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AND

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EDITORIAL.

THE ONTARIO MEDICAL COUNCIL, OVERCHARGE ON PER DIEM.

The meeting of 1907 was held in Kingston from 2 p.m. of 2nd July to noon of 6th July. This would call for an outlay on the 29 who attended of \$1,740, as the per diem on that occasion was \$15. The amount paid for per diem, however, was \$3,135. This was made up of 6 days which the council voted the session should consist of plus extra time in going to and from Kingston. Thus Dr. E. G. Adams, of Toronto, was paid \$120; or for one day going and one day returning, and six days in Kingston; or for 4 days in Kingston and 2 days going and 2 returning. It is an actual fact that over \$500 was taken in per diem on that occasion which should not have been taken.

Turning to the meeting of the council of 1908, held in Toronto, beginning at 2 p.m. on 7th July and ending at noon on 11th July, and at an allowance of \$20 a day, we find Drs. E. G. Adams, W. Britton, E. A. P. Hardy, A. J. Johnson, E. E. King and J. A. Temple, all of Toronto, charge \$120, or two days too much. A mere resolution of the council cannot make six days of from 2 p.m. Tuesday to noon Saturday. This meeting of the council cost in per diem \$3,935. We make out that it should have cost about \$2,700 or \$2,800; or an overcharge of about \$1,100.

We might remark on a few of the examples of overcharge. Drs. J. H. Cormack and L. Luton, both of St. Thomas, charge \$160. This is one day coming, one day returning, and six days at the session. Now, one can leave St. Thomas in the morning, arrive in Toronto before 12, attend the council from 2 p.m. Tuesday till noon Saturday, and leave Toronto Saturday afternoon and be in St. Thomas in the evening. This would call for \$100. What of the extra \$60 to each? Drs. C. E. Jarvis, J. MacArthur, and W. H. Moorhouse, all of London, can come to Toronto on the morning train and return in the afternoon one. Thus they would use five days in attendance on the council meeting, but they draw \$160, or \$20 a day for 8 days. Is this right?

The council meeting of July, 1909, affords some interesting matter for reflection. As usual the allowance was \$20 a day, and the session lasted from 2 p.m. Tuesday to noon Saturday, or four days. The session cost in per diem \$3,600 for 27 members who attended. As nearly as we can ascertain there was an overcharge for about 45 to 50 days; or a total overcharge of from \$900 to \$1,000. Drs. J. H. Cormack and L. Luton, of St. Thomas, charge \$160 each. Dr. E. C. Jarvis, of London, charges \$160; while Drs. J. MacArthur and W. H. Moorhouse, of London, each charge \$140. We think that Dr. Jarvis charged for three days too much, and that Drs. Moorhouse and MacArthur each took two days over pay. Dr. J. W. Lane, of Mallorytown, was paid \$180. We think he can leave home at 2.43 p.m. Monday and reach Toronto at 10 p.m. The council is in session from Tuesday, 2 p.m., till Saturday noon. He can take the train at 1.50 p.m. and arrive at Mallorytown at 8.39 p.m. This would entitle him to 6 days or \$120.

Of course we know that some members of the council have told us that they are not supposed to travel before a certain hour in the morning, nor after a certain hour in the evening; but the foregoing hours to Dr. Lane would not be regarded by any one as irksome. His allowance, we think, should have been \$120, but the returns from the council show he was paid \$180, or 3 days extra.

Turn now to the council meeting of this year. It went into session at 2 p.m. on Tuesday, 5th July, and rose at noon Saturday, 9th July. Or four days, or to be very exact, 3 days and 2 half days. There were present 28 members, and the amount paid in per diem was \$2,923. The session for July, 1907, cost \$3,135 at \$15 a day for 29 present. The session for July, 1908, at \$20 a day, cost \$3,935 for 29 present; and the session of July, 1909, at \$20 a day cost \$3,660 for 27 present. Each of these sessions was of the same during. This year the session costs \$2,920 for 28 present. Any one will see the drop this year. Surely it is due to the fact that the council was on the defensive and had yielded to the criticism that had been heaped upon it.

We will return to this again in a future issue; but for the present enough to show where some of the money has been going.

ONTARIO MEDICAL COUNCIL CHARGE FOR COMMITTEES.

In 1907 there was a meeting of the Discipline Committee held at the time of the regular July session of the council. Those present at the committee meeting were Drs. Bray, G. Henderson, J. W. Lane, and J. A. Robertson. The fees paid amounted to \$60. This, we think, should not have been charged.

Then the Discipline Committee met on 19th November, 1908, while the council held a special session. Those present at the committee were Drs. R. J. Gibson, G. Henderson, J. W. Lane, and J. A. Robertson. The fees paid were \$80. Why this?

The Building and Site Committee met during the July session of 1908. There were present at the committee Drs. S. H. Glasgow, E. A. P. Hardy, S. C. Hillier, A. J. Johnson, E. E. King, J. MacArthur, J. A. Robertson, and W. Spankie. Each member charged \$10, or a total of \$80. Again, why?

The Education Committee at the time of the special meeting of the council in November, 1908. There were present Drs. W. Britton, R. J. Gibson, S. H. Glasgow, E. A. P. Hardy, W. H. Moorhouse, J. A. Robertson, E. Ryan, W. Spankie, and J. A. Temple. Each charged \$15 and the total bill was \$135. Surely this should not be.

The Committee on Fifth Year Course met at the time of the July meeting of 1908. There were present Drs. W. Britton, J. Henry, L. Luton, and W. H. Moorhouse. Each charged \$10, or a total of \$40.

The Committee on Redistribution met at the time of the special meeting of the council in November, 1908. There were present Drs. J. Henry, E. E. King, J. W. Lane, and J. MacArthur. At \$15 for each the bill came to \$60.

The Committee on British Reciprocity met at the special meeting of the council in November, 1908. There were present Drs. E. T. Adams, H. S. Griffin, F. N. G. Starr. At \$15 for each the bill came to \$45.

The Discipline Committee met at the time of the special council meeting in December, 1909. There were present Drs. R. J. Gibson, J. W. Lane, L. Luton, and J. A. Robertson. Each charged \$20 and the bill came to \$80.

These committee meetings total \$580. We do not think there should have been any charge made, as the council was in session. It is no doubt good business to hold committee meetings at the same time as the council meetings to avoid the mileage charges, but we do not think there should be the extra per diem allowance. These charges should be explained by the council.

There is one committee to which we would invite special attention. We mean the special Committee on Filing. There is a property committee to which the filing of records could have been referred, and at some occasion when this committee met, or during the ordinary session of the council, it could have looked into the method of filing papers. A special committee, consisting of Drs. W. Britton, E. A. P. Hardy, A. J. Johnson, E. E. King, and E. Ryan, was appointed. This committee met on 9th December, 1908, and again on 18th March, 1909. The cost of these two meetings was the neat little sum of \$230. The members of the committee

charged \$15 each meeting. Dr. E. Ryan, of Kingston, charged for 3 days each time and \$17.50 for mileage. His cost was, therefore, \$125. We think this was wasting money, as we are of the opinion that the matter of looking into the filing of papers need not have cost anything, as the property committee could have looked into this when the council was in session. We do not believe that the medical profession of the Province of Ontario will approve of these expenditures on committees as now pointed out.

THE MEDICAL COUNCIL, ON MILEAGE.

On the matter of mileage we think the council has been too liberal. It voted 5 cents each way. It is well known that 5 cents one way pays for railway fare. We have asked members of the council why 5 cents each way was paid. The answer is that it costs to travel on the train, as meals are expensive. But the members of the council receive \$20 a day while travelling and attending the meeting. From this they should defray all personal expenses.

The mileage during the past four years, or during the lifetime of the present council, amounts to \$3,182.30. One-half of this is an over-payment, or \$1,591.15. There is no sound argument for this double payment. Just as well say that the council should vote the members' hotel bills, as vote the expenses of the members by way of a double mileage, when they are paid their full per diem.

The examiners are in the same position. They are paid for examining the students and also the double mileage. The mileage paid examiners during the past four years amounted to \$2,936.66. Half of this is an over-payment, namely, \$1,468.33.

It will thus appear that the council has paid the large sum of \$3,059.33 in mileage in excess of the proper amount.

The funds under the control of the medical council belong to the medical profession of this Province. We have often expressed the view that the medical council is only a trustee body. It is quite improper for the council to pass an account containing one cent of over-payment, if such is known. But the council lengthened the session by vote, paid committees that sat at the time of council meetings, and paid double mileage. We end with the words of Shakespeare :

Thou wear a lion's hide! doff it for shame,
And hang a calf's skin on those recreant limbs!

THE WASTE OF EXAMINATIONS.

We have on several occasions referred to the folly of duplicating examinations at great waste of both time and money. We return to this subject once more.

According to the statements of expenses, the Ontario Medical Council expended \$20,421.01 on examinations. If we assume that the cost this spring was the same as last spring there should be added to the foregoing \$5,318. This would make a grand total of \$25,318, expended on examinations during the past four years.

That the primary examination might be done away with is now pretty well admitted. This would cut out about one-third of the expense, or, say, \$8,000 a year. This sum added to what should be saved in per diem payments, mileage, and the remuneration allowed committees would soon place the medical council in possession of such funds as would enable it to erect a suitable examination hall, if such be at all desirable.

What the public wishes to know is that the graduate in medicine is reasonably well prepared for his duties on surgery, medicine including children's diseases, and obstetrics, including diseases of women. That the Medical Council should expend a lot of money examining candidates on chemistry, anatomy and physiology, does seem the height of folly. It may be safely assumed that the universities will do this. Anyway, all the essentials of anatomy and physiology will come in during the final examinations in surgery, medicine, obstetrics, etc.

In conversation the other day with a very distinguished medical educationist from Britain, I was informed that the whole tendency in Britain now is towards unification and getting rid of so much examination machinery as has been in vogue in the past. Medically speaking, we are all in little bits in Canada as yet.

FLORENCE NIGHTINGALE, O.M.

She was born at the Villa Columbia, near Florence, on 12th May, 1820. On the occasion of her 90th birthday, the King sent her kind greetings, and so did many others. It is saying but little when we state that she was a remarkable woman, and was one of those who saw her duty with clear vision and performed it with inflexible courage.

Her father was a gentleman of means, owning Lea Hall, Lea Hurst, and Embley Park, in Derbyshire. It was at Lea Hurst that Florence Nightingale spent most of her time in early life and since her retirement from active duties.

At an early age she realized the need for trained nurses, on account of the difficulty in securing proper service of this sort in her father's home. She went abroad to learn what was then known about nursing; and on her return to London made an effort to introduce a better system of nursing into the London hospitals, especially St. Thomas' Hospital.

When the Crimean War broke out and the British troops were sent abroad, there were very poor arrangements for the care of sick or wounded. Sydney Herbert, the War Minister, thought of Florence Nightingale, and wrote asking her to take charge of the task of organizing a number of nurses to go to the scene of war. Strange to say his letter asking her to undertake this work crossed one from herself offering her services for any duties she might be able to do in behalf of the sick and wounded soldier. The difficulties she had to encounter were enough to have discouraged even a brave old general, but they did not discourage her.

She reached the great military hospital at Scutari, on 4th November, 1854, with a band of 38 nurses. Within two days this hospital, lacking in everything, was filled with the wounded from Inkermann. It was then that her real work began and her true character became known. One by one the difficulties melted away and her indomitable will overcame every obstacle. She remained at her post till the close of the war. At the close of the war, the senior British officers unanimously voted that she had accomplished more than any other person in the service of the British army.

The people of all classes subscribed a fund of £48,000 in recognition of what she had done. This she handed over to the Nightingale Home for nurses in connection with St. Thomas' Hospital. The late King Edward conferred on her the Order of Merit, the only instance of a woman receiving this great distinction. Through her efforts in raising the standard of nursing she rendered the greatest of services alike to the medical profession and to mankind. We quote the following from Charlotte M. Yonge, *The Historian*:

"Nor may we pass by her to whom our title page points as our living type of Golden Deeds—to her who first showed how woman's ministrations of mercy may be carried on, not only within the city, but on the borders of the camp itself—'the lady with the lamp,' whose health and strength were freely devoted to the holy work of softening the after-sufferings that render war so hideous; whose very step and shadow carried gladness and healing to the sick soldier, and who has opened a path of like shining light to many another woman who only needed to be shown the way. Fitly, indeed, may the figure of Florence Nightingale be shadowed forth at the opening of our roll of Golden Deeds."

Here is Longfellow's poem, entitled Santa Filomena, on Miss Nightingale:

When e'er a noble deed is wrought,
When e'er is spoken a noble thought,
Our hearts in glad surprise
To higher levels rise.

