise serious objections to those, who have done nothing more than earn their license to dispense drugs, carrying on the business not only of a druggist, but that of medical practitioner also. How many hours would it take the Druggists' Association to raise a rumpus if one of the large stores down town, who carry on a drug department, employed one who was not a graduate of the O. C. P.? Not long. In the same manner, therefore, have the doctors every reason to object if the druggists contravene any regulation of their college.

We trust that our friends, the druggists, will look into this matter, and see that it will pay them better in the end to cater to, rather than fight, the profession who can put many a good dollar in their way.

W. A. Y.

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#### THE CANADIAN ASSOCIATION FOR THE PREVENTION OF TUBERCULOSIS.

THE Canadian Association for the Prevention of Tuberculosis, which is the outcome of the conference held at Ottawa, under the presidency of His Excellency the Governor-General, on February 14th, (*vide* page 291), should attract the attention of all who are interested in repressing tuberculosis in Canada. As the crusade against this widespread disease gains headway, the consensus of opinion is, that the public must be educated to provide for the disinfection of the sputa of tuberculous patients, thereby destroying the one great source of infection.

Public spitting should also be suppressed as much as possible. The establishment of open-air sanatoria, such as have already done good service in Europe, America and Canada, will also prove advantageous in many ways. They are training schools, where candidates for tuberculosis are taught how to live down their disease, and where patients, not yet affected with ineradicable lesions, may retrieve their losses. Instead of indulging injurious fancies, searching for amusement or mental distraction, tubercular patients can, in well-regulated sanatoria, apply themselves, while there is yet time, to the serious business of strengthening a weakened system, so as to fight energetically against the destroyer by rest or exercise, according to the indications, by proper diet, bathing and hygiene.

When they have acquired habits of self-discipline and a knowledge of hygiene applied to their disease, they become, when they return to their homes, centres of instruction to others. The results of treatment in European sanatoria are quite satisfactory, about a fourth of the patients being practically cured and the rest much relieved and improved.

The results obtained at the Gravenhurst Sanitarium, which have already been referred to in this journal, are also very encouraging.

The notification of cases of open tuberculosis should also be adopted and made obligatory. It is useless to contend that consumption is preventable, if advanced cases of this disease are not brought to the notice of the municipal health authorities, so that effective precautions to prevent the infection of others may be enforced. The question of tubercular infection through milk and meat must also be solved. Even if the tuberculin test is not applied to dairy cattle, a considerable source of peril to the public would be removed if all milk were sterilized before being used as food. In cities, at least, inspected abattoirs should supersede private slaughter-houses, and the sale of infected meat should be strictly forbidden.

There can be no doubt, that the breathing of rebreathed air in dwellings, shops, factories and public edifices is dangerous to health and weakens the lungs. The beneficial influence of pure air and sunlight in the cure of tuberculosis shows that if the patient had availed himself of these physical agencies prior to the attack, the bacilli tuberculosis would not have been able to make an impression on him. For the production of tuberculosis, two things are necessary: the seed of the disease, conveyed through infected sputa and a favorable soil, largely produced by insufficient respira-

ation and the regular use of rebreathed air, which is a poison to the lungs. If men wish to have strong lungs and enjoy the health and vigor of their ancestors, they must eschew too much comfort in their homes, and above all, learn to be as fastidious in the selection of the air they breathe as they are in the food they eat and the fluids they drink.

J. J. C.

### THE PROPOSED WOMAN'S HOSPITAL FOR TORONTO.

“Patience is a virtue,  
Catch it if you can,  
Seldom in a woman”—

THE aforementioned patience is exactly what the medical women of our city are most in need of at present. Surely there may be some good advice in the words, “Learn to labor and to wait.” Wait—what for? they may ask. For a standing—an equal footing perhaps would express it better—side by side with the physicians upon the staff of Toronto General Hospital. Wait until their services are accepted in the Woman’s ward, not exclusively, but on equal terms with the male physicians, a fair field and no favors. This is what they asked awhile ago, and if our worthy medical women would only possess their souls and their bowie-knives in patience, their request, we firmly believe, would be granted in this new century, dawning so full of appreciation by all mankind of the worth of woman’s work in the world. But because they have asked and not immediately received the coveted blessing, they have determined apparently not to wait, but to forever resign any claim to a future invitation “to play in our yard,” and are filled with a purpose, resolutions, and “manned” with collecting books, and intend to start another hospital, all by themselves (God help them), to be owned, captained, quarter-mastered, and sailed by women, a frail little craft to withstand the storms of adverse criticism, sailing in an unknown sea, without compass or chart. Let us pause here to repeat a question—to gain what? Experience, perhaps, but at what price? The loss of a position of equality, a right to stand side by side with the ancient mariner, the physician, man though he be, who can be so helpful and also courteous when he feels respect, and when interest in a common cause has created a feeling of comradeship. Is not this position a something worth waiting for? Then why place the fixed gulf of a

small hospital for women, run by medical women, in the way? Where a woman puts herself she must stay. Once she flaunts the small flag of independence, she must expect war to the knife or a smile of pity. Let the medical woman take her stand in line at the box office of the Toronto General Hospital, and ask again and again for a seat right in the bald-headed row; and see if she does not get it sooner or later, and, obtaining it, she will assume a position that will benefit her in the eyes of the profession, and give her a higher standing for all time to come.

Give up this idea, medical women, of starting another small hospital (there are already too many); it will only prove a white elephant on your hands—a sort of “a Saratoga trunk with a fence around it,” called a Woman’s Hospital; else the man without “bats in his belfry” might be tempted to call it The Medical Woman’s Isolation Hospital.

W. A. Y.

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#### EDITORIAL NOTES.

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**One of the Unanswered Riddles of Science.**—Among the unanswered riddles of science, M. Gabriel Prevost proposed the following in *La Science Francaise* (Paris, December 21st): “Why do the effects of theine and caffeine, which are composed of the same chemical elements, differ according to the temperament of individuals?” In his “Text-book of Materia Medica, Pharmacology, and Therapeutics,” Butler says: “Guaranine, theine, and theobromine, while chemically almost identical with caffeine, differ from it somewhat in their physiological action. Guaranine first depresses the sensory and afterwards the motor nerves, affecting them from the centre towards the periphery. Its primary effect, in toxic doses, is to produce general hyperesthesia, succeeded by convulsions of spinal origin. Theine, in its action, very closely resembles guaranine, save that when injected it causes local anesthesia. It lowers temperature, while caffeine tends to raise bodily heat. Theobromine differs in no essential from caffeine.” The question is thus put in two different ways. Prevost says that “the effects of theine and caffeine differ according to the temperament of individuals.” Butler teaches that theine and caffeine produce different physiological effects, but does not consider the temperament of the user of the one or the other drug. Curious to learn if race characteristics might influence individuals

in the beverage use of tea and coffee, which derive their activity from these proximate principles, we asked the question of Messrs. Schwartz & Fedy, who do a grocery business with a population in which Germans preponderate. Their reply is as follows:

J. J. CASSIDY, M.D.

DEAR SIR,—In reply to yours of the 28th inst., may say that our experience in twenty-seven years' business in a German, English and Irish community is, that Germans use about 50 per cent. each coffee and tea, whereas the English and Irish use 90 per cent. tea and 10 per cent. coffee. We find amongst the Germans that the older people use more coffee than tea, the younger almost more tea than coffee. The latter custom seems to be on the increase right along.

Yours, etc.,

SCHWARTZ & FEDY.

Formosa, Ont., Jan. 31st, 1901.