The tidal waves of deeper souls
Into our inmost being rolls,
And lift us unawares
Out of all meaner cares.

Honor to those whose words or deeds
Thus help us in our daily needs,
And by their overflow
Raise us from what is low!

Thus thought I as by night I read
Of the great army of the dead,
The trenches cold and damp,
The starved and frozen camp—

The wounded from the battle-plain,
In dreary hospitals of pain;
The cheerless corridors,
The cold and stony floors.

Lo! in that house of misery
A lady with a lamp I see
Pass through the glimmering gloom,
And flit from room to room.

And slow, as in a dream of bliss,
The speechless sufferer turns to kiss
Her shadow as it falls
Upon the darkening walls.

As if a door in heaven should be
Opened, and then closed suddenly,
The vision came and went,
The light shone and was spent.

On England's annals, through the long
Hereafter of her speech and song,
That light its rays shall cast
From portals of the past.

A lady with a lamp shall stand
In the great history of the land,
A noble type of good,
Heroic womanhood.

Nor even shall be wanting here
The palm, the lily and the spear,
The symbols that of yore
Saint Filomena bore.

MUNSEY'S MAGAZINE ON THE MAYO BROTHERS.

In *Munsey's Magazine* for June of this year there appeared an article on the Mayo brothers of Rochester, Minnesota. The article does

not appeal to us as the sort of thing one should expect about two eminent surgeons. We will therefore offer some comments.

The article in question was written by George W. Sackett. The article states: "Their rapid rise from the narrow sphere of two country physicians, ministering to the ills, pains, and injuries of a little western town, to the foremost places in a most difficult and exacting profession, reads like a fairy tale; but it is true." Barnum acquired great fame, but most of us know how it was accomplished. This article in *Munsey's Magazine* has the flavor of one that has been inspired from some source in touch with Rochester.

We are told in the article "It is perhaps the most perfectly equipped institution in the world for surgical work." This sounds much like what one reads about some large industry where they make chairs, etc. We have known of write-ups of manufacturing concerns where many thousand copies of the article were reprinted, and in this way the publisher received his reward for publishing the puff. This article on the St. Mary's Hospital looks very much like one of these; and it would be reassuring to the medical profession if proof were forthcoming that it was not of this nature.

Another choice statement is that there "is a laboratory in charge of one of the best bacteriologists in the country. In the basement are more laboratories, and also a department given to photographic work. Within the walls of this institution Drs. William J. and Charles H. Mayo have worked out the destiny that has given them their place among the greatest surgeons of the world."

In the foregoing, that group of words known as adjectives, is made free use of. It would appear too that the writer of the article must have been given the freedom of the hospital in order that he might gather up his material for a real genuine write-up of the hospital, which no doubt is quite anxious to keep its wards full: for you know there is money in it.

But interest grows as one reads on. "The percentage of cures at St. Mary's Hospital is probably larger than that of any other institution." If this statement was not inspired, the Mayo brothers should lose no time in repudiating it. There is some fear that such expressions might disturb the rest of Hippocrates, Galen, Celsus, Baerhaave, Hunter, McDowell, Rush, Jenner, Pasteur, etc. But, dear reader, more yet! "The marvelous skill with which the Mayos handle their instruments has amazed the world; but behind their technical skill lie perfect knowledge of the human anatomy, the keen mental ability to grasp situations, the steady nerve, and the unflinching hand." May we not exclaim in despair what a pity that they cannot leave their mantle to a successor as did Elijah of old when he threw his raiment over Elisha! In the dying words of

Goethe, may we not exclaim for all of us poor mortals who trudge along the dusty roadway with far off footstep, "Let more light in!"

The flights of Herr Teufelsdröckh in Carlyle's *Sartor Resartus* are as the imagination of the child to that of the great poet, Shakespeare, compared with the praise of the following: "There is no known operation that the Mayos do not undertake, and they do some that were unknown until these men dared them." Such praise upon Lister would make him blush; and would have turned the head of Billroth or Gross.

But as dear Blumine admired Herr Teufelsdröckh, so we are called upon to admire the Mayos. Here is something good: "Another of their specialties is the treatment of goiter, their study of exophthalmic goiter having resulted in reducing the death-rate of the disease by one-half. Last year they performed 407 operations for goiter, without a death." Ach mein Gott! where is Kocher; and would he not like some American journalist to visit his town and point out the way to fame, as the old Arabian Nights tell us of the wonders of bygone times.

In speaking of diagnosis the article goes on to state that "They do the right thing in the right way." Well, this is grand. To be able to do the right thing in the right way is the ideal state, where there can be no mistakes. Oh that Plato could look on the earth once more and see how near the *ideal* some of us have become!

Now, we come upon a rare piece of modesty. We read this: "But these two country surgeons, who are world-leaders in their profession, do not know it all. Dr. William Mayo went to Germany, some time ago, to see how an incision was made in a certain operation." It is a real treat that the writer of the article admits even this much.

Then comes in the incident that occurred at Atlanta, Georgia, some years ago, when Dr. William Mayo disputed some statements made by some well-known surgeon. In some way the writer of the article seemed to find out all about this incident and the great effect it had on the assembly of medical men.

We are further told that "a noted French savant, connected with the research work of his government, recently said: "No surgeon in France has completed his education until he visits Rochester." While the author of the article learned of the foregoing statement, he has not given us the name of the French savant. This would be very interesting information. Almost any sort of words can be attributed to dead people or those whose names are not mentioned.

We are then treated to an account of their office "in the business district." We are told that "it is said to be the largest office of its kind in the world." We also read that "a staff of thirty doctors diagnose the troubles of new-comers, or treat patients who have been released from the hospital."

We further learn that "a separate building serves as the Mayo's private medical library, and here one night a week is devoted to the discussion of medical topics with the staff." This looks rather like the work of the busy journal man who wishes a scoop on his contemporaries, and has got at some news through some channel.

The article takes us into the office, and tells us that in it we find the "millionaire and pauper," "plebeian and prince." We are told that rank counts for nothing. "The man without a dollar receives the same helping hand as the one with a big bank account. The Mayos have given their lives to relieving the physical sufferings of humanity, and the door of hope has never closed upon a man because he could not pay." Old father Aesculapius would like to see this. Then we are told about a woman who had a cancer removed and paid \$25 and said she had a cow that she would sell and turn over whatever coin she could get in this way. But Dr. William Mayo handed her "a receipted bill" and "a check for seventy-five dollars." This incident, however, in some way has secured the publicity that *Munsey's Magazine* can give it.

Then we are treated to some fine words about the honesty of the Mayos. We are told that on one occasion Dr. Mayo recognized the case as tubercular after commencing the operation. He stopped and conferred with the patient's husband. It was agreed to go on with the operation, "and the woman lived." All we can say on this is to quote from Virgil *mirabile dictu!* and go on wondering how it all got into the pages of *Munsey's Magazine*. Perhaps the words of Burns explains the whole event: "There is a chiel amang ye takin' notes and faith he'll prent them."

The writer of the article found out about a certain conversation between James J. Hill and Dr. William Mayo regarding the latter going to New York. This also reaches the public in the article.

We are told that "The Mayo brothers are thoroughly democratic men." "They will not speak to a layman about their professional achievements." The writer for *Munsey's Magazine*, however, found out enough to make up an article that would make most people of "democratic" tastes feel that the whole affair had been a little overly done.

From the article we learn also when they begin work in the morning, about the demands "made upon them for addresses," and that "the night trains are always used to save time."

The article closes with this outburst of language that would have done credit to Cervantes. "These masters of surgery are still young men. What the future has in store for them, what they may yet give to the surgical profession, no one knows, not even themselves."

O ye surgical heuschrecken (grasshoppers) of Weisnichtwoland (know-not-where-land) get down on your knees, place your hands

together, and send a portion of your blood to the region of your fourth ventricle so as to stimulate your *nervi pathetici* into action that you may assume the true attitude of wonder and amazement, as you view the surgical chariot of the Mayo brothers coursing along the surgical horizon, with its wheels almost blocked by the immense verbiage of adjectives, adverbs, and interjections that are scattered along its course.

"What do you read there, my Lord?" said Polonius; and Hamlet replied, "words, words, words!"

SUPERINTENDENT OF ASYLUM AT ORILLIA.

It must have been a great surprise to the medical profession of Canada, indeed, to the civilized world, to see the press of the country heralding the appointment of Mr. Joseph Patrick Downey as the superintendent of the Asylum at Orillia. Among the qualifications for this important office we are told that he was born in the county of Wellington where he received a public school education; that at 15 years of age he entered the service of the *Guelph Herald* newspaper; that in 1885 he became the editor of the paper; that in 1902 he was elected to the legislative assembly with the letters M.P.P.; and that he is entitled to use the following letters after his name as a member of a number of secret and friendly societies, namely, C.M.B.A., A.O.U.W., and I.O.F. Most politicians have a goodly number of such degrees and diplomas.

The Orillia Asylum is for the juvenile insane—the imbecile child, the poor derelict. If one could imagine anywhere in all the world where the skill and judgment of the experienced, wise and humane doctor would be in demand, more than in any other walk in life, it would be at the head of such an institution. We have often protested against the appointment of the political doctor to such positions as against those who are specially trained for these duties; but when it comes to the appointing the lay politician to a position that but few doctors have had the experience to enable them to fill properly, we must raise our protest in the most emphatic manner. It is wrong from every possible standpoint.

These sad and unfortunate children need the oversight of an experienced medical doctor to look after their welfare. It is quite true that Mr. Joseph Patrick Downey, C.M.B.A., A.O.U.W., I.O.F., ex-M.P.P., ex-editor, etc., will do all right in buying the coal, clothing, food, etc., the institution may require, but this is not the main end. When it comes to the scientific study of these cases, their treatment if ill, their training, physically and mentally, their classification, etc., surely most people would prefer to know that such vital matters were in the hands of

a worthy disciple of Aesculapius. A man who could write after his name the letters M.D., M.C.P.S., which he obtained after years of careful study of the human body and the human mind and their diseases would meet the conditions better than one who can write after his name such titles as C.M.B.A., A.O.U.W., and I.O.F., which can be bought for less money than the old notorious Buchanan diploma, which purported to confer upon its possessor medical knowledge.

Mr. Joseph Patrick Downey, C.M.B.A., A.O.U.W., I.O.F., ex-M.P.P., is an excellent citizen, and could fill many positions with credit to himself and usefulness to the position; but we regret very much to see the sound and safe rule of the superintendent of an asylum being any other than a thoroughly competent and trained member of the medical profession.

We may now expect to see the announcement some day that David William Jones, S.O.E., A.O.F., I.O.O.F., ex-editor of the *Jeremiahville Lamentation Record*, has been made senior county judge for the county of Fooldom.

BED SIDE TEST FOR URINE.

To test for albumin, take an ordinary spoon. Half fill with the urine, add a small pinch of salt, and heat over a lamp or a match. When it begins to steam and bubble, add a few drops of vinegar. This test will indicate the presence of albumin unmistakably, is more delicate than the Heller test, and possesses the advantage that the color of the urine is not changed while a white precipitate or turbidity appears.

To test for glucose is even simpler. Dilute one or two drops of urine with a few drops of water in a spoon. Carefully evaporate to dryness with little heat. Now slowly heat further, when, almost suddenly, a characteristic orange-brown spot and an unmistakable odor of caramel will prove the presence of sugar without the shadow of a doubt. One-fifth of a milligram (1-3 of 1 per cent.) is thus easily detected. Urine free from sugar colors a smoky black, and, on heating further, emits its peculiar urinous odor. When there is 1 per cent. or more sugar present, a very characteristic lump of sugar-coal is formed. *Probatum est!*—Richter, *Medical Record*, Feb. 12th, 1910.

ORIGINAL CONTRIBUTIONS.

THE CAUSATION AND RECOGNITION OF FUNCTIONAL
HEART MURMURS.*

By ROBERT DAWSON RUDOLF, M. D. (Edin.), F.R.C.P. (Lond.),
Professor of Therapeutics in the University of Toronto, Senior Assistant Physician in the
Toronto General Hospital.

SOME years ago, when as a medical student and young graduate in Edinburgh, I was a member of the oldest medical society in the British Isles—the Royal Medical Society—it came to my turn, as it does to every member in turn, to read a paper before the society. The subject that I selected was Functional Heart Murmurs, and it has happened to me, as it has often happened to other members of that society, that the subject of my thesis has always interested me since. So when your President did me the great honor of asking me to deliver this address. and further hinted that some circulatory subject might be desirable, what more natural than that I should turn to my first love.

By functional heart murmurs is meant those murmurs heard over the precordium, which for various reasons we do not consider as due to any permanent physical physical lesion of the heart structure. That they are due to some temporary change in the physical condition of the heart or adjacent vessels is, to my mind at least, certain; but this alteration in form of the tissues is temporary and quite capable of completely disappearing.

Laennec, the father of auscultation, fully recognized these murmurs and wrote as follows: "I have known a considerable number of persons to die of different diseases, acute and chronic, who have presented a 'bellows murmur' during life, sometimes during several months, as well in the heart as in the different arteries, and upon examination of their bodies I could discover no lesion coinciding constantly with the phenomena, which are not constantly met with in subjects who had never exhibited anything of the kind during life." And since that time, much has been written about them.

These murmurs are often spoken of as of trifling import and of not mattering much, but nevertheless the subject is one of the greatest importance as upon their correct recognition often rests the patient's whole future life.

We have all seen such cases, where perhaps some young fellow has been condemned to the life of a semi-invalid, possibly knowing too much about digitalis and the like, when it has been our great pleasure to assure him that he is all right, and that the sooner he gets out into the cricket field or onto the golf links the better.

*Address on Medicine delivered before the Nova Scotian Medical Association on July 6th, 1910.

In insurance work again who has not seen people sailing under the false colors of "bad risk," who are well practically but happen to have a systolic murmur about the base of the heart. A case such as the following illustrates the importance of such a diagnosis:—

A. B., a medical student, aged 22 years, complains of palpitation of some weeks' duration. He has been working hard at his books, and is feeling run down and is losing weight. Two weeks ago he felt faint, and consulted a medical man, who told him that he had heart disease with enlargement of that organ, and gave him tablets of digitalis and nitroglycerin to take frequently. He has been distinctly worse since then, and the palpitation has been considerably more troublesome. He has no special shortness of breath, nor swelling of the feet. He does not use alcohol or tobacco.

He is a pale, anxious youth with cold extremities; has lost 12 pounds in the last year. The pulse is rapid and slightly irregular. The cardiac impulse is marked all over the precordium, and a good deal of pulsation is visible in the epigastrium, and this troubles him much. The cardiac apex is one inch below the normal and half inch outside of the nipple line. There is a loud *bruit du diable* in the neck. At the apex the first sound is impure, but there is no conduction of this impurity into the axilla. At the base there is a loud systolic murmur, with accentuation of the second sound. The blood is normal; the tongue foul.

A diagnosis of functional heart trouble was made and he was put on a strychnine mixture, and, later, on cod liver oil and malt. He steadily improved and in six months had gained eleven pounds in weight, and all the murmurs had disappeared. I have seen him often since, this note of eight years ago, and he has remained well in spite of hard work as a general practitioner.

The occurrence of murmurs about the heart, systolic in time, is so common, that it is probable that the physician gets into the way of sub-consciously ignoring them in most cases. For example, in acute fevers it is almost rare for the first sound of the heart to remain quite pure throughout the illness, la Salle found them in 66 per cent. of cases of scarlet fever, and yet in such cases we do not at once diagnose endocarditis, unless indeed there happen to be other signs or symptoms present to suggest such a thing. But when a young patient is in the clutches of acute rheumatism, and murmurs develop, as often as not such a diagnosis is come to, when there may be nothing organically wrong with the heart.

Let us first look for a moment at the various murmurs that come under our title, and then go on to consider shortly their causation.

As regards the appearance of functional murmurs it may be laid down as a rule that they are all systolic in time, that is, they lie in that part of the cardiac cycle devoted to the ventricular systole.

Murmurs have been described as functional which occur in the diastolic part of the cycle, but one should always look on such with the gravest suspicion. Some of them may be explained by a venous hum occurring about the base of the heart. One has seen aortic diastolic and pulmonary diastolic murmurs come and go, but it suggests that there is something organically wrong here.

These bruits are nearly always rather soft and blowing in character, and accompany rather than displace the first sound, and are often distinctly postsystolic. Distinctly musical sounds are probably always organic, and although one occasionally hears such a one clear away it does not therefore follow that it was purely functional. One can easily imagine the cusps of say the mitral valve so thickened and stiffened by inflammatory infiltration as to be for a time unable to properly close the orifice, and yet, as the inflammation clears up they become more limber and able to do their passive work properly, although if carefully examined they might show signs of organic disease.

The most common site of maximum intensity of a murmur is the pulmonary area, or rather the third left intercostal space, close to the sternum, and this bruit is usually accompanied by an accentuated pulmonary second sound. The next most common one is the mitral area, and after that come the aortic and tricuspid. The pulmonary murmur often occurs alone, but it is very rare to find any of the others without the pulmonary one as well.

These murmurs are not well transmitted. They are markedly affected by posture, being all louder or indeed only present when the patient is recumbent. So much is this the case that some years ago Dr. James F. Goodhart wrote to *THE LANCET* suggestion that they should be called postural ones. There is no doubt but that they are more affected by posture than are organic ones, and the reason for this has been much discussed. The late Dr. A. Foxwell (1) argued, and with much reason, that a recumbent posture increased a pulmonary murmur because (a) it caused an alteration between the angle of the conus arteriosus and the pulmonary, (b) it increased the blood pressure in the pulmonary artery, and (c) in the recumbent posture the heart no longer pulled by its weight upon the pulmonary artery, and thus this vessel could more easily dilate.

A second theory of why the recumbent posture brings out the pulmonary murmur is that of Dr. William Gordon (2). He found that in this posture the antero-posterior diameter of the chest is less than in the vertical one, and he assumes that therefore the anterior chest wall is nearer to the heart in the recumbent posture than it is in the vertical. That the

chest does measure less antero-posteriorly in the recumbent than in the vertical I can fully confirm, as some years ago working with special calipers, we found that there is often a difference of from half to three-quarter inch (3), but because the chest then measures less in that diameter it does not at all follow that the heart is then nearer the sternum than when the individual is vertical. Dr. Cummings and I showed at the time of the British Medical Association meeting four years ago (4) that in the vertical position the heart is distinctly near to the anterior chest wall than it is when the individual is horizontal. In the latter position the organ tends to fall away from the front. Hence, it is not because the heart is nearer to the front in the horizontal position that the murmur is better heard. Probably Dr. Gordon is right when he says that the chief reason for the fact that all systolic murmurs are louder when the individual is horizontal is that then the blood in producing them is not working against gravity as it is when the patient is vertical.

Functional murmurs are much affected by respiration, being as a rule better heard towards the end of expiration, but this is not always the case.

They are usually associated with a *bruit du diable* in the neck, and very likely also with an arterial murmur.

There may be no symptoms associated with such murmurs, but frequently one finds shortness of breath, dizziness and even faintness, and there is often, in fact, usually a slight dilatation of the heart. Any signs of real breaking down in compensation, such as enlargement of the liver, oedema (beyond a slight puffiness on long standing) and scanty urine should make one reconsider the diagnosis. As a rule the general vasomotor tone is low, and there is a tendency to cold extremities. There may be often seen a slight venous pulse in the neck, which is usually auricular in time, but may be ventricular, which means tricuspid leakage.

Causation. One would naturally say that there must be something wrong with people in whom functional murmurs occur, for if not then, why are they not present in everyone. But there is no doubt but that they may occur in individuals who *seem* to be quite well, and Dr. Thayer, of Baltimore, recently read a paper before the Academy of Medicine in Toronto, on the presence of such murmurs in the apparently healthy, and he then argued that they had no significance. To my mind, however, they suggest that the individual is not quite well, just as much as the common finding of a hæmoglobin percentage of say 85 per cent. shows that the patient is not quite himself, and probably requires iron. These murmurs are extremely common in the ordinary run of hospital cases, and recently we found them present in 60 per cent. of the surgical cases at the Victoria Hospital for Children, and in 50 per cent. of adult patients

taken at random in the Toronto General Hospital. Also the other day I noted them in 8 out of 20 Barnardo boys just arrived from England.

Functional murmurs have often been termed "hæmic murmurs," and it used to be believed that they were due to a blood condition, but it is so common to find them present where the blood count is normal, and on the other hand to find them absent when there is even extreme anæmia that the term "hæmic" must be abandoned. During the past winter I watched two cases of severe pernicious anæmia, in one of whom murmurs were well marked and in the other were absent. Skoda, in 1839, put the matter bluntly, but well, when he wrote that "It is not true that a watery state of the blood is a cause of murmurs, because in many cases one does not find it." All the same it would be safe to say that we are more apt to find these bruits in anæmic people than in those not so afflicted. Anæmia undoubtedly predisposes to their production, probably as we will see by producing a relaxed condition of the circulatory tissues. Thayer & MacCallum (5) found in experiments upon dogs that when these were bled freely and then infused with saline solution pulmonary and aortic murmurs developed. Here an artificial anæmia was induced.

Besides anæmia, hard work, ill health of all kinds, acute and chronic—due to disease or toxæmia such as nicotine and alcohol all predispose to these murmurs.

The physical causes of pulmonary and aortic murmurs will be much the same so may be considered together, and likewise mitral and tricuspid ones may be grouped and discussed as one.

Pulmonary and Aortic Murmurs.

A number of explanations have been put forward to account for the common murmur which is best heard about the pulmonary area and a little lower down.

Balfour and Naunyn believed it to be really produced at the mitral orifice and to be conducted to the surface by a distended left auricular appendix. But the facts that in any cases no murmur is heard at the mitral area while it is plainly audible nearer to the base, and also that the murmur occurs best nearer in and lower down than is the position of the auricular appendix would seem to negative this theory.

William Russell held that the murmur was due to the dilated left auricle forming a fulcrum about which the pulmonary artery was bent so that obstruction was produced with a consequent murmur. This he says is furthered by the dilating and lengthening of the pulmonary artery which undoubtedly does exist and has again and again been shown *post mortem*. But the theory has not found general acceptance and seems to

assume too much. Why should the left auricle be distended before the mitral valve leaks?

Foxwell (6) and others believed that this murmur was due to a dilated conus arteriosus, plus a dilated pulmonary artery beyond, and has advanced much evidence to show that such a dilated conus and pulmonary artery actually exist in these cases.

Physicists tell us that (1) a fluid passing from a cavity into a cylindrical tube is not likely to produce a sound; that (2) fluid passing from a cylinder into a cavity *may*, but not easily, do so; but that (3) the figure *par excellence* which will most easily give rise to a murmur is one in which the fluid passes through a constriction. Now in the normal heart, either at the aortic or at the pulmonary orifice, fluid—the blood—is flowing from a cavity—the ventricle—into a cylinder—the artery with its orifice—and hence no murmur occurs. And, however, much the ventricle be dilated, as long as the orifice and vessel beyond remain of the same diameter it is little likely that a sound will be produced. If, however, the orifice be stenosed, as occurs in organic disease, we have the physical conditions necessary for the production of vibrations and a murmur is the result. But in functional disease, of course, no such constriction occurs, and yet murmurs are heard. What must have happened is that the artery beyond must have dilated, and as a result we have the blood flowing from a cavity—the ventricle—through a normal orifice—into a cavity beyond—the dilated artery, and hence, the physical conditions necessary for the production of a sound are met. We have in other words a relative constriction at the orifice.

That such a dilated condition of the pulmonary artery does occur in functional disease is often easily demonstrated clinically by pulsation in the second left intercostal space. A dilated condition of the ventricle, especially the conus arteriosus has often equally been proved, and such would undoubtedly increase the tendency to the murmur, but to my mind the essential condition that must be present is that the artery immediately beyond the orifice must be enlarged. The reason why the orifice itself does not dilate along with the artery is easily seen in its firm fibrous ring, which usually successfully resists any such tendency. On the other hand Foxwell showed that the pulmonary artery was six times as easily dilated as the artery after making all allowance for the different strains at which they work, and Stacey Wilson demonstrated the ease with which it is distended (7). A demonstration of the ease with which a dilated pulmonary artery will produce a murmur may be easily done as follows:—If a hose pipe be introduced and tied into the tricuspid orifice of a bullock's heart, and another be continued from the cut end of the pulmonary artery and a stream of water be allowed to flow through the apparatus (while we auscultate over the pulmonary orifice) no sound is

at first heard. This demonstrates by the way that a watery fluid, and therefore watery blood will not produce a sound in going through a normally-shaped heart. If now the pressure be raised in the pulmonary artery by slowly obstructing the outflow of the water from the distal tube, the pulmonary artery will be seen to easily dilate at its root and soon a loud murmur will appear here.