According to this information, the temperament of a people is evinced in their selection of a beverage. The excitable Irish prefer the cooling tea; the phlegmatic Germans drink stimulating coffee. Instead of saying that the effects of tea and coffee depend on the temperament of individuals, it would be correct to say that individuals select one or the other beverage according to the mental effect they wish to produce, or which they find more congenial to their temperament. The increased consumption of tea among German Canadians, in opposition to the custom of their ancestors, who drank coffee instead of tea, may be due to the influence of association with other races in Canada, or a change in their temperament brought about by the stimulating climate of Canada. Although coffee and tea contain identical proximate principles, each of them possesses marked peculiarities distinguishing one from the other, and not dependent on the temperament of individuals.

**An American Doctor's Opinion of King Edward VII.**—From *The Journalist* of the 2nd ult. we find that Dr. Clark Bell, editor of the *Medico-Legal Journal*, published in Gotham, and who as a medical jurist is known all over America, made some very kind remarks at one of the meetings of the Blue Pencil Club in New York City, given in honor of Mr. Allan Farman, editor of *The Journalist*, about our new Sovereign, King Edward VII. Mr. Bell said all Americans who have watched the career of the late Prince of Wales, and studied the relation he bore and his influence upon the Government of England, must rejoice that he had at last come to the English throne. Without speaking of the universal

feeling of affection that our people had entertained for the late Queen, who had ruled for so many years, and at an advanced age, he could not conceal the gratification that would be felt in this country, that the reins of government had fallen into hands so able to fill the King's place in the great mission that lay before England in the opening years of the new century. Those who have most carefully studied the character and career of King Edward VII., and who have known him best, have high hopes of his ability and disposition to rise to the occasion which is before him. In his opinion the present King will throw more of his personal influence and personality into the Government of England. He is a friend to the advancement of the arts, of the culture and advocate of science and the arts. He will be able to establish and maintain what England has lacked, a Court that will be commensurate with the greatness and dignity of the nation over which Providence has called upon him to rule, and Mr. Bell predicted that he will establish and advance the glory of England in his reign more than any Englishman now in England imagines.

**Current Medical Glossary Required.**—The rapid progress of medicine and surgery has caused the production of an extraordinary number of words and expressions, to which may be added a considerable number of designations bearing the names of the authors of discoveries, new operations, etc. The medical dictionaries in ordinary use being incomplete in these particulars, Drs. Landouzy and Jayle, through the intermediary of *La Presse Medicale*, Paris, have undertaken to instruct physicians in the novelties of medical terminology. Some of our readers, perhaps, might be puzzled to know the meaning of camptodactylitis. This word is derived from *χαμπτος*, curved; *δαχτυλος*, finger (Landouzy): Permanent flexion of one or several fingers. The flexion is produced either in an isolated manner, of a second phalanx on a first, or, in an associated manner, of a second on a first and a third on a second, the palmar aponeurosis remaining sound. It is a sign of arthritism. Illustrations of the more important conditions, operations, etc., accompany the text. Decidedly the French keep ahead in medical journalism.

**Congress of Tuberculosis.**—Among those who arranged to be present at the Congress of Tuberculosis at Ottawa were: Sir James



Grant, Prof. J. G. Adami, Montreal; Dr. Fred. Montizambert, Ottawa, Director of Public Health; Dr. P. H. Bryce, Secretary Provincial Board of Health; Dr. A. McPhedran, Toronto; Dr. J. J. Cassidy, Toronto; Dr. John Coventry, Windsor; Dr. James Fleck, Ottawa; Dr. A. Robillard, Ottawa; Dr. D. McEachran, Montreal; Dr. A. D. Blackader, Montreal; Dr. A. I. Richer, Montreal; Dr. J. Cousins, Ottawa; Dr. Colin Sewell, Quebec; Dr. R. W. Powell, Ottawa; Dr. T. G. Roddick, M.P., Montreal; Dr. Chas. Sheard, Toronto; Dr. A. P. Reid, Halifax; Dr. E. P. Lachapelle, Quebec; Dr. J. A. Grant, Ottawa; Dr. William Britton, Toronto; Sir Wm. Hingston, M.D., Montreal; Dr. E. J. Barrick, Toronto; Dr. Wm. Bayard, St. John, N.B.; Dr. H. H. Chown, Winnipeg; Dr. J. D. Lafferty, Calgary; Dr. J. C. Davis, Victoria; B.C.; Dr. James Thorburn, Toronto; Dr. James Stewart, Montreal; Dr. H. A. LaFleur, Montreal, and others. Drs. J. J. Cassidy, N. A. Powell, P. H. Bryce, E. H. Barrick, G. S. Ryerson, and others, were unfortunately prevented from reaching Ottawa at all owing to getting stuck in a C.P.R. snowbank near Peterboro'.

**"American Medicine."**—Dr. Geo. M. Gould, who, as explained in our February issue, was retired from *The Philadelphia Medical Journal* recently, will publish this month the first issue of a new American medical weekly, entitled *American Medicine*. Dr. Gould will be Editor and Dr. Martin B. Tinker Assistant Editor. The collaborators will consist of Drs. David Riesman, A. E. Wolpert, Helen Murphy, J. C. Bloodgood, A. B. Craig, Chas. A. Orr, Wilmer Krusen, Frank C. Hammond, J. W. Hirst, A. O. J. Kelly, C. S. Dolley, H. H. Cushing, A. A. Stevens, L. F. Appleman and J. W. Macintosh. The journal will cost \$4.00 per annum and, as announced on the advance proof, "will be founded, owned and controlled by the Medical Profession of America." We wish our esteemed friend, Dr. Gould, and his confreres every possible success in their new venture, and look to their new production as one of the greatest exponents of medicine in this country.

**An Urgent Appeal for a Physician.**—It is not often we hear of a town fairly crying out aloud for a doctor. Such, however, is the fate of the town of Strathcona, Alberta. Our correspondent says, "If you know of a medical man looking for a location, there is a very good opening here for the right kind of a man, middle-aged

preferred, one who is steady and reliable, and in vulgar parlance, "a good head," not necessarily "one of the boys," as the phrase is usually applied. The town of Strathcona has a population of 1,500, and is the terminus of the Edmonton Branch of the C.P.R. It has two drug stores, and in all fifty merchants. There is a telegraph and an express office. Any physician who thinks this would suit him should address at once Mr. Frank Cowles, Strathcona, Alberta.

**Unreliable Statistics.**—While ever ready to praise vital statistics for the lessons they teach, as well as for the labor entailed in their compilation, physicians know that in the making out of a death-certificate, veracity and medical science are occasionally sacrificed to family pride. Thus, in the Ontario vital statistics of 1898, fourteen deaths are credited to syphilis and seventeen deaths to alcoholism. While pathology teaches that a gumma of the brain is of syphilitic origin, physicians know of the far-reaching effects of that unwritten law, which says: "It would never do to write syphilis on the death certificate of a respectable citizen." Similarly if a gentleman dies of alcoholism, the actual cause of his taking off may be whispered among his acquaintances, but must not find its way into the Registrar-General's annual report.

**Bank Bills the Nidus of Every Disease.**—Has it ever occurred to our readers how dangerous a dirty bank bill can become? The public complain of how modern medicine has frightened those not cognizant with medical lore, regarding almost everything they touch as being pregnant with bacilli or germs of every conceivable form and shape. It is better to be forewarned rather than forearmed, and all that would have to be done to establish the truth of our statement would be to have one of our filthy bank-bills subjected to a bacteriological examination, when it would be found to contain disease germs sufficient to infect a whole town. Why do not our Government do as the Bank of England, and never issue one of their bills twice?