It appears likely then that the common pulmonary systolic murmur is due to a dilated artery just beyond the orifice, and anything that will induce such a dilatation will tend to produce the murmur. There is no reason to think that the blood pressure rises in the artery in anæmic and run down conditions, and hence, the probable cause of the dilatation is a relaxed state of the vessel wall. This relaxed state may occur in the apparently normal, but any condition tending to lower the general health will predispose to its occurrence.

Mitral and Tricuspid Murmurs.

When a systolic murmur occurs at either of these orifices it is due to leakage here. In the normal heart the valve is kept competent by three factors: (*a*) the cusps, which are swept into position by the blood; (*b*) the papillary muscles which, through the chordæ tendinæ pull the cusps towards the ventricle and thus prevent these thin membranes from being swept through into the auricle; (*c*) the muscular sphincter around the orifice, which by contracting synchronously with the rest of the ventricular wall, makes the orifice much smaller, and hence, more easily closable by the cusps.

Now in functional bruits the cusps are by the definition normal, and the cause must lie in one of the other two factors or in both. The papillary muscles grow from the inner aspect of the ventricle, and if this cavity be dilated (as is often the case in these conditions) the chordæ might so pull on the cusps as to prevent their proper apposition. Such may partially account for the murmurs under consideration, and my colleague, Professor Brodie, would lay more stress on it than on the next factor.

The auriculo-ventricular orifices are surrounded by rings of muscular tissue, which by their tone and contraction make the openings smaller than would otherwise be the case. John Hunter pointed out the importance of these sphincters and showed that the cusps of the tricuspid valve are barely big enough to close the orifice if it were not for the contraction of the sphincter. In the heart of the bird the tricuspid valve is not provided with cusps at all, and its closure is affected wholly by the sphincter, whilst in diving animals, according to Wilkinson King, quoted by Sherrington (8), the incompetent tricuspid valve seems specially pro-

vided to permit of regurgitation when the animals are under water. Now even in healthy athletes any great strain produces such a temporary leakage at the tricuspid valve, this, the so-called safety-valve action of the valve, being believed to be due to the temporary dilatation of the sphincter of muscle. So probably in people who are run down or in any way relaxed as regards the muscular wall of the heart, the sphincter tends to dilate under the normal intracardiac pressure and does not contract as strongly as it should do, and as a result the orifice is too large at the moment when it most needs to be small, and thus the normal cusps are not able to close it, especially if they also are pulled upon by the chordæ tendinæ to an unusual extent. This want of contraction of the sphincter may occur alone, or be part of a general want of action of the whole ventricle. This, to my mind, is the cause of the frequent mitral and less common tricuspid systolic murmurs of functional origin. When a systolic murmur occurs in later life, due to insufficient action of the muscular ring of the mitral orifice, it is a more serious thing than in younger people, as probably by this time the muscle is not healthy organically, and hence, has not the reparative power of one that is so. And when a mitral murmur occurs for the first time after forty it does not make much difference in the prognosis whether it be due to chronic valvulitis or to relative insufficiency of normal cusps. It will probably be permanent in either case, unless, indeed, the giving way of the sphincter be due to some definite and extra cause, such as a sudden strain or acute illness.

Recognition.

As already said, the important thing about functional cardiac murmurs is to be able to recognize that they are of this nature, as upon such a conclusion rests all our prognosis and treatment.

In the great majority of instances no difficulty exists, as for example, where we find a systolic murmur in the third left space, accompanied perhaps by a well marked *bruit du diable* in the neck and largely disappearing upon the individual assuming the erect posture; and all this occurring in a youth who has been working too hard and perhaps smoking to excess. But in some cases, as where a murmur appears in the course of acute rheumatism the diagnosis is not so easy and a doubt may last for years.

In a paper published several years ago (9) I tried to formulate certain rules which might help one in doubtful cases, and these were somewhat as follows:—

- I. Functional murmurs most commonly occur during adolescence and early adult life.
- II. They are more common in males than in females, although there are many exceptions to this, especially in anæmic girls.

III. They all occur during the ventricular systole, and thus accompany or immediately follow the first sound of the heart.

Certain diastolic murmurs have been described by Cabot and others as functional, but such must be so rare as to be of no practical interest. It should take a great deal to make us diagnose a diastolic murmur as functional.

IV. While functional murmurs may occur over any of the cardiac areas, by far the most common site is the pulmonary one, and the chest immediately below this.

V. The pulmonary murmur is of so constant occurrence in relaxed state of the body that one should look with suspicion upon any murmur occurring at any of the other orifices, if the pulmonary first sound is clear (*i.e.*, the sound as heard in the pulmonary area).

VI. A pulmonary systolic murmur due to organic disease is very rare except when of congenital origin. When, however, of organic origin from this or other causes, other signs, such as cyanosis, stunted growth, clubbed fingers, etc., will be present, and the pulmonary second sound will not be accentuated, but rather the reverse.

VII. The pulmonary second sound is early accentuated in functional cases, and indeed, may be present before any murmur appears.

VIII. The *bruit du diable* and other vascular murmurs heard in the neck are always functional, except, indeed, the arterial one be due to an aneurism; hence, when a cardiac murmur is associated with such vascular ones there is considerable reason for considering that the cardiac bruit is also of functional origin. On the other hand there is no reason at all why cases of organic heart trouble should not in addition have functional murmurs in the neck as elsewhere, and in fact one often finds this to be the case. The functional element will probably clear up in time, leaving the organic lesion.

IX. Functional murmurs are as a rule soft and blowing in character, and accompany rather than replace the first sound. They *may*, however, be loud and rasping, and the pulmonary one is specially apt to vary in this way.

X. Functional murmurs are not so widely conducted as are organic ones, and hence, are seldom audible in the axilla.

XI. Functional murmurs vary more under different conditions than do others; exertion, respiration, posture all affecting them more than they do organic ones.

XII. In functional murmurs there is usually little sign of hypertrophy or dilatation of the heart, and the apex is not much displaced.

A slight amount of dilatation is, however, usually present, and often more, pulsation is visible over the precordium, and in the second left intercostal space, and in the epigastrium than should be there.

XIII. Signs of breaking down in compensation are rare in functional cases, and should always suggest something more serious.

XIV. Functional murmurs tend to disappear as the patient's general health improves. This is not the case with organic ones, which are apt to become louder as the heart's action strengthens.

XV. No mention has so far been made of the effect of the pressure of the stethoscope upon functional murmurs. Some writers state that these murmurs are greatly influenced by such pressure, and Dr. Henry Sewall, of Denver, (10) goes so far as to say that all non-organic murmurs at the base of the heart can be stopped by pressure with the stethoscope. I am not convinced that this is the case, nor indeed, that pressure has any marked influence upon any murmur.

XVI. No mention has been made purposely of cardio-respiratory murmurs because they scarcely come within the scope of our subject. These sounds, which are produced in adjacent lung by the movements of the heart, and hence are not cardiac murmurs at all, sometimes very closely simulate them. They, however, largely disappear when the breath is held. They occur chiefly along the edge of the tongue of lung that lies just about the apex of the heart.

The object of this paper has been to emphasize the importance of recognizing the frequency of non-organic cardiac murmurs and of suggesting some rough rules by which we may in doubtful cases distinguish them from those due to permanent organic changes in the endocardium.

Let me add my belief that we are all too apt to conclude that the heart is diseased because murmurs are present, and on the other hand that this organ is healthy because murmurs happen to be absent.

References.

1. A. Foxwell. The Causation of Functional Heart Murmurs. *THE LANCET*, II., 1899.
2. Wm. Gordon. The influence of Posture on Heart Murmurs. *Brit. Med. Jour.*, 1902, II., p. 149.
3. R. D. Rudolf. The effect of Posture on Cardiac and Vascular Murmurs. *Amer. Med.*, March 3rd, 1906.
4. S. Cummings and R. D. Rudolf. The effect of Posture upon the Position of the Heart. *Brit. Med. Jour.*, Oct. 20th, 1906.
5. Thayer and MacCallum. *American Jour. of the Med. Sciences*, Feb. 1907.
6. A. Foxwell. *Op. cit.*
7. Stacey Wilson. Transactions Pathol. Soc. of London, 1899, I., p. 41.

8. C. S. Sherrington. Allbutt and Rolleston's System of Medicine. VI., p. 5.

9. R. D. Rudolf. Functional Heart Murmurs, *Internat. Clinics*, Jan., 1905.

10. H. Sewall. Stethoscopic Pressure in Physical Examination of the Heart. *New York Med. Jour.*, Dec. 4th, 1897.

ON THE CAUSATION AND EARLY DIAGNOSIS OF UTERINE CANCER.*

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ALTHOUGH this paper is intended to deal primarily with the early diagnosis of uterine cancer, still it is very important to survey briefly the prevalent ideas in regard to the causation of cancer in general, since if one has some idea of the probable causation one may be led the more reasonably to an early diagnosis of the condition.

First of all we must realize that cancer is universal, all races of mankind and all vertebrates being liable to it.

Bashford (1) states that the vegetarian castes of India are no more exempt than are those living on a mixed diet, though it has been stated that the Jews of East London become more liable to it after some years of living in England. Hence, the mode of living would seem to have little to do with the causation of the disease.

Again, the disease seems to have a predilection for certain regions of the body in different species, mammary cancer being common in the mouse, but rare in cattle.

Experimentally there can be produced:

1. Local infiltration.
2. Systemic dissemination.
3. Terminal cachexia.

The transference is a true transplantation of living cells, infection taking no part. Hence, Ribbert's view of cancer is that it is a continuance of growth of cells which primarily were confined to a circumscribed area.

Age incidence: This has been shown to be the same for short-lived animals as for man.

Now, explanations of cancer must agree with:

1. That statistically cancer is a function of age.

* Read at the meeting of the Canadian Medical Association, Toronto, June, 1910.

(1) *THE LANCET*, Vol. II., 1909, p. 691.

2. That biologically cancer is a function of senescence, and one may add of immaturity.

The law of age incidence applies alike to individuals of a species and individual organs and tissues. For example, (2) cancer of the breast before puberty is practically unknown.

Senescence: Constitutional or circumscribed is an endogenous predisposing factor. It is closely associated with its origin, but it is not necessary to its continuance. That is, the origin and the growth of cancer are separate phenomena.

Cancer is more prevalent in domesticated animals because on account of good care, etc., they reach the cancer age.

EXOGENOUS CAUSES.

1. Chronic irritations have nothing in common except causing prolonged attempts at repair. Hence, tissues subjected to such conditions are really primarily old, so to speak, or perhaps immature in some cases, and so are liable to cancer if they have reached the cancer age. Many examples of this are known. For example: Radiant cancer, or actinic cancer of the lip from smoking a short pipe or from x-rays.

Again, distinct innate relations seem to exist between cancer of the same organ in different species and the connective tissues. For example, in the human breast it is scirrhus, in a dog breast cartilage, in the mouse angioma.

It is important to bear in mind that cancer may:

1. Arise locally in a circumscribed area.
2. Any part of the normal covering of the body may acquire cancerous properties.
3. And that more than one focus of origin in a circumscribed area may exist, or have origin of different ages. That is, extension by apposition.

Hence, one may assume an acquired local or constitutional predisposition. That is, an indirect etiological significance to chronic irritation causing anapylaxis.

Again, as to the morphology of cancer. It is to be borne in mind that there is an immense variety of carcinoma cells all descended from normal cells, some of which pass into one another, whilst others do not and are able to maintain their characteristics for a considerable period. Hence, apparently benign growths become malignant. For example, adenoma. Also by transplanting cells from individual to individual, and so maintaining them in the continuous or intermittent state of regener-

(2) Bergmann, *Systems of Surgery*, Vol. II., p. 592.

ation it seems possible to perpetuate varieties of cells more capable of growth. Hence, the origin of sarcoma.

Again, there are normal types of cells which are the prototypes of malignant cells, for example:

1. Bladder epithelium and carcinoma.
2. Decidual cells and sarcoma.
3. The mucous membrane of the outer end of the Fallopiian tube and malignant adenoma. Also columnar epithelium may become squamous, for example: psoriasis of the endometrium or squamous cells become columnar, due perhaps to metaplasia.

Growth of cancer: Growth of cancer cells is different from embryonic cells.

1. The cancer cell shows cyclic changes in the degree of differentiation of its histological characters.
2. It disobeys all the laws of growth of embryonic tissue. That is, it has the habit of growth minus the habit of function.
3. When transplanted the blood vessels and supporting connective tissue scaffolding are supplied anew by a reaction elicited by the chemi-tactic influences of the parenchymatous cells.
4. Cancer cells are specialized re growth and not undifferentiated cells.
5. The cancer cell has not analogy with any known form of infective disease.

Continued growth takes place after inoculation of living cells into animals of the same species.

The metabolism of the cancer is a property of itself. That is, *a vita propria*, the propagated tumor having much the same relation of the foetus to the mother. That is:

1. There would seem to be no toxic properties injurious to the host.
2. No disturbance in the cell metabolism.

Cyclical changes in cancer cells are shown by:

1. Rapid or slow growth.
2. Transitory cessation of growth.
3. Greater or less spontaneous immunization.
4. Variation in histological structure, for example, alveolar to acinous and *vice versa*.

But we must remember the dosage and the soil are important factors.

HEREDITY.

Darwinism hardly applies here. That is, acquired cancer, etc., except, perhaps, in cases of metaplasia.

Weismann's theory that germ plasm is continuous from generation to generation, and that these germ cells have a potentiality of variation dependent upon environment. That is, oscillation in the nutrition of somatic cells, may influence or cause variation in germ matter. Therefore, there is heredity in disease, or as Garrod in his Croonian lectures, in 1908, states it: "Inborn errors of metabolism," and since metabolism depends upon cellular enzymes so in cancer perhaps there is some innate error of metabolism forming or altering the cellular enzymes, so causing increased tendency to cell proliferation, the actual growth activity being due to some accidental irritation.

It cannot be doubted but the processes of the body are largely influenced by heredity. For example, the endogenous toxins, diabetes, baldness, or the abiotrophy of Gowers.

The Mendelian Law: Would seem to be applicable to such a disease as cancer, which has not yet been shown to be due to infection; as is, for example, tuberculosis.

By the Mendelian Law one means the law of segregation, the germ cells being a single structure and the animal a double structure, having received a series of elements from its father and a series also from its mother.

The Mendelian Observation: When dissimilars meet in one individual there is on formation of the germ cells a separation between the two characters which come in. That is, the dominant and the recessive. The animal is a combination of many natures. For example, height, color, form and so on, separately transmitted. For example, in eye color the presence of pigment is dominant. Color blindness and other deformities follow the law, so special resistance or special liability might follow the law. For example, resistance due to presence of something, as in color blindness, and liability to the absence, or recessive qualities, as, for example, in alkaptonuria.

So with sex limited diseases as hemophylia. Hence, as to the causation one may sum up:

1. No limitations as to species.
2. Diet and mode of living has little influence in causation.
3. Cancer is statistically a function of age of the individual.
4. Cancer is biologically a function of either immaturity or senescence, either constitutional or acquired: for example, immaturity when owing to limitations of function, the growth habit alone is differentiated, the cell becoming purely vegetative, due perhaps also to some error of its metabolism. Then its faulty metabolism causes enzymes, which may cause adjacent cells to take on this vegetative habit, etc., due to chemiotactic influence, so one sees the different reactions of the surrounding tissues or stroma developed. Or again, in repeated attempts at repair the cells spe-

cialize the growth habit, and so become more strongly vegetative and unspecialized as to function. For example, metaplasia and anaplasia take place, and so one finds abnormal new growth. For example, squamous cell epithelium arising from columnar cells as in the uterus, gall bladder, etc. Again, the normal inter-cellular antagonism of the body seems not to hold for the anaplastic cells, that is the vegetative or rapidly proliferating cells, hence metastatic growths are possible. For example, the mother cells of the thyroid to bone, causing adenoma.

5. The origin and the growth are separate.
6. Exogenous causes. That is, chronic irritations are important predisposing agents.
7. Cancer may arise locally anywhere.
8. There may be more than one focus of origin in a circumscribed area.
9. The histology of cancer cells varies within wide limits.
10. Cancer cells are specialized cells.
11. Heredity certainly plays a part in the predisposition to cancer.

THE EARLY DIAGNOSIS OF UTERINE CANCER.

The early diagnosis of cancer of the uterus is one of the most important functions of the family physician, for it is to him the patient usually appeals for relief, hence it is his bounden duty by every means available to make the diagnosis if possible. There are three sites for uterine cancer.

1. The vaginal portion from the vaginal vault to external os.
2. The cervical portion from the external to the internal os.
3. The uterine body from the internal os to the tubal orifices.

Now, cancer of the uterus develops in its mucous membrane, or immediately under the mucous membrane of its elements. That is, the glands of the cervix or the body. This classification is important because, not only the clinical picture of the cancer but the methods of diagnosis are quite different, depending on the starting point and extension of the disease.

There are certain symptoms which one may designate by the name of prodromes of uterine cancer. These are:

1. Bleeding in coitus—due either to engorgement or friction. It is very common, and often the first symptom noted in cancer of the cervix, though it may occur in vascular erosion, endometritis or polyps. It is always a suspicious sign.
2. Metrorrhagia—after the menopause; that is, some months after the menopause. This symptom may occur in fibroids and polypoid dis-

ease, but it is most often due to cancer. Irregular hemorrhages before the menopause are not so suspicious, but we must bear in mind the age incidence.

3. A sero-sanguinous discharge resembling greasy dish-water or beef brine occurs in the very early stages of cancer of the cervix, and is rare in other conditions. This modified cervical discharge is characteristic.

Clinical Diagnosis.

The clinical diagnosis of uterine cancer depends upon two factors:

1. The presence of a neoplasm, either proliferation or infiltration.
2. Its degeneration. This leads to the characteristic friability of the tissue which is of great diagnostic value. This friability is recognized by the finger or the sound. This property of breaking up into small pieces under pressure of the finger is very characteristic, and the only other tissues, perhaps, showing it is a necrosing fibroid.

The great tendency to bleed is understood when one recalls the histological structure. Hence, bleeding is characteristic of all three varieties of uterine cancer. But one finds hemorrhages in erosions, endometritis, chronic metritis and polyps, although less, so that diagnosis cannot be based on bleeding alone. When both features of cancer are present, namely, neoplasm and degeneration, the diagnosis is easy, but if only one of these is present difficulty arises. For examples, there may be only proliferation, then inspection with speculum aids, while any infiltration is found on palpation, whilst degeneration is found by both methods.

Cancer of the vaginal portion may be seen and felt through the speculum in the Sims posture, whilst palpation of body cancer may require dilatation.

Vaginal Portion.

Cancer here is the most easily diagnosed of all sites.

1. If of the polypoid variety its surface is reddish in color and friable; that is, easily broken or crumbled down by finger or sound.
2. If of the flat kind, any bulging above the surface is suspicious.
3. If of the infiltrating kind, a nodule is felt cartilaginous in consistence and altering the shape of the vaginal portion. If, however, the mucous membrane over the lump is intact then there is trouble, though the surface of the nodule may be purple in color and spotted by yellow pits due to the cancer nests.
4. Ulcerating cancers are easily spotted. The jagged fissures with soapy secretion, or reddish in color, with moderate induration, are quite characteristic, but often the microscope has to decide.

Differential Diagnosis.

The polypoid variety from:

1. Papillary tuberculosis may be made by careful inspection, finding the millet seed nodules or tubercle in the neighborhood. For example, the tubes, peritoneum or a focus in other organs.

2. From mucous polyps. Inspection shows the surface mucous membrane intact, and the sound that they originate in the cervix.

3. Cervical fibroid with the pedicle is distinguished by its intact mucous membrane and non-friability, unless gangrenous.

4. Follicular hypertrophy of the vaginal surface. Here the surface is not rough, the tumor is not friable, and it is covered by intact mucous membrane through which the follicles may be seen.

5. Condylomata acuminata. Here there is only a papillary surface with thick epithelium, no ulceration or infiltration. The color is a whitish red. Further condylomata may be found also in the vagina or vulva.

Infiltrating Variety: The differential diagnosis from

1. Inflammatory infections—metritis colli, but inflammation usually affects the whole vaginal portion uniformly. The consistency is not so hard, the mucous membrane is intact and follicles are seen. For example, a case in hospital the microscope decided.

Flat Cancerous Ulcerations.

Flat cancerous ulcerations have to be distinguished from:

1. Erosions, if developed upon a hard inflammatory base, or associated with ectropion, or the surface becomes rough on account of thick papillary erosions. Inspection decides; an erosion surrounds the external os evenly and has a glistening shiny appearance and bright red color, as it is covered by columnar epithelium, whilst a cancer is duller in color and rougher, even if ulceration is quite superficial. The erosion has no sharp border, but merges gradually into the squamous epithelium of the vaginal portion—outline irregular and pits or follicular ulcers are often seen on the surface. But if the erosion has lost its epithelium the microscope decides.

2. *Simple Ulcers:* Due to prolapse or a pessory or cauterization or croupous processes, lack induration and at the borders healing is often seen.

3. A tubercular ulcer is similar to cancer but is very rare. It surrounds the external os. Its edges are undermined, the floor is granular but not indurated, yellow miliary tubercles may be seen. Also the disease is found elsewhere or the microscope shows a tubercle structure.

4. Chancroids (soft sore): Are usually small sores, becoming larger by confluence, have elevated borders, the floor has a croupous membrane but is not indurated. Ulcers are multiple and contact ulcers are found. Also ulcers on the vagina or vulva.

5. Syphilitic Ulcers:

- (a) Initial lesion.
- (b) Degenerative papule.
- (c) Gumma.

Degenerative papule is a solitary indurated and shallow ulcer, with indistinct border and dirty copper red color, with greasy exudate on its floor. The anterior lip is the favorite site.

6. Condylomata lata, or papulous ulcers, are elevated slightly and covered by a yellowish debris. They are multiple and other papules may be found on the vulva.

7. Gummata—are rare. The ulcers are elliptical, well-defined, shallow, and the floor covered by a pus-like exudate, which on separation leaves bleeding granulations. It is situated usually to one side of the external os, and extends by serpiginous border. One may demonstrate the lesion elsewhere, also the Wasserman reaction or the presence of spirochaete may be shown.

Diagnosis of Cervical Cancer.

This is more difficult, especially if the os is closed, but otherwise when the os is patulous. Then ulceration, the absence of epithelium and especially friability on scraping with the curette is diagnostic.

Infiltrating Cancer.

Here diagnosis depends on change in shape of the cervix and its consistency. The surface becomes distended on one side, perhaps, and the canal displaced. Its consistency is cartilaginous. If infiltration is high up in the cervix a rectal examination may help, but the best plan is to remove a piece of tissue with the curette and examine histologically, or even to curette the body as well as the cervix and *vice versa*.

Differential Diagnosis.

1. Metritis or endocervitis, but here the condition is uniform and the mucous membrane is intact.
2. Follicular hypertrophy, but here the mucous membrane is intact and the follicles shining through may be punctured.

3. Interstitial myomata, are more rounded; that is, better outlined and surrounded by soft issue, while cancer owing to inflammatory reaction is not. Ulceration favors cancer.

4. Chronic cervical catarrh, in old females. Here the mucous membrane feels rough, uneven and nodular owing to the granular depression and the surrounding fibrosis, but the mucous membrane is intact and the curette gets no tissue. The microscope decides.

Cancer of the Uterine Body.

Cancer occurs here about one-fifteenth as often as in the cervix, but is very important to diagnose, since most corporeal cancers arise after the menopause. Hence, there are two important signs.

1. Hemorrhages.

2. Simpson's pains, regular labor-like pains, lasting several hours and recurring at definite times of the day.

But there are no characteristic bi-manual palpatory findings in cancer of the body. The size of the uterus may be normal or even atrophic. Later it may resemble a fibroid or metritic uterus. Diagnosis is made by exploring the cavity.

1. By the sound which distinguishes from retained desidua or fungus endometritis, by presence of hard nodules or depressions when cancer is present. If the interior seems smooth cancer may be excluded, but if there are irregularities of the surface the microscope is necessary. The microscope is the proper method of diagnosing early cancer of the body. Digital exploration may be employed if the os is open plus curettage, but if the cervix is closed curettage is employed, and if negative digital exploration is then used, but the latter is more dangerous, besides palpation is not so sure as the microscope.

Differential Diagnosis.

If the curette is used the microscope decides; if a digital exploration then one has to distinguish from:

1. Adenomyoma.
2. Sarcoma.
3. Degenerating fibroid.
4. Mucous polyps.
5. Remains of abortions.
6. Chronic Metritis.

But cancer is distinguished by the two signs of neoplasm and degeneration.

Although corporeal cancer occurs only about one-fifteenth as often as the other varieties, still it is more insidious in its mode of onset. It is more frequent in spinsters and in barren wives than in multipara. This corresponds with the clinical experience that it is frequently associated with fibroids, and fibroids are a result of the barren or the celibate state. It is interesting to note that cancer of the body of the uterus has been found to follow double ovariectomy, and since this is practised occasionally for bleeding fibroids near the menopause it is worth remembering.