**Death of the Editor of the "Medical Press and Circular."**  
—On Saturday, January 9th, Archibald Hamilton Jacob, B.A., M.D., T.C.D., F.R.C.S.I., died at his residence in Dublin, Ireland. Dr. Jacob's fame as a physician, a writer, and an editor for thirty-

five years of the *Medical Press and Circular*, is well known. He was a man of many parts; he combined the arduous work of a large public and private practice with the never-ending duties of the editor of a well conducted and largely circulated medical journal. His place will be difficult to fill with even a measure of his ability.

**The New Sanitarium for Consumptives.**—A meeting of the Executive Committee of the National Sanitarium Association was held at the National Club, Saturday afternoon, February 9th. Various reports were presented. Plans for a free hospital for poor patients in the early stages of consumption were reported ready. Several sites for the erection of a hospital near Toronto for incurable cases were discussed. These will be submitted for the approval of Dr. Sheard, Toronto Board of Health, before final action is taken. Mr. Walter James Brown was appointed Secretary, and will enter upon his duties immediately.

**The Death Rate in Ontario for 1900.**—For the year 1900, the total deaths from all causes in Ontario, based on returns representing about 90 per cent. of the population, were 25,381, or 11.5 per thousand, which is an exceedingly low death-rate. The deaths from contagious disease were as follows: Scarlatina, 135; diphtheria, 486; measles, 93; whooping cough, 123; typhoid fever, 550; tuberculosis, 2,260.

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#### PERSONALS.

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DR. RENNIE has been appointed Health Officer of Hamilton, Ont.

DR. A. G. WOODWARD, of Sherbrooke, died a few weeks ago at his home.

DR. CHAS. TROW left for Bermuda last month, and will spend a few weeks there.

DR. J. M. MACCALLUM looks very much the better of his trip to Oregon a month ago.

DR. GEO. R. McDONAGH left on the 9th ultimo for a two-months' trip to Jamaica.

THORBURN.—At Toronto, on February 16th, the wife of Dr. J. D. Thorburn, of a daughter.

DR. J. A. CREASOR has moved from Brunswick Avenue back to Spadina Avenue; his number is 718.

DR. J. T. CLARKE has moved from College Street to 410 Bloor Street West, opposite Spadina Avenue.

DR. VAUX, of the Provincial Board of Health, has taken up his residence at the Arlington Hotel, Toronto.

DR. HAMILL, who conducts the Medical Exchange Office, wishes us to say that now is a most opportune time for physicians desiring to sell their practices to place them in his hands, as he has many more vendees than vendors.

DR. EAKINS, physician at the Institute for the Deaf and Dumb, Belleville, died after a very protracted illness on February 14th. The deceased had been physician to the institution for a great many years. Dr. P. D. Goldsmith has been appointed to succeed Dr. Eakins as physician.

ON the 18th February, Dr. James Third, of Kingston, was reported to be in a very low condition from an attack of paralysis, and little hope was held out for his recovery. He is a graduate of Trinity, a former house surgeon of Toronto General Hospital, and for the past four years has been Superintendent of Kingston General Hospital.

DR. EZRA HURLBURT STAFFORD left a day or two ago from New York, where he spent the past month, en route for "Greenland's icy mountains;" but will not travel as far as "India's coral strands." "Ezra" has secured the appointment of surgeon to the annual sealing fleet, and will remain in that spring-like (?) climate for about a month.

DR. J. J. MACKENZIE, Professor of Pathology of Toronto University Medical Faculty, leaves in April for the Continent. The Doctor will visit Berlin, Heidelberg, Vienna, Cologne, and other cities on the Continent, and will spend some weeks in England and Scotland, ere sailing for home in August. Dr. Mackenzie proposes making further study of his specialty, and getting hold of the most recent ideas on that subject, so that his course of lectures on pathology next session will be second to none in America.

DR. MICHAEL LAVELL, of Kingston, died on February 18th, aged seventy-six. He was a native of Quebec. In 1872 he was appointed surgeon of the Kingston penitentiary, and succeeded the late John Creighton to the wardenship in 1888, resigning in 1895. He was an ex-professor of Queen's Medical College, and is survived by a large family. One son is a Methodist minister at Ayr, another son is practising law at Smith's Falls and is M.P. for South Lanark. One daughter is the wife of G. Y. Chown, registrar of Queen's College.

## ITEMS OF INTEREST.

**The Prince a Physician.**—A humorous friend of the Prince of Wales (before he ascended the throne) recently gave him a silver stethoscope as a present, the point lying in the not generally known fact that His Royal Highness has been given diplomas as a Physician and Surgeon.

**Rats a Means of Spreading the Plague.**—Since the slight outbreak of bubonic plague at Cape Town last month, the authorities have placed a value of threepence upon the head of every rat, they having decided that the rodents might be the means of unduly spreading the disease.

**Garbage and Mendelssohn.**—"Garbage and Mendelssohn" was a woman's answer when someone asked what had been her share in the club programme for the day. "You see, I'm chairman both of the Municipal Housekeeping and the Music Committees, and first I had to read my report of our crusade against the present disposition of garbage, and then I had to go to the piano and play some songs without words. Oh, our women's clubs are nothing if not versatile."

**Thiocol in Pulmonary Tuberculosis.**—Professor De Renzi (*Supplemento al Policlinico*), President of the Tuberculosis Congress held at Naples in April, 1900, expressed his opinion as follows: "The observations made by my associate, Prof. Boeri, and myself, during the past year, have convinced me that Thiocol-Roche and its solution in orange syrup are well borne and exercise a beneficial influence on the course of pulmonary tuberculosis. On account of its mode of action, this new remedy seems to me preferable to all other preparations of creosote and guaiacol."

**Ontario Medical Association.**—The Committee of Arrangements of the Ontario Medical Association are already getting together with reference to the 1901 meeting, which takes place on the 19th and 20th of June next. Last year's meeting was a wonderful success, and even yet it is a common thing to hear nice remarks as to the recherche character and quality of the dinner given to the out-of-town members on the evening of the first day, under the guiding banner of Allen Baines, J. F. W. Ross, and Bruce Rior-

dan. This year's meeting will outstrip all. The Committee have something "up their sleeve," and are determined that 1901 will in every way beat the record.

**Highfields Consumption Sanatorium**, more especially for the scientific treatment of advanced cases of the disease, has vacancies for two or three more patients. This institution is very pleasantly situated on the high ground north of Toronto; is well lighted and ventilated, and provided with sunny balconies. An ozonizing apparatus has been imported from London for ozonizing air for inhalation, found so beneficial in the Manchester Hospital for Consumptives. Following are the names of the consulting medical staff, general and special: Drs. Arthur Jukes Johnson, F. Le M. Grasett, Irving H. Cameron, Adam H. Wright, Henry H. Moorhouse, Alexander McPhedran, J. J. Cassidy, James H. Cotton, Charles McKenna, Leslie M. Sweetnam, George A. Bingham, George A. Peters, Edmund E. King, Norman Allen, William H. Pepler, Walter McKeown, Charles A. Temple, Harry B. Anderson. Specialists—Drs. J. Price-Brown, J. Murray McFarlane, George H. Burnham, G. Sterling Ryerson, Harold C. Parsons, William Goldie. Resident Medical Superintendent, Dr. Edward Playter. Pamphlet and terms sent on application to the "Medical Superintendent, Highfields, Deer Park, Ont."