Again, sub-mucous fibroids are often associated with changes in the endometrium which not only cause excessive bleeding but set up also inflammatory conditions, giving rise to salpingitis, leucorrhoea, etc., but also render the mucous membrane more susceptible to cancer.

Bland-Sutton (Burghard's System of Surgery, Vol. 4, p. 52) states that in patients submitted to hysterectomy for fibroids, over the age of fifty years, about ten per cent. will be found to have cancer of the corporeal endometrium.

Hence, one may sum up the early diagnosis of uterine cancer by stating that:

1. The family history is important in discovering a predisposition.
 2. The personal history is important in deciding a predisposition.
- For example, cervical cancer is almost exclusively a disease of women who have borne children, or at least been pregnant. Hence, there seems good reason to suppose that injuries and their sequelæ are predisposing factors. Again, corporeal cancer is chiefly the disease of spinsters and barren wives, and these are the patients who suffer from endometritis and fibroids.

3. Chronic irritations are important etiological factors. For example, lacerations in multipara, fibroids, and endometritis in nullipara.

4. The warnings or prodromes are:

1. The red flag of metrorrhagia after the menopause and the Simpson pains in corporeal cancer.
2. The unusual discharge in cervical cancer.
3. The bleeding after coitus in the vaginal variety.

Since being fore-warned is fore-armed the way to get an early diagnosis is:—

1. To educate women as far as possible to regard any unusual hemorrhage or discharge after the menopause or even before it as a danger signal.
2. To submit all patients consulting one for these symptoms to a most careful examination.
3. To never temporize or delay, but, if necessary, to have an expert in consultation, or, if impossible, at least to use every available means to

arrive at a diagnosis, and among these is a careful histologic examination of the curetteage, or a piece of the suspicious growth, for after all the microscope is the supreme test in many of these cases.

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ASEPSIS IN PRIVATE OBSTETRICAL PRACTICE.

By A. EDMOND BURROWS, M.D., Harriston, Ont.

IT is not the purpose in writing this article to introduce anything new in obstetrics, but to review the subject as it stands to-day in the light of bacteriological knowledge which has, or should have revolutionized obstetrical methods, in the past few years, and particularly to apply this knowledge to private and country practice.

It may not be absolutely necessary for the general practitioner, or country practitioner to master the details of aseptic surgical technique, because by far the largest majority of surgical cases go to the specialist in that line, but on the other hand the largest amount of obstetrical work, of necessity, is handled by the family physician.

It is therefore of the utmost importance that an aseptic technique should be at the finger tips of every practitioner who attends an obstetrical case.

What has been done in surgery by rigid aseptic methods can also be done in obstetrics, and more, because in surgery we are dealing with grave pathological conditions. Yet there are surgical institutions which have a record of hundreds of consecutive operations without a single death.

It would be difficult or impossible to find the exact percentage of deaths due to puerperal sepsis, or child-bed fever, in private practice. It is not at all likely that the cause of death is given or even known in every case. Yet a search into the records of several county registrars, reveals a condition of affairs, appalling.

And even when death does not occur from the milder infections, the chronic illnesses and disability resulting from this cause is alarming.

There is no doubt that this is the greatest source of ill-health among women to-day. It has become a real menace to mankind. It is common to see a woman, the mother of one child, practically an invalid. The result of this on her future offspring is disastrous. When one considers the light and knowledge that has recently been gained by bacteriological study of puerperal sepsis, it is hard to understand how any of the profession can still grovel in the error of ignorant dogmas, but yet too often we still hear expressions conveying the belief in some such dogma.

That a puerperal sepsis is caused by suppression of the lochia, for instance, or the milk, or a draught of air, changing a sheet, colds, etc. In fact the cold theory is oftenest the loop hole used to crawl out of the responsibility of a septic infection, rather than put the blame on hands not properly rendered aseptic, or unsterilized instrument. In general practice there may be difficulties in the carrying out of absolutely aseptic methods, but it can be done and results have proved to be well worth the effort. It is therefore the bounden duty of every practitioner who takes the responsibility of the life of a parturient woman in his hands, to strive towards the perfect ideal that can actually do away with death from puerperal sepsis.

“Better let the toe be chopped off with an axe, the bone allowed to slough out, and the wound to heal by granulation, than subject one woman to even a mild puerperal infection that will transform her from a strong, healthy being, to a confirmed invalid, a burden to herself, her husband, and her family.”—J. B. Cooke.

The first thing a practitioner must do who would aim high in regard to obstetrical practice, is completely to disillusionize himself of the thread bare ideas which should have long since been relegated to the past ages of ignorance in these matters.

The following is a summary of the facts which have been based on thorough investigation, and elaborate experiments by men to whom we owe our present knowledge of puerperal infections.

(1) That normally the vagina is free from pathogenic organisms, particularly in its upper part, but many forms of bacteria are present which may be looked upon as scavengers of the passage, as they are known to possess the power of destroying virulent organisms.

(2) These protective bacteria are absent, or are powerless when the parts are bathed in lochia, but reappear when this ceases.

(3) That the uterus is further protected by a plug of mucous in the cervical canal, so that the interior of the uterus and its contents are sterile at the onset of labor.

(4) When virulent bacteria are found in the upper vagina or uterus they *have been introduced from without*.

(5) In the puerperium the normal resistance of the tissues is lowered owing to bruising and pressure, and therefore infection easily invades the uterus, tubes, and system.

(6) Death from puerperal sepsis is always due to infection from without, and is usually due to neglect of aseptic precautions on the part of physician or nurse.

(7) That a temperature or a chill, no matter how slight, is always a result of some infection, or the absorption of the products of bacteria.

Practically speaking, every death occurring during the puerperium, which does not occur at the time of delivery, or shortly afterwards, results from sepsis. Those deaths which take place suddenly after the patient has seemingly been doing well and showing no marked symptoms of sepsis, are due to a septic thrombi being washed through the vena cava into the heart as was seen by the writer at post mortem in Montreal. The clot found in the heart being an exact cast of the junction of the common iliac veins, it having been washed into the heart. Such deaths are commonly attributed to heart failure.

Puerperal sepsis can be avoided, and fortunately can easily be avoided, and it is the duty of every practitioner who accepts the management of a case faithfully and conscientiously to guard his patient by following out a rigidly aseptic technique. He must ever remember that the slightest flaw or break in his technique may break the chain of asepsis and completely undo his most careful preparations.

It is obviously useless to render one's hands aseptic and later touch anything which is not aseptic, not to mention such a filthy practice as that of putting the hands into a pocket where money is kept. Paper money has been shown to carry the most virulent bacteria. Yet such a breach as this is sometimes observed.

To accomplish perfect asepsis the details in regard to the patient, her surroundings, the instruments and appliances, and the physician himself, require rigid adherence to fixed rules.

The following is an outline of the routine for management of a case in private practice:—

The patient should be instructed to take a hot soap suds bath on the approach of labor.

The bowels should be moved by a soap suds enema. If they move during forceps operation, the risk of sepsis is greatly increased.

After the physician has given his hands the first scrub the pubes and vulva are shaved or clipped.

The patient is then placed on a sterilized Kelly pad, and washed thoroughly with spirits of green soap. From the umbilicus to the knees, paying particular attention to the vulva, the clefts between the labia and the anus, etc., a swab of absorbent cotton is used for this purpose.

This area is then flushed off with bichloride solution 1-4,000 and covered by a sterile pad, wrung out of bichloride solution.

The bladder is emptied, if necessary, by a catheter, using aseptic precautions.

All superfluous clothing should be removed from the bed as these are usually filled with dust, and are a prolific source of infection. All drapery, curtains and table-covers should be removed for the same reason.

A freshly laundered sheet is pinned over the mattress which should be hard. Frequently in the country a feather mattress has to be removed.

The patient is covered with a freshly laundered sheet, the room should be warm enough so that this will be sufficient covering. Examination can now be made if required, after the obstetrician has scrubbed his hands for the second time, and put them through the solution. Although it is quite possible to manage even difficult cases without making a vaginal examination at all, they certainly should be limited as much as possible.

The physician himself must observe the most absolute personal cleanliness of skin and wearing apparel.

Clothes which are used for knock-about wear become filled with dust and should not be worn to a confinement, not to speak of clothes which have been worn to infected or pus cases.

Let me here say that no practitioner who attends obstetric cases should have anything to do with the care or handling of his own horses, or any duties in a stable. Such a condition of affairs is an injustice to his patients. If he undertakes such work many virulent bacteria will be present in the deeper layers of the skin, which would take days of treatment to remove. It is the physician's duty to his patient to obtain fees that enable him to avoid such drudgery, and also cover the expense of a thorough technique. If his charges are not enough, or barely enough to cover the expense of such a technique, it can mean but one of two things; either that he is a philanthropist of a very poor sort, or that he is performing such careless, slovenly work that he is overpaid if he receive any remuneration whatever.

In every locality there are certain women who are willing and able to pay *well* for work that they know is properly and scientifically performed. And the practitioner who limits himself to occasional cases of this sort, will gain a greater reputation, than he could through patients who do not appreciate scientific work.

The hands and arms should be rendered as aseptic as if for a laparotomy. This is principally to be obtained by *physical* means, *i.e.*, scrubbing. They should be scrubbed for at least five minutes, using spirits of green soap, or ether soap, to remove the oil from the skin. The brush is used vigorously, first, lengthwise then crosswise, paying particular attention to the nails, knuckles, back, front, sides, and webbs of the fingers, also the wrists.

The physician should manicure his nails daily, using peroxide of hydrogen and an orange stick to clean thoroughly under the nails, and push back and cuticle. After scrubbing the hands thoroughly they are immersed in a 1-4,000 bichloride solution, then rinsed in sterile water.

It has been clearly shown that unless the oil of the skin, the loose layer of epithelium be removed, and the follicles opened up, bacteria may remain hidden which could not be reached by the ordinary antiseptic solutions, but might be washed out after the skin has been moistened for some time with organic fluids as is the case in making vaginal examination, etc. *After* the hands have been rendered aseptic the physician dons a sterilized gown or apron.

All instruments to be used, or touched by the physician are sterilized by boiling ten minutes. Bicarbonate of soda should be added to the water to prevent rust. The small instruments are boiled in an agate dish or something of the kind, which is usually to be found in any house. The instruments should include a pair of scissors, artery forceps, needle forceps, needles, and scissors for cord, silk for cord should be carried in alcohol tank.

Many cases of early death of the infant result from infection of the cord. I have seen several such cases, one was infected with tetanus.

Forceps are put into an ordinary bedroom jug, boiling water poured over them, a little creolin added, and covered with a sterile towel.

A table covered with a freshly laundered sheet and large enough to hold basins, jugs, etc., is put within easy reach of bed.

On it is placed a scrub basin containing sterile water and a hand brush. A basin of bichloride solution, 1-4,000. A basin of plain sterile water for rinsing hands. One jug of hot, boiled water. One jug cold, sterile water. A dish containing four golded pieces of flannel about six inches square, in hot bichloride solution. These may be left on the stove until required for applying to perineum. One package of sterile gauze, Dish of instruments. Tank of silk for cord. Hypodermic syringe (ready sterilized). Ergot for hypodermic use. Jug with forceps is placed on floor beside bed.

The care of the obstetric bag is an important part in the carrying out of asepsis. It should never be used in any case other than obstetric. It is wiped out with a damp cloth wrung out of bichloride solution after each case. The bottles it contains are also wiped off in the same manner.

The physician should never administer the anesthetic himself because it is impossible to anesthetize the woman, and at the same time keep himself, his instruments, and the birth canal in an aseptic condition, nor should he trust it to any but one well trained to administer an anesthetic. The work he is doing will require all his attention, and anything that will divide his attention may result in a more or less serious accident.

For many reason the services of a trained nurse is necessary for the proper management of a confinement, and people should be educated to this end.

If a forceps operation is required the patient is best placed in the lithotomic position. Freshly laundered white cotton stockings are drawn over the feet and legs. A sterile towel is placed over the abdomen, so that if the physician desires to make pressure over the uterus, he can do so without danger of soiling his hand.

Important points to remember—make as few vaginal examinations as possible.

When doing so have the nurse or assistant lift the clothing.

Put hands through solutions before each examination.

If patient's bowels move during labor wipe downward with one of the perineum pads, throwing the pad away. Cover with fresh pad out of bichloride solution.

Repair vaginal or perineal tears immediately. Repair cervical tears as soon as practicable.

Pass hands through solutions every time anything has been touched which has not been sterilized.

A bed pan has no place in the lying-in room. The patient should be allowed to sit upright on an ordinary bedroom vessel, at least three times a day. This is the only possible way of obtaining drainage from uterus.