**Canadian Students in the University of Michigan.**—According to the records of the University of Michigan there have been students in the institution from one or more of the Provinces of the Dominion of Canada every year since 1871. By far the largest number have registered from Ontario. The other provinces that have been represented at different times are New Brunswick, Quebec, Nova Scotia, Manitoba, and British Columbia. The largest number of Canadian students enrolled at one time was 51, during the years 1888-90. The smallest number registered at one time was 17, in 1895-96. The largest number from Ontario in any one year was 45, in 1889-90. The number of Canadian students has not been so large for the last five years as during the preceding twenty-four years. Nearly one-half of the students who have entered the University from Canada have registered in the department of medicine. In 1875-76 there were 35 enrolled in that department. Second to the medical department in number of Canadian students has come the law department, and after the law the homoeopathic department.

## Correspondence.

*The Editor cannot hold himself responsible for any views expressed in this Department.*

### THE QUEEN'S FATAL ILLNESS.

*To the Editor of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY.*

DEAR SIR,—The following is clipped from the *Toronto World* of January 24th, 1901, and interested me very much, and I thought might interest your readers. It is a full and complete description of the Queen's fatal illness, as found in the press of to-day:

New York Herald: Queen Victoria appears to have succumbed to a second attack of apoplexy, while the pulmonary congestion which followed the first attack seemed to remain stationary and not pass to a state of broncho-pneumonia.

This attack of apoplexy, which was to all appearance accompanied by paralysis of half the face and body, was the consequence of thrombosis—that is to say, a small clot in one of the arteries that feed the brain.

The clot forms of itself because the inner wall of the arterioles of the brain hardens and becomes, so to speak, sclerous or atheromatous. The clot reduces the size of the artery, and prevents the blood from passing through, thus to some extent withdrawing life from the cerebral region, which it is the function of the artery to irrigate. The region, no longer nourished, softens and dies. All functions that are dependent are suppressed with it, and if it extends, death results more quickly in proportion as the cerebral region suppressed is greater.

In the treatment of thrombosis, stimulants of all kinds are prescribed, also everything that quickens circulation of the nervous centres and supplementary insufficiency of irrigation from the artery, but, if the blocking of the artery is considerable, therapeutics become powerless.

Toronto, Jan. 24th, 1901.

Sincerely,

J. W. S.

# The Physician's Library.

## BOOK REVIEWS.

*Orthopedic Surgery. A Handbook*, by CHARLES BELL KEETLEY, F.R.C.S., Surgeon to the West London Hospital; Member of the British Orthopedic Society; Corresponding Member of the American Orthopedic Association. London: Smith, Elder & Co., 15 Waterloo Place. 1900.

The amount of space ordinarily allowed is not sufficient for a satisfactory review of such a book as this. There are many chapters which the reviewer must stamp with the most hearty approval, but there are two or three chapters which do not truly reflect the present status of orthopedic surgery.

Whatever the author has to say is said with much directness, in strong, terse English; and when he has something to condemn there is no mistake about the attitude which he assumes. His refusal to limit the definition of orthopedic surgery to some one definite statement is commendable. In his own words "orthopedics as a department of surgery has developed in accordance with professional and individual convenience."

In the discussion of conditions such as genu valgum, genu varum and others demanding osteotomy, he speaks with the wisdom that comes from experience. In the discussion of symptoms, prognosis and treatment, his advice is not only safe, but fully up-to-date, and will be endorsed by those who have had much experience in dealing with these cases. The use of braces receives but scant attention and, by implication, his hearty condemnation in most cases. Correctly, "The treatment in confirmed and severe cases in adults and adolescents is summed up in two words, 'Macewen's Osteotomy.'"

With good judgment he gives but a short chapter to osteoclasia. It is strange that any surgeon at the present time should give much attention to osteoclasia, in view of the simplicity of osteotomy and of the exactness which may be attained in the use of the osteotome, and of the safety which attends its use where proper asepticism is observed.

When one recalls the fact that rickets is spoken of as the "English disease," one is scarcely surprised that the author has given us an excellent chapter on that subject, especially from the standpoint of the deformities which are dependent upon the disease.

The same warm commendation may be given to his chapter on infantile paralysis and to that on the cerebral paralysees of children. Surgeons have done but little until recently to relieve the unfortunates who suffer from deformities due to paralysees of congenital origin. There are few departments, however, of orthopedic surgery where more gratifying results can be secured, if we remember the hopeless state of many of these children without surgical aid and select proper cases for operation. Surgical intervention is not of much value in patients whose intellectual condition is much below par. Probably sixty per cent. of these children are found to have mental as well as locomotor disability. If operative intervention be prudently employed and confined to the children whose intellectual status is normal, results will well repay the efforts put forth.

The chapter on flat-foot can fairly receive general commendation, but greater emphasis should be laid upon the physiological development through training of the structures whose duty it is to hold the foot in a normal position.



and also upon the proper construction of boots adapted to supplement the weakness of the foot.

It is with some hesitation that we refuse to give a like commendation to the chapter dealing with congenital club-foot. We must take issue with the author in his advice that the treatment should begin as soon as the child is born, if by that he means that any form of brace or bandage should be employed from that date. These feet and legs are imperfectly developed and under the most favorable circumstances are likely to be smaller than normal. If they are to be subjected to the restrictions implied by mechanical treatment during the months when normal development is so important, irreparable injury is done thereby. As there is no natural means by which the foot can be held in a corrected position, until the child is able to walk, the surgeon need not actively intervene until very near that time in the child's development. From birth, the child's foot should receive treatment, however, by the nurse or mother. Manipulation by which the foot is daily or several times a day brought into an improved position, and by which circulation and nutrition are improved, should be employed. If it be assumed that the child will be able to walk at fifteen months, then there is ample time for the surgeon to have fully completed his task, if he apply his mechanical means of treatment for the first time when the child is about a year old.

In dealing with cases in older children and in the adult, we must also take decided exception to the author's teaching. He is a strong advocate of radical measures by which whole bones or portions of bone are removed from the outer convex aspect of the deformed foot. The reviewer wishes to say, after a very considerable experience, that such radical operations are very seldom required, that in ninety per cent. of cases under forty years of age the deformity can be corrected in the most satisfactory manner as to both form and function without the removal of bone and without Phelps' open incision. While with aseptic precautions there need be no fear of this operation, yet without risk of successful amputation it may be asserted that where simpler means can successfully replace the foot, such radical measures as removal of the astragalus and cuboid, or the removal of a cuneiform section from the foot, or the free open incision by which structures are cut at the inner border of the foot, should not be employed. The after treatment of these patients is most important, and the omission of any reference to the means to be employed to prevent relapse is inexcusable.

A short but good chapter has been contributed upon the subject of hysteria in relation to orthopedics. The author, however, falls into error in belittling the influence of training, as it is capable of being employed in an orthopedic gymnasium under competent supervision.

The subjects which have occupied the attention of orthopedic surgeons in a large degree in late years, such as congenital dislocation of the hip and coxa vara, have received excellent discussion and these chapters are brought fully up-to-date.

His presentation of the subject of spinal deformity falls below the average level of the book, especially in that part of it referring to scoliosis. The author pins his faith very largely to the use of mechanical appliances, especially the plaster-of-Paris and felt jackets. Old prejudices die hard, and while it is true that numerous surgeons still are found who believe that with the pelvis as a base, props can be carried upward twelve, fourteen, or sixteen inches, and can at that distance from the fulcrum exercise a lever power to hold the thorax in a corrected position, yet it must, for the credit of the mechanical perception of the profession, be said that they are rapidly giving up a position so untenable. His discussion of the work done in the gymnasium for the treatment of lateral curvature would imply that the efforts put forth are limited to the use of free gymnastics or nearly so. Such, however, should not be the case. Most powerful means may be employed to extend and straighten the spine in the use of suspension by the neck, while at the same time a lateral force varying from fifty to one hundred pounds is employed so as to correct both the rotation and lateral deviation. The author very properly speaks of these cases as being of

two varieties, those in which there is a fixed deformity and those in whom the deformity is one of posture. All will admit the efficacy of training by the aid of gymnasium work in the latter class. It is possible in the former class, by the forcible means above named, to increase greatly the suppleness of the spine and to lessen in some cases the amount of rotation. As supplementing this employment of force, free gymnastics now have an important place.