One soon forms a habit of carrying out all the details of technique unconsciously and automatically, so that it becomes easier to perform them than to leave one undone. Such a habit not only rewards the practitioner by the most happy, and positive results, but makes him a strength and blessing to humanity.

THE MEDICAL USES OF RADIUM.

By G. STERLING RYERSON, M.D., C.M., L.R.C.S.E.,
Professor of Ophthalmology and Otology in the University of Toronto.

HOW little it was thought when Radium was discovered by Professor and Madame Curie that it would ever be of medical use! Yet as time goes on it is being demonstrated more clearly every day that we have in radium one of the most potent substances wherewith to combat lupus, rodent ulcer, cheloids, angioma, naevi and epithelioma which has yet been discovered.

Its use in medicine, like that of many other substances, was discovered by accident. In 1901 Becquerel who was using a tube of bromide of radium for experimental purposes put it in his vest pocket. His attention was drawn to the imprudence of this act but he took no notice of it but carried the tube about with him for several hours. A fortnight afterwards (note the slow action) severe inflammation of the skin appeared which lasted for a considerable time. Curie then made

an experiment on himself which resulted in a large burn which was very slow in healing. Drs. Danles, Wickham and Dominici then began experiments with tubes of this substance at the Hospital St. Louis. Later, Dr. Wickham associated Dr. De Grais with him and undertook prolonged and exact studies of the effects of radium, the results of which are embraced in their recent book.* The writer's attention was first drawn to this subject in 1909 when a case of angioma of the larynx presented itself for treatment. The history of the surgical intervention was so unsatisfactory that he began to look around for some other and more hopeful method of treatment. He obtained from Dr. E. E. King a tube of German radium for which a holder was made so that it could be introduced into the larynx. Later in the same year he went abroad and, in company with Dr. W. H. B. Aikens, visited the Laboratoire Biologique du Radium in Paris, conducted by Drs. Wickham and Dominici. What he saw there induced him to invest in a small quantity of bromide of radium adapted for application to the ear, eye, nose and throat. His subsequent experiences have confirmed him in his earlier impressions of the benefits to be derived from the use of radium in suitable cases.

It may be of interest to record here some of the facts with regard to the origin and properties of radium. As is well known it was discovered by the Curies in 1899 and is obtained from pitchblend. It is exceedingly difficult of extraction hence the high price, \$75.00 the gramme. It requires five tons of chemicals and fifty tons of water to obtain 2 to 5 milligrammes from the pitchblend. To this lavish expenditure of material must be added the time and labour to obtain this small amount. Radium has never been isolated in metallic form but as bromide or sulphate and it is in this form of these salts that it is sold. The activity and strength of radium are measured by its power of ionisation. Uranium is taken as the unit of ionisation. Radium ioinises 2,000,000 times more than Uranium. Hence the activity of pure radium bromide is said to be 2,000,000, half pure 1,000,000, and twenty-five per cent., 500,000 and so on. Bromide of barium is added to the radium to subdivide and reduce its strength while giving bulk.

Radium liberates heat, so much so that patients state that it feels hot, although the treatment is entirely painless. It also liberates light, becoming luminous in the dark and has the power of lighting up flourescent screens. It has great penetrating power, the rays passing through the human body or through twelve inches of iron, indeed the gamma rays are much more penetrating than the x-rays. It has the power of coloring bodies and will turn glass violet, brown or black depending on the chemical composition of the glass. It will colorise the diamond

* Radium Therapie—Paris, 1909.

rose, green, blue or yellow but this colorisation is evanescent. It excites phosphorescence in certain substances such as barium-platino-cyanide, even with the intervention of an opaque body. Its activity is due to the emission of three kinds of rays, alpha, beta and gamma. Of these the gamma are the ultrapenetrant and are of the greatest use in treatment. The alpha and beta rays are more irritating to the skin and of less value therapeutically. To shut off, therefore, the irritating rays and to obtain the beneficial effect of the ultra penetrating rays (gamma) filtration is resorted to by means of screens. For this purpose paper, rubber tissue, gold, silver, aluminium and lead screens are used. They vary in thickness from 1-100mm to 1cm. The surrounding normal skin must be protected by lead shields, openings being made of the shape and size of the diseased surface.

When long applications of ultrapenetrant rays are required radium of low activity, 100,000 or less, is used. When short destructive doses are needed "naked radium" that is, radium bromide of full strength, without the intervention of screens is required.

"Cross fire" is a method devised by Wickham to enable the rays to cross in the tissues during an application. Two or more instruments are required. The crossing of the rays seems to greatly increase their activity.

When radium is in process of disintegration it not only sets free energy in the form of the alpha, beta and gamma rays but it gives off a radio-active gas, the "emanation." This gas can be collected in water and has been used therapeutically as an injection into the tissues but also interally. Some observers claim more activity for it than for the rays themselves, notwithstanding its shorter active life of about six hours.

The simplest growth for which radium is used successfully is the non-malignant papillary hypertrophy—the common wart. Press against it a small quantity of pure radium screened by a thin layer of aluminium. In a few days a slight hyperemic zone appears around it accompanied by tenderness and itching. In the next ten days these symptoms increase and during the third period of ten days the growth rapidly recedes. I have handled a recurrent wart on the nose which had been twice excised. Papilloma of the larynx may be treated in the same way. The tendency is to recur under ordinary evulsion even when accompanied by galvanocautery. Radium, if used in sufficient strength, will effectually remove them.

Leukoplakia of the tongue and mouth, another form of papillary hypertrophy, can be treated in the same way. I have had one on the roof of the mouth which disappeared in three, thirty minute applications. Lupus heals readily under radium. It is essential that all crusts be

removed and that the radium be used for considerable periods at intervals of one or two days. Rodent ulcer seems to be particularly amenable to radium. Epithelioma of the face, buccal cavity and nares is readily accessible to radium. Results have been reported by Wickham and Degrais as having been obtained in from eight to thirteen weeks.

Abbe* states, "Leaving out of this short paper more than a mention of the true epitheliomata, basal celled and other destructive and defacing types, which yield permanently and with less scar than any agent heretofore used, except Roentgen rays, I will not only the fact that five or six years have elapsed, with permanent cure, in some of the earliest cases so treated. Relapses do occur in some, due entirely to insufficient treatment, and only serve to demonstrate the need of careful study of dosage and standardising of specimens of radium before use."

He records the following remarkable case.

"A man of forty-five, had a growth for a year so as to involve two-thirds of the lid. It grew equally on the mucous membrane, on the eye and on the skin, so as to form a mass in which all semblance of the lid and lashes was lost. It resisted Roentgen ray application and all other treatment by ophthalmologists. A section was taken from its centre and showed small cell sarcoma. The patient was offered to me to try radium before excision of the lid. I laid strong radium in glass tubes upon it four times during one week, protecting the eyeball by a thin lead shield. Then I waited. Week by week it melted away. In eight weeks it was absolutely gone. Five years have gone by, and not a trace of it has recurred. Nothing so nearly resembling the marvellous has ever been my fortune in surgical work. I will conclude by quoting still another case from Abbe. The subject was a middle aged lawyer who for two years had been developing a parotid mixed sarcoma of which I took a photograph before treatment, as well as plastic impressions. The rapid improvement shown was due to the insertion of a strong radium tube several times, for two hours each, buried in the tumour after pieces had been punched for microscopical study."

It will be seen from what I have already detailed that the subject of treatment of non-malignant, semi-malignant and malignant growths by radium is one of intense interest. Where failures have occurred they seem to be due to insufficient or improper dosage.

My experience has taught me that the application of radium is a very technical proceeding. The strength of the radium to be used, the length of time to application, the amount of filtration necessary in a given case and the intervals between treatments all require careful considera-

* Archives of the Roentgen Ray, London, Feb., 1910.

tion and experience. Improper dosage, too long or too short exposure, insufficient or too great filtration seriously affect the results.

Too long exposure or too large a dose are destructive in effect. While this destructive power is injurious in some cases yet advantage is taken of this action in certain cases of malignant disease with the happiest results, as for instance, in fungating epithelioma and in some cheloids.

In general it may be said that more good is effected by activities of 100,000 than by pure radium and that applications with intervals are more effectual than daily treatments.

HYPERCHLORHYDRIA.

Puersol, in *The Monthly Cyclopaedia* for February, 1910, reports the result of study of 300 cases of hyperacidity.

156 were hyperchlorhydria per se, 144 were due to some lesion of the gastro-intestinal tract, e.g. gastric dilatation or ulcer, 70.5 per cent. were in males; it was much more frequent in those who lead sedentary lives under mental or nervous strain and dietary indiscretions are casual in many cases.

The symptoms are local and general. Local are epigastric distress, pain, gaseous and acid eructations, pyrosis, nausea and acid vomiting, but these are not constant; pain or burning, worse two hours after meals was present in 42 per cent. of cases, acid eructations in 26.9 per cent, acid vomiting in 16 per cent., pyrosis in 8.9 per cent. Constipation was present in over 50 per cent., diarrhoea in 8 cases; usually the appetite was good and the state of nutrition well maintained, but 31.6 per cent. showed loss of weight.

Nervous phenomena were exhibited in a number of cases as depression and mental confusion, irritability, phobias, numbness, weakness and faintness and vertigo in 28 cases.

Examination of the stomach contents showed in 125 cases good digestion of the solid parts, and good starch digestion in 110; retention was found in 18.5 per cent. and hypersecretion in 19 out of 156. The stools showed good digestion, and no signs of occult blood. The urine was unusually decidedly acid with specific gravity over 1,020 and indican was present in 50 per cent. of examinations. No noteworthy changes were found in the blood.

CURRENT MEDICAL LITERATURE.

MEDICINE.

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

TREATMENT OF PROTEIN INTESTINAL INDIGESTION.

In the *Medical Record*, March 26, 1910, Thayer and Turck make a study of the forms and the treatment of this form of intestinal indigestion. The following classification is suggested:—

1. Neuraglic; with frequent frontal headaches; there may be other neuralgias or actual neuritis; usually the nerves above the waist are chiefly or alone affected; these cases commonly have more indolacetic acid than indican in the urine.

2. Neurasthenic; when in males there is often present a distinctly sexual element, with seminal vesiculitis or prostatitis.

3. Anemic-chlorotic; oftenest found in young women who neglect their bowels and eat imprudently.

4. Dyspeptic, with flatulence, alternating diarrhea and constipation, distress in abdomen or dull pain, ptosis of some of the viscera, chronic appendicitis.

5. Mental; with fears, dulness, rapid exhaustion on mental effort, impaired will and memory, melancholy.

6. Mixed types, most common, but one of the above usually predominating.

Under treatment they say: This subject naturally falls into two main divisions, the dietetic and the medicinal. The most valuable hints for the diet are derived from the study of the feces and the tests of hepatic and pancreatic efficiency; for if the patient is making a good use of starches and sugars, while fats are fairly well digested, the indications are clearly to cut proteins to a minimum, make cereals and other starches the main reliance, and supply assimilable fats guardedly. It will not do to exclude protiens from the diet entirely, for these patients are often losing weight, and without proteins in the food they will consume the body's own proteins and continue losing weight. A little lean meat once a day, or milk, or vegetables rich in protein may be allowed. The weight must increase in such a case if improvement is to take place, and the patient should have a special suit of clothes and a particular day of the week and hour of the day for taking his weight, always on the same scales; after the first weighing the clothes should be roled in a bundle and weighed at home, which will give a

constant factor to subtract from the various weighings to reckon the actual weight without clothes.

It is absolutely necessary to supply ferments; otherwise even the small amount of protein allowed will putrefy and delay improvement. All the strong proteolytic ferments have a pronounced action on milk and upon proteins of vegetable origin.

Many patients miss the protein from their diet if too much restricted, and will rebel, and since the patient's co-operation is most important this must be taken into consideration. Perhaps nothing is quite so good in such cases as gelatin. It may be prepared acceptably in many ways, simply dissolved in beef broth, or given as calves'-foot jelly or other jellies, or as Bavarian and other creams for dessert. Gelatin is peculiarly free from aromatic elements which furnish indican and indolacetic acid, and is bulky and well tolerated. Aldor has used it with success in 60 cases of intestinal catarrh. Other cases do well on junket and whey, the latter given cold, flavored with lemon. Buttermilk is an excellent article of diet, and may be taken *ad libitum*. Fermented milks are on the border line between food and drugs, for they are supposed to nourish and at the same time to aid in disinfecting the intestine. In such fermented milk the casein is already converted (to about 50 per cent.) into peptone and albumose; lactic acid is about 1.0-1.2 per cent.; calcium phosphate is in an easily absorbed form, and they are particularly useful when the stomach is also deranged, as in anorexia nervosa, and subacute gastritis. Gout and arteriosclerosis are often associated with intestinal putrefaction, and for these conditions the fermented milks are also useful. North in some cases employs suspensions of butter and lactic acid bacilli in maltose broth for flushing out the colon. Nutritive enemata may be found useful, but rectal alimentation is seldom needed for these cases. Where hyperacidity and spasmodic pain are important symptoms, olive oil is frequently of service, either swallowed or taken through a tube, best given hot. Tea, coffee, and alcohol are almost always to be forbidden, and copious drinking of distilled water encouraged to the utmost and kept up for weeks and months. Other cases will require other diets, and it often taxes the physician's ingenuity to suggest something which the patient likes and which he really ought to have.