It is very gratifying to find a book written with such candor, force and evidence of knowledge through actual experience with the subject in hand. The general practitioner will find it a thoroughly safe guide, and the specialist will find in most of its chapters that it faithfully mirrors the best orthopedic practice.

B. F. M.

*Introduction to the Study of Medicine.* By G. H. ROGER, Professor Extraordinary in the Faculty of Medicine of Paris; Member of the Biological Society; Physician to the Hospital of Porte-D'Aubervilliers. Authorized translation by M. S. GABRIEL, M.D. With additions by the author. New York: D. Appleton & Co. 1901. Canadian Agents, George N. Morang & Co., Limited, Toronto.

Dr. Roger's book is composed of a series of lectures delivered by him before the University of Paris two or three years ago. The work is certainly one which will enable those entering upon the study of medicine to choose wisely the path they had best pursue, the books they shall buy, the methods they shall adopt, so that they will avoid covering the large amount of ground twice or unnecessarily. Ask any doctor whether during his primary year at college he followed the course he would pursue to-day, were he starting in again on the study of medicine, and ninety-five out of a hundred will say "No," and add that they would have been delighted had they at that time had some person to advise them and show them how to study systematically, with the least effort and the best result.

The author devotes quite a large amount of space to the "Examination of the Sick," including examination of the integuments, general rules for the examination of the circulatory and respiratory organs, the digestive canal, liver, spleen, pancreas, peritoneum, urinary and genital organs, and the nervous system. Dr. Roger shows very conclusively that it occurs too frequently that the physician is misled by attributing the pain complained of by his patient to the organ in the immediate vicinity of the pain, in place of being only the manifestation at that point of a disease situated at some more distant spot. An individual complains of pain in the stomach and frequent vomiting. Gastralgia is at once thought of, and the stomach is treated with negative result. In this case, failure to relieve the patient is due to the fact that the gastric symptoms were those of ataxia. At some other time a patient with some spinal disease complains of pains irradiating in the limbs or located in one or several of the joints; these pains are too hastily referred to rheumatism and sodium salicylate or antipyrine are prescribed without effect. The author cites those cases in order to show the student the absolute necessity of examining all the organs in a systematic manner, and that to do so is the only means of avoiding such gross errors. We enjoyed perusing "Introduction to the Study of Medicine." It is full of good common sense, and the best advice we can give to those embarking upon a course of medical study is, "Buy Dr. Roger's book, mark, learn, and inwardly digest it."

W. A. Y.

*Patron Von Volkenberg: A Tale of Old Manhattan in the Year 1699.* By HENRY THEW STEPHENSON, illustrated by C. M. RELYEA. Second edition. Toronto: The Copp, Clark Company, Limited, Publishers.

An interesting tale of love and adventure in the New World, during the romantic period of the early English occupation of New York, when the Governments of Europe and especially of England were using their utmost endeavors to quell the lawless buccaneering, which at that time seemed almost the only code of morals on the high seas.

The introduction of the story finds us in Paris, rapidly shifting to Bristol, then only second in importance as a seaport town to London, thence to Yorke (New York City), the scene of the story, always an interesting background for fiction in those stirring times. We are introduced to the two factions of political thought in the town, as well as to the two races at that time so closely associated, viz., the English and Dutch.

The Patroon is identified with the Merchants' Party, which really represents the interests of the smugglers. Von Volkenberg's character is drawn with a strong hand as captain of the "Red Band," who were hand in glove with the adventurous pirates, who then frequented what is now known as the great seaport of New York. His career as portrayed in the story carries us along with him in all his escapades against law and order, and holds our unflinching interest to the end.

As an offset to the villainous father, we have the character of his daughter Miriam delightfully portrayed in its tenderness and devotion to her father, who seems to little deserve it, but divided in her allegiance to him and to his sworn enemy who is hounding him to his well-deserved end, this same enemy having fallen violently in love with the sweet Miriam, his enemy's daughter.

The interest of the story is intensified by several most artistic, colored plates, and we can promise to all who read this delightful tale some pleasant hours, as well as a most instructive acquaintance with the people and interests of those early days in the English Colony of the New World.

W. J. W.

*A Text-book on Practical Obstetrics.* By EGBERT H. GRANDIN, M.D., Gynecologist to the Columbus Hospital; Consulting Gynecologist to the French Hospital; Fellow of the American Gynecological Society of the New York Academy of Medicine; of the New York Obstetrical Society, etc., etc.; with the collaboration of GEORGE W. JARMAN, M.D., Gynecologist to the Cancer Hospital; Instructor in Gynecology in the Medical Department of Columbia University; Fellow of the New York Obstetrical Society. Third edition, revised and enlarged. Pages 511; octavo. Philadelphia: F. A. Davis Co., Publishers.

A third edition of this practical and useful work strongly attests to its continued favor and popularity. This edition has been carefully revised, in part rewritten and enlarged by the addition of a chapter dealing with Embryology and the Anatomy of the Female Organs of Generation. In this chapter the authors, however, have wisely adhered to the plan set forth in the preface of their first edition, of leaving to special text-books of anatomy, physiology, embryology and pathology, the abstract knowledge of these specific subjects, and giving only such data of an anatomical and embryological nature as are essential to the amplification of obstetric teaching. The work is, therefore, quite modern, as it is essentially a clinical and practical treatise, and will enable not only the student but also many practitioners to become thoroughly familiar with the complex phenomena of pregnancy, labor and the puerperal state. One of the most admirable features of the book are its numerous illustrations, fifty-two full-page photographic plates and one hundred and five illustrations on the text having been prepared and selected with the special end in view of teaching graphically. The photographic illustrations are beautiful, clear and intelligent, and will prove wonderfully helpful and valuable to the student in forming a comprehensive understanding of his subject.

The chapters on the Mechanism of Labor, The Clinical Cause of Labor, The Management of Normal and Abnormal Labor, and The Care of the New-born Infant, are most practical and are of especial value and interest. The chapters also on The Normal Puerperium and The Pathological Puerperium are deserving of great praise. As regards the obstetric surgery taught, it is thoroughly modern, up-to-date, and the great value of election in obstetric surgery fully exemplified. It is a perfectly safe and satisfactory text-book; no student can make a mistake in making the work his guide and teacher, and no practitioner will regret placing it upon his book shelves and frequently referring to its interesting and practical pages.

G. T. M'K.

*On the Use of Massage and Early Passive Movements in Recent Fractures and other Common Surgical Injuries, and the Treatment of Internal Derangements of the Knee Joint.* By WILLIAM H. BENNETT, F.R.C.S., Senior Surgeon to St. George's Hospital; Member of the Court of Examiners, Royal College of Surgeons of England, etc. Reprinted, after revision, from *The Lancet*. With 12 illustrations. Pp. 97. \$1.25. London, New York and Bombay: Longmans, Green & Co. 1900. Canadian Agents, J. A. Carveth & Co., Toronto.

This book consists of a series of lectures and a reprint of a paper from *The Lancet*. The subject dealt with is a most practical one, and which is demanding a great deal of attention among surgeons at the present time. The French surgeon, Lucas-Championnière, published his work entitled "Traitement des Fractures par le Massage et la Mobilisation," in 1895, and he, more than any other living surgeon, demonstrated the fact that massage and passive movement were scientific methods of utility in the treatment of recent fractures. Mr. Bennett has advocated these methods in fractures and injuries to the joints, and in the little volume now under review, he has indicated the principles of such treatment in a concise and lucid manner. He claims for the method the following advantages: (1) The ease with which the patient is made comfortable by arresting the muscular spasm, and so relieving the pain. (2) The effecting of the rapid absorption of effused blood, etc. (3) The prevention of stiffness, by obviating the formation of adhesions. (4) The prevention of muscle wasting with preservation throughout the case of the normal nutrition of the limb. (5) The shortening of the time by about half, during which the patient is prevented from resuming the ordinary use of the limb. These are advantages which are undoubtedly of great moment, and one is safe in saying that the great majority of surgeons have been convinced in recent years, either by personal experience or by the literature of the results reported by other surgeons, that the methods here advocated are of great value in the treatment of this class of injuries. We recommend Mr. Bennett's book to those who wish to acquire a knowledge of the principles of the method of treatment. The book also contains a suggestive and instructive paper on "Dislocation of the Semilunar Cartilage of the Knee Joint and Allied Conditions."

A. P.

*Studies in Human and Comparative Pathology.* By WOODS HUTCHINSON, A.M., M.D. Edited by D. EDWARD BLAKE. London: Henry J. Glaiser, 57 Wigmore Street, Cavendish Square. 12s. 6d. net.

Dr. Hutchinson, the author of this work, is Professor of Comparative Pathology in the University of Buffalo, and the book itself is dedicated to Roswell Park; but although an American, a great deal of his material has been gathered in London, notably from the Zoological Society's Gardens, a place which has proved a mine of interest to many other comparative anatomists and pathologists.

The author in his preface states that the book is an outline substitute for what he had intended would be a complete memoir on the subject, and the reader must regret that the intention was not realized. One feels that the treatment has been somewhat sketchy and although every page is full of suggestive one would like to have had a fuller discussion of many of the points.

The author is a biologist and is thoroughly catholic in his treatment of pathological phenomena from the broadest biological standpoint, but it is just this breadth of view which will render it difficult for the old-time physician to follow his arguments.

As we have said, every page is suggestive and interesting, but perhaps two of the most interesting chapters and certainly two of the most original are those upon the Developmental Diseases of the Thorax and upon the Skin, Heart and the Blood. In the former the author shows very conclusively that the so-called flat chest is really a relatively deep chest and approaches more nearly the quadrupedal type, and in the latter he makes some very original suggestions as to the functions of the arterial muscle fibre and the capillary

endothelium, especially as throwing light upon the action of the cold bath in typhoid and the bath in the Nauheim treatment.

One fault we have to find with the author, and that is in his somewhat metaphorical style, which is, in places, almost flippant.

We shall look with interest for other contributions from Dr. Hutchinson, for although we are not convinced that he has always established his thesis, we are fully convinced that his method is the correct one. J. J. M'K.

*Rudiments of Modern Medical Electricity, arranged in the form of Questions and Answers, prepared especially for Students of Medicine.* By S. H. MONELL, M.D. (New York), Professor of Static Electricity in the International Correspondence Schools; Founder and Chief Instructor of the New York School of Special Electro-Therapeutics; Member of the New York County Medical Society; Member of the Kings County Medical Society; Charter Member of the Roentgen Society of the United States; formerly Editor of the Electro-Therapeutic Department of the *Medical Times and Register*, 1894-98; Author of "The Treatment of Disease by Electric Currents," "Manual of Static Electricity in X-ray and Therapeutic Uses," "Elements of Correct Technique," "The Cure of Writers' Cramp and the Arm Troubles of Telegraphers and Ballplayers," etc., etc. New York: Edward Pelton, Publisher, No. 19 East 16th Street. 1900.

This work of one hundred and sixty-five pages is arranged in the form of questions and answers, and covers the rudiments of medical electricity very fully. It is a very useful work for students or others who wish in a short and convenient form to learn something of electricity before purchasing batteries or reading larger and more complete works on the subject.

There are a number of illustrations of batteries and appliances distributed through the work. The author is evidently an enthusiast in electro-therapeutics, and very properly insists on a thorough knowledge of each current and its mode of application, comparing the knowledge in this line to the intimate knowledge of individual drugs required for their rational administration in therapeutics. We think, for those who have no knowledge of electricity, there is more to be learned from this little work in a few hours than by days of patient work on any of the ordinary text-books on the subject. W. J. W.

*An American Text-book of Physiology.* By Henry P. Bowditch, M.D., John G. Curtis, M.D., Henry H. Donaldson, Ph.D., W. H. Howell, Ph.D., M.D., Frederick S. Lee, Ph.D., Warren P. Lombard, M.D., Graham Lusk, Ph.D., F.R.S. (Edin.), W. T. Porter, M.D., Edward T. Reichert, M.D., Henry Sewall, Ph.D., M.D. Edited by Wm. H. HOWELL, Ph.D., M.D., Professor of Physiology in the Johns Hopkins University, Baltimore, Md. Second edition, revised. Philadelphia: W. B. Saunders & Co. 1900. \$3. Canadian Agency: J. A. Carveth & Co., Toronto.

The second edition of "An American Text-book of Physiology" is issued in two volumes. The first volume was published in the latter part of last year, and the second volume is now at hand.

The second volume is quite equal to the standard of the first, and the publishers have added to its value by issuing it with such commendable promptness. It contains chapters on Muscle and Nerve, The Central Nervous System, The Special Senses, Special Muscular Mechanisms such as Walking and Voice Production, and a final chapter on Reproduction.

"The section dealing with the Central Nervous System has been recast in large part, with the intention of making it more suitable to the actual needs of medical students." It is divided into three parts and forms a very interesting and readable chapter. Part I. deals with the Physiology of the Nerve Cell; Part II. with the Physiology of Groups of Nerve Cells, and Part III. with the Physiology of the Nervous System taken as a whole.

In the last chapter the subject of Reproduction is treated in a general way. The writer does not attempt to give a detailed account of the various stages of

development in the individual embryo, but deals with the main facts in the whole process of reproduction. A few of the leading subjects discussed in this section are: The Origin of Sex and Theory of Reproduction, Menstruation, Theory of Menstruation, Physiological Effects of Pregnancy upon the Mother, Parturition in General, Growth of the Body after Birth and Heredity. The whole chapter is stored with facts that are of great interest to every student of medicine.

A. E.

*Students' Edition: A Practical Treatise of Materia Medica and Therapeutics, with special reference to the Clinical Application of Drugs.* By JOSEPH V. SHOEMAKER, M.D., LL.D., Professor of Materia Medica, Pharmacology, Therapeutics and Clinical Medicine, and Clinical Professor of Diseases of the Skin in the Medico-Chirurgical College of Philadelphia; Physician to the Medico-Chirurgical Hospital; Member of the American Medical Association, of the Pennsylvania and Minnesota State Medical Societies, the American Academy of Medicine, the British Medical Association; Fellow of the Medical Society of London, etc., etc. Fifth edition. Thoroughly revised. 6½ x 9½ inches. Pages vii-770. Extra cloth, \$4.00, net; sheep, \$4.75, net. Philadelphia: F. A. Davis Company, 1914-16 Cherry Street.

In his Students' edition, Dr. Shoemaker has acted wisely, and decided, on account of the recent multiplication of remedies from both the chemical laboratory and from the animal kingdom, that he shall in future issue his well-known work on "Materia Medica and Therapeutics" in two distinct parts. The one which he shall style the Students' edition, shall not be burdened with facts regarding remedies which have come to light of more recent years and months, and which are not essential to the study of the subject as demanded by university or college examiner; though at the same time it shall contain all the preparations official in the pharmacopeias of the United States and Great Britain. We consider the division of a book on such a subject a very good one, as not only is it unnecessary to load the student's brain with matter which does not concern him as a student, but, on the other hand, the physician must have a book on therapeutics, which is in every point up-to-date, and contains the very latest and most recent remedy or method of treatment. We look forward to Dr. Shoemaker's Physicians' edition with a good deal of pleasure, as, judging from the fourth edition of his work, it will be in every respect complete and exceedingly acceptable.

*Physical Diagnosis in Obstetrics.* A Guide in Antepartum, Partum and Postpartum Examinations for the Use of Physicians and Undergraduates. By EDWARD A. AYERS, M.D., Professor of Obstetrics in the New York Polyclinic; Attending Physician to the Mothers' and Babies' Hospital. With illustrations. New York: E. B. Treat & Co., 241 W. 23rd Street. 1901. Price, \$2.00.

We had not read many chapters of this book before it occurred to us that now we had in book form something which had for years been an actual necessity. For years past in all the medical schools and universities, more and more attention is being given to clinical teaching, so that when a student walks out a graduate in medicine he is able at once to intelligently treat those who are fortunately, or perhaps unfortunately, placed in his hands as patients. A great deal of attention has been given to bedside teaching in medicine, and also in surgery; but we fear that, if there is any branch to which too little time is given at the bedside, it is unquestionably that of obstetrics. Time and again we have heard graduates of several years' standing state that, when they entered upon practice, all they knew about midwifery was what they had read in "Play-fair," and what knowledge they had absorbed as they stood around the room and saw a head or breech presentation in twelve confinement cases. Is such an amount of practical experience anything like sufficient to enable any graduate to leave his *Alma Mater* and go into the country, perhaps fifty miles from a consultant, and manage alone a transverse presentation? It is certainly not; but, with a work such as that of Dr. Ayers' at hand, a complicated case will be

rendered much more easy, and the mind of the practitioner who finds himself frequently "in a corner" and puzzled, set at ease. We congratulate the author and the publishers upon the result of their labors.

W. A. Y.

*A Text-book of Pharmacology and Therapeutics on the Action of Drugs in Health and Disease.* By ARTHUR R. CUSHING, M.A., M.D. (Aberd.), Professor of Materia Medica and Therapeutics in the University of Michigan, formerly Thompson Fellow in the University of Aberdeen, and Assistant in the Pharmacological Institute of the University of Strassburg. Second edition, revised and enlarged. Illustrated with forty-seven engravings. Philadelphia and New York: Lea Brothers & Co. 1901.

It speaks well for the popularity that this book has met with, when it is only a little over a year ago that the first edition appeared. The author has brought this edition up-to-date, and has made many useful additions. Prof. Cushing has been very frank in culling the bad from the good, and endeavors to give us as exactly as possible the advantages various drugs have. Too many physicians rely on the accuracy of patent nostrums, or, as they are usually called, proprietary medicines, and do not give the drugs mentioned in the Pharmacopœia even a chance, and in this way accurate information of the therapeutic action of a drug is lost. The book is well arranged, and the illustrations simple and easily understood. It will take a prominent place with the student and active practitioner.

Part I.—Organic Substances which are Characterized Chiefly by Their Local Action, such as emollients, simple bitters, genito-urinary disinfectants, skin irritants.

Part II.—Organic Substances, Characterized Chiefly by Their Action After Absorption, such as narcotics in general, strychnia, prussic acid, formaldehyde, ergot, etc.

Part III.—Combinations of the Alkalies, Alkaline Earths, Acids and Allied Bodies. This grouping describes the action of salts, acids, arsenic, phosphorus, etc.

Part IV.—Is devoted to the Heavy Metals.

Part V.—Describes Ferments, Secretions and Toxalbumins.

Part VI.—Is devoted to Menstrua and Mechanical Remedies.

Prof. Cushing is to be congratulated on the able manner in which he has compiled his treatise on Pharmacology.

A. J. H.

*Hygiene and Public Health.* By LOUIS PARKES, M.D., D.P.H. (London Univ.); Lecturer on Public Health at St. George's Hospital Medical School; and HENRY KENWOOD, M.B., D.P.H., F.C.S.; Assistant Professor of Public Health, Univ. Coll., etc. 12s. London: H. K. Lewis, 136 Gower Street, W.C. 1901.

Under the same title, and with Louis Parkes as author, the above work of which this is a recast has become very familiar to the medical fraternity, there having been five editions of the original work in the past ten years. The authors in the present work have brought the subject of Public Health up-to-date in a condensed and readable form, and the book, while of special use to those connected with Public Health administration, is yet a handy guide to the medical profession generally, and yet sufficiently free from unnecessary technical phraseology to be of use to those of the laity interested in public health.

The collection, removal and disposal of excretal and other refuse receives considerable space, and methods for the purification and utilization of sewage; the biological purification of sewage; intermittent downward filtration; irrigation; and subsidence, straining and filtration are outlined.

Details for chemical or bacteriological work in the laboratory are not included in the present work.

Soils and building sites, warming and lighting, air and ventilation, exercise and clothing, food beverages and condiments, disinfection and contagion, climate and meteorology are all treated in a scientific and yet popular manner.

Some seventy-seven pages are devoted to water supply and as many more to sanitary statistics.

E. H. A.

*A Guide to Instruments and Appliances Required in Various Operations.* By ART. MAYO ROBSON, F.R.C.S., Senior Surgeon to the Leeds General Infirmary; Honorary Consulting Surgeon to the Keighley and Battley Hospitals; Emeritus Professor of Surgery in the Yorkshire College of Victoria University; Member in Council and Hunterian Professor, R.C.S. of Eng. Second edition. Two shillings and sixpence. Cassell & Company, Limited, London, Paris, New York and Melbourne. 1900.

On the first page is found the general requirements for an antiseptic operation, and following this the various operations, including those on the eye, are mentioned in alphabetical order and the necessary instruments and appliances mentioned under each.

The requirements of an operating room are given, and a "reliable method of preparing catgut." This is a little book of fifty-five pages, exclusive of a good index. We think this would be a most convenient book for dressers, home surgeons, or nurses, and for the doctor who operates at the patient's home. By a quick reference one would be saved the mortification of finding he had left some essential instrument or appliance at home.

W. J. W.

*A Manual of Medicine.* Edited by W. A. ALLCHIN, M.D. (Lond.), F.R.C.P., F.R.S. (Edin.); Senior Physician and Lecturer on Clinical Medicine, Westminster Hospital; Examiner in Medicine in University of London, etc. Vol. II.: General Diseases—Continued. New York: The Macmillan Company. London: Macmillan & Co., Limited. 1901.

This volume deals more particularly with diseases caused by parasites, diseases determined by poisons introduced into the body, primary perversions of general nutrition and diseases of the blood. There are contributions from a dozen well-known medical writers and specialists, and not a little new material which cannot usually be found in medical works of this size is introduced. The chapters on Diseases Caused by Parasites, and Diseases Determined by Poisons Introduced into the Body, as such are particularly interesting, as are also those on Uremia, Cholemia, Acetonemia and the Typhoid state.

This is the age of specialism, and the advantage of having the latest scientific knowledge in its various branches portrayed by those best capable of doing so is well shown in this little volume, while the editor, who has himself contributed very largely to special articles, deserves great credit for the excellent arrangement and selection of the subjects discussed.

E. H. A.

*L'Alcool et L'Alcoolisme.* Notions générales—Toxicologie et Physiologie, Pathologie, Thérapeutique, Prophylaxie. By TRIBOULET ET MATHIEU. Vol. I., 8vo carré de 254 pages. Cartonné à l'Anglaise, 5 frs. Paris: G. Carré & C. Naud, éditeurs, 3 Rue Racine. 1900.

Physicians who read French will be pleased with this work, which has been just issued by Messrs. Carré & Naud, of Paris. The authors have written for the profession and not for the general public, and consequently have confined themselves to facts which have been positively and scientifically established. The part of the work devoted to therapeutics is extremely interesting. We have abstracted the last-named portion of the therapeutics of alcohol, as given by the authors, and present it to our readers on the editorial page.

*Richard Yea and Nay.* By MAURICE HEWLETT, author of "The Forest Lovers," "Little Novels of Italy," etc. Toronto: The Copp, Clark Company, Limited. 1900.

Something of fact, something of fiction, and much of imagination fill the pages of this interesting story of the olden time "when Knights were bold and Barons held their sway." The tale that is told is entirely based upon the strangely contrary characteristics of the hero—Richard Yea and Nay—a man, whose component parts were half lion, half leopard. Thus the author introduces his subject: "Of him, therefore, torn by two natures, cast in two



moulds, sport of two fates; the hymned and reviled, the loved and loathed, spendthrift and a miser, king and a beggar, the bond and the free, god and man; of King Richard Yea and Nay, so made, so called, and by that unmade, I thus prepare my account." The life, the love story of Richard and beautiful Jehane, and the conclusion of it all, form by no means dreary reading. Perhaps, though, even better work remains to be done by Maurice Hewlett, of which he has given abundant proof in his "Little Novels of Italy."

*Diseases of the Heart; Their Diagnosis and Treatment.* By ALBERT ABRAMS, A. M., M. D., San Francisco, Consulting Physician for Diseases of the Chest, Mt. Zion Hospital and the French Hospital. Illustrated. Pages 172. Price \$1.00 net.

In this book the author discusses the subject of diseases of the heart from a practical aspect. His most noteworthy researches in methods of diagnosis are here recorded for the first time in collected form, and the latest and most practical methods of treatment given in detail. J. J. C.

*Anomalies of Refraction and of the Muscles of the Eye.* By FLAVEL B. TIFFANY, A. M., M. D., Professor of Ophthalmology and Otology of the University Medical College of Kansas City, Mo. 4th edition. Kansas City: Hudson, Kimberly Company. 1900.

Among the many volumes which have in recent years appeared on this subject, Dr. Tiffany's work will hold its own. It is elementary in character, clearly written, and profusely illustrated. J. M. M.

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### MAGAZINES RECEIVED.

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A copy of the first issue of *The New York State Journal of Medicine*, published monthly by the New York State Medical Association, has been received. It supersedes the annual volume of the *Transactions*, formerly issued by the association. The Committee on Publication (Dr. James Hawley Burtenshaw, Chairman), deserve to be complimented on the attractive appearance of the *Journal*, and we wish them every success in their enterprise.

*The International Monthly* for February contains a carefully prepared and interesting account of "American Interests in the Orient," by Charles S. Conant. The opportunities for American commerce in the Far East are worthy of careful study.

The account of "Mountain Structure and Its Origin," by the eminent Scottish geologist, James Geikie, is concluded in this number. The essay gives the reader a vivid insight into the wonderful transformations this earth of ours has undergone. Most interesting essays are by Camille Mauclair, the French critic, on "Auguste Rodin and his Decorative Sculpture," and by William Archer, the great English literary and dramatic critic, on "The Real Ibsen." Mr. Archer is undoubtedly the greatest authority on Ibsen. Alfred Fouillée, the eminent French thinker and scholar, writes on "Nietzsche and Darwinism." Altogether this number is most attractive. Certainly for exhaustive, scholarly discussions of subjects of international importance, no magazine, English or American, surpasses *The International Monthly*. The publishers offer a sample copy free. Published at Burlington, Vt., at \$4.00 a year. Single numbers, 35 cents.

*Scribner's Magazine* for February begins a new series of reminiscences of theatrical life—a form of article in which it has been peculiarly fortunate in the past, having published the recollections of Lester Wallack and Mrs. John Drew. The Stage Reminiscences of Mrs. Gilbert, which are here begun, are full of vivacity, incident, and entertaining recollections of great actors of the past half

century. Mrs. Gilbert is eighty years of age, and has been on the stage for more than seventy years of that time, beginning as a dancer when a mere child at Drury Lane. This instalment first gives some recollections of her childhood and then the narrative moves to America where Mrs. Gilbert and her husband emigrated in 1849. Her recollections of her experiences in Chicago, Milwaukee, St. Louis, and other western cities are very amusing, and give a vivid idea of the old stock companies of half a century ago. It is remarkable that when Mrs. Gilbert first appeared in New York she came as a "western" actress from Cincinnati. These reminiscences, which will run through three numbers of the *Magazine*, are exact transcripts of the conversations with her friend, Mrs. Charlotte M. Martin, who has been a most sympathetic editor. The abundant illustrations have been selected from the wonderful collection of Evert Jansen Wendell, and also from Mrs. Gilbert's own souvenirs.

Thomas F. Millard, the war correspondent, sends from China a remarkable summary of the international conditions prevailing there at present, and a very shrewd analysis of the part played by the various armies and the representatives of their governments. Mr. Millard is the first man to make a proper allowance in his writing for the very biased statements of the "foreign resident" in China. He also fully reveals the campaign of revenge and plunder which has been promoted by the Germans, and shows how they have been making cruel expeditions against a people who have shown no resistance whatever. Mr. Millard also shows how fortunate are the United States in escaping from the whole difficulty, and how honorable their attitude has been.

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#### PAMPHLETS, REPRINTS, ETC., RECEIVED.

La Cure Pratique de la Tuberculose: par le Dr. P. Piyade (d'Amelie-les Bains), Précédée D'une Lettre-Préface, par E. Boirac, Docteur ès lettres; Recteur de l'Académie de Grenoble. Paris: Georges Carré & C. Naud, éditeurs, 3 Rue Racine. 1900.

We have just received the annual announcement of the New York School of Clinical Medicine for 1901. The schedule of clinics suggests an abundance of material, and the facilities for teaching operative surgery on the cadaver in in general or special departments appear to be exceptionally good. The system of post-graduate teaching pursued by this school—personal instruction and limited classes—has advantages that are appreciated by those who desire to participate in practical work. The specialties are all represented.

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#### LITERARY NOTE.

DR. SAMUEL FLOERSHEIM, of 218 East 46th Street, New York, writes us to say that he intends to publish a second paper on "The Use of the Suprarenal Capsule on Organic Heart Disease," and asks the readers of this journal to send him the reports of their cases as follows: 1. The condition of the heart pulse and pulse rate. 2. The effect on the heart, pulse and pulse rate, within ten minutes after the suprarenal powder, three grains, is chewed and swallowed, without water, by the patient.

It is announced that *The Stylus*, the well-known monthly medical journal edited by Dr. William Porter, of St. Louis, has been consolidated with the *Interstate Medical Journal*, of St. Louis, Mo. *The Stylus* will be consolidated with the *Interstate Medical Journal*, and the two publications continued under the latter name. Dr. William Porter, editor of *The Stylus*, will be associated with Drs. W. B. Outten, R. B. H. Gradwohl and O. F. Ball, in the editorial management of the *Interstate Medical Journal*.