Drugs: The indications for drugs are chiefly six: 1, to clean the bowel thoroughly; 2, to stimulate the liver produce more bile and of a more fluid quality; 3, to supply ferments; 4, to disinfect the alimentary canal; 5, to care for the stomach condition; 6, tonics.

1. The immediate need is for a clean bowel, and this may be obtained by calomel or calomel with podophyllin, best given in 0.01 every hour for six doses, and followed by a saline the morning after,

with a full glass of cold water. But it will not do to stop here. Increased catabolism is an absolute need, and either cathartics or diuretics or both must be taken for a long time. When the constipation is accompanied by too small a total daily urine, of high total solids salines may accomplish the double purpose of flushing out the bowel and causing the excretion of more urine, but as a rule it will be better to give salines only as diuretics, except with obese patients, cleansing the bowel otherwise. For the latter purpose nothing gives better satisfaction than phenolphthalein, either in the tablet form or a syrup, the latter especially for children. Usually one or two tablets every night will suffice, but more can be given, and after daily thorough defecation has become the rule, the quantity of the drug may be reduced, giving a tablet once every other day or twice a week. As opposed to all other purges, phenolphthalein does little if any damage to the intestinal wall, materially decreases the number of bacteria, and produces a copious outpour of the lymph in the deeper parts of the mucosa and its lymph channels. But in some cases other cathartics are necessary, and a proper pill may be alternated with a tablet of phenolphthalein, and the laxative effect of certain articles of diet, like shredded wheat biscuit, may be used to aid the drugs. Consistent and persistent deep breathing will also aid in the attainment of this object, but it is difficult to persuade the patient of it. The various preparations of bile salts, and combinations which contain them, are efficient and convenient means of obtaining several kinds of action at once. The offensive breath, coated tongue, pain in the region of the liver, foul odor of the feces, flatus, and similar symptoms, all tend to improve as soon as more bile, or more fluid quality, enters the intestine daily. As the catarrhal condition of the upper part of the small intestine improves, the enterohepatic circulation of bile salts is facilitated, peristalsis becomes more regular, and cathartics in reduced frequency maintain the advantage gained.

3. Since the chief reason for the failure of the proteins to digest, whence come all the other troubles, is often a lack of the normal ferments, a very clear indication is to supply such ferments. The administration of ferments should be kept up for several months while proteins are cautiously added to the dietary and their digestion watched by frequent tests of the feces and the urine. When fat is not well digested, alkalies are indicated.

4. Intestinal disinfection is a difficult subject. Salol, naphthalene tetrachloride, some of the guaiacols, creosote, and sulphocarbolates are all useful at times; perhaps the sulphocarbolates are most uniformly useful, keeping watch against any tendency to constipate. Schmidt has suggested a simple and ingenious method of disinfecting the bowels

which it might be well to try. He finds that agar will take up about 12 per cent. of hydrogen peroxide and give it off slowly in the intestinal canal. Such a jelly, flavored to taste, swallowed in rather large lumps without much chewing, may be a valuable addition to the medication, particularly if diarrhea is a marked symptom.

5. The conditions in the stomach should always be studied. Hyperchlorhydria and gastrosuccorrhoea are well controlled by eumydrin, as shown by Tedeschi in 1907 and Massini in 1908. It may be given in doses of 0.001 t.i.d., and is best combined with sodium citrate; it is more efficient than atropin and less toxic. For the opposite condition Ynkawa has lately claimed that suprarental extract strongly increases the flow of gastric juice and the production of hydrochloric acid, except in complete acidity. Of course, the well-known and established measures may be required in addition, to say nothing of the repeated use of the stomach tube.

6. Tonics are required in the majority of these cases; anaemic cases usually do best when both iron and arsenic are given. A convenient and efficient way to administer iron is by Bland's pill after meals either plain or with arsenic. Strychnine is best avoided in these cases for the heart is apt to be irritable. As a rule tonics are most needed at the beginning of the case and should be dropped as soon as there is a decided gain in weight and the patient is habituated to a diet which suits him.

ALCOHOLIC INJECTION IN TRI-FACIAL NEURALGIA.

In the *Medical Record*, April 30th, there is an article by Loszynsky on the treatment of neuralgia by injection of alcohol. He advises that after rectifying all discoverable sources of irritation, either direct or of reflex origin, should the pain continue unabated despite the systematic treatment instituted, we may then resort to the injection of alcohol without considering surgical intervention. For those unable or unwilling to submit to any prolonged course of treatment, the alcohol method may be adopted in selected cases.

The benefit is due to the degeneration of the nerve trunk which follows the injection, and as an operation research would indicate that it is as effective as resection. Schlösser who was the pioneer in the field, suggests that first the effect of injection at the foramina of emergence of the branches be tried *e.g.*, at the supra-orbital, and if this fails that the more radical method of injection at the foramen rotundum or foramen ovale, depending on the location of the pain be adopted. The technique is not difficult to acquire, and the writer advises the subzygomatic

method of Levy and Baudouin. A needle 10 c.m. long and 1.5 m.m. in diameter is used and introduced through the skin at the lower border of the zygoma to a depth of 4 c.m. to reach the inferior maxillary division of the nerve at its emergence from the foramen ovale or to a depth of 5 c.m. to reach the second branch as it leaves the foramen rotundum to enter the pterygo-maxillary fossa. When the point of the needle has reached the desired location the alcohol to the amount of 2 to 3 c.c.m. of sterile 80 to 90 per cent. alcohol, is slowly injected, the needle withdrawn and the small puncture closed with collodion.

The pain of the operation is not great enough to require any anæsthetic. The region of the foramen ovale is more easily reached than that of the rotundum, the latter may be protected by a projecting coronoid process, or there may be some unusual configuration of the skull, and there is no guide but anatomical knowledge and the sense of touch. If successful there will be a development of analgesia in the peripheral distribution of the corresponding nerve, it may be necessary to repeat the treatment a number of times, and the results are as a rule more lasting when this is done. No serious accidents or complications have been recorded, there is frequently slight swelling or ecchymosis of the face for a few days, and when the inferior dental foramen is injected there may be troublesome rigidity of the masseter.

The writer reports fifteen cases all of whom were relieved, and as far as the pain goes are cured for the present; in most of them more than one injection was needed, and in some persisting pain was removed by injection to the superficial foramina of emergence.

HYSTERICAL FEVER.

In the *Medical Record*, April 30th, there is an article by Levison on this very interesting subject. He calls attention to the long fought dispute on the possibility of a truly hysterical fever, and the fact that this has often been taught as a test for the existence of a hysterical basis for symptoms.

He summarizes as follows, and thus indicates the unsettled position of the question:

1. That the earlier reports on hysterical fever are unreliable.
2. The larger number of case reports are faulty, in that the differential diagnosis from tuberculosis, malaria, typhoid, meningitis, peritonitis, and other infections, have been insufficiently considered.
3. The Latin races have furnished the greater number of cases.

4. Most cases have been in young women.
5. Medical opinion is divided on the question of hysterical fever.
6. The case reports of fever reaching an unusually high point may be set down as clever deceptions.
7. The fever has been more often variable in the highest degree, without definite relation to pulse and respiration.
8. The temperature has been found at times unequal on the two halves of the body.
9. Medical writers of high repute have reported elevations of temperature from psychic influences only, as suggestion or hypnotism. This seems to stamp hysterical fever as genuine.

DIFFERENTIAL POINTS IN GALVANIC POLARITY.

POSITIVE.	NEGATIVE.
Is acid	Is alkaline
Hardens	Softens
Denutritive	Nutritive
Promotes a clot	Dissolves and absorbs a clot
Liberates oxygen	Liberates hydrogen
Produces anemia	Produces hyperemia
Slows circulation	Quickens circulation
Allays excitability	Increases excitability
Decreases local heat	Increases local heat
Retards hemorrhage	Increases hemorrhage
Repels soluble salts	Attracts soluble salts
Lessens inflammation	Aggravates inflammation
Decreases vascularity	Increases vascularity
Has a drying influence	Has a moistening influence
Lessens nerve irritability.	Increases nerve irritability.
Is a vasomotor contractor.	Is vasomotor dilator
Used in acute conditions	Used in chronic conditions
Is coagulating to albumen	Is liquefying to albumen
Intensifies scars and Strictures in canals	Dissolves scars and strictures in canals
Decomposes all metals except gold, platinum and aluminum.	Does not decompose any metals ex- cept aluminum.

—Chicago Clinic

SURGERY.

Under the charge of H. A. BEATTY, M.B., M.R.C.S., Eng., and A. H. PERFECT, M.D., C.M.,
Surgeons to the Toronto Western Hospital.

CARCINOMA OF THE TONGUE.

Much of the recent discussion concerning the increase of cancer is confined to statistics relative to cancer of the uterus, breast and stomach. It is pertinent, therefore, to call attention to a form of carcinoma of the epithelioid type (epithelioma) which is quite as fatal as any other.

Of the epithelioid type, carcinoma of the tongue is much more frequent than is commonly supposed. Andrew of Glasgow presents some very surprising statistics relative to epithelioma of the tongue. Of 118 cases comprising various diseases of this organ, such as abscess, hematoma, glossitis, leucoplakia, papilloma, and tuberculous ulcer, 98 were cancer of the epithelioid variety. Of the 98 patients, 88 were males and 10 were females. These figures are similar to those obtained for cancer of the lip. Andrew found that in 469 cases of epithelioma the order of frequency was: tongue, lower lip, esophagus, penis, cheek, larynx and tonsil. In other words, epithelioma of the tongue comprised 20.8 per cent. of all cases of epithelioma seen during a period of ten years. Of the 118 cases there was only one case of tongue syphilis, or 0.8 per cent. The tongue and floor of the mouth are very rich in blood vessels and this, combined with the constant muscular movements of the tongue, produces a quick extension of the cancerous process into the lymphatic and submental and submaxillary glands.

The entire statistics cited by Andrew cover the histories of over forty thousand cases of general diseases, and bear out the opinions of the rhinologists and stomatologists who naturally see cases of tongue disease more frequently than the average general practitioner.

It needs to be emphasized that tertiary syphilis is rare in the tongue—a fact which is by no means well known. Recently three cases were reported in which several physicians diagnosed gumma of the tongue, and the patients were given iodids in large doses. Each of these cases, when a section of the tongue was taken, proved to be epithelioma, and all were practically inoperable at the time the true diagnosis was made.

However, if the patient has had an initial syphilitic lesion it is necessary to be on guard, for Brandt of Berlin says that it is not uncommon to find carcinoma arising from the base of a syphilitic ulcer and Foerner of London has seen at least twelve undoubted cases in the tongue. These observations are somewhat discounted by the statement previously made relative to the infrequency of syphilitic tongue conditions, but the possibility should be kept in mind.

A leukoplakia, a fissure or an ulcer of the tongue should not be tem-
porized with, but a portion of the growth should be submitted early to
microscopic examination. It need scarcely be stated that the cure of
cancer anywhere in the body depends on early diagnosis and complete
eradication. Anything short of this means that the patient is deprived
of the only opportunity he has of preventing a speedy and fatal termina-
tion of his malady. It is well, therefore, to be constantly on guard as to
all suspicious lesions of the tongue.—*Jour. A. M. A.*

FRACTURE OF PATELLA.

Dr. M. Figueira showed at the Brooklyn Surgical Society, a patient
with a patella which had been fractured and wired twelve years ago, and
another patient with a patella which had been fractured and not wired
at all. He presented them to show the contrast. The one that was
wired has no separation, the other has; yet one man has as good use of
his limb as the other, showing that the claim of those who say that these
fractures can be treated successfully without operation is a valid one.

The first man before operation was treated by splints, and as the
result was not good, the patella was wired with a satisfactory result. The
other man was treated the same way, without operation and the result is
good. The speaker advised against operation as a primary treatment.

One of the specimens presented was quite large, and in both of them
the patients were normal, said the speaker. They did not suffer from
metrorrhagia or menorrhagia, and only suffered from the mechanical
conditions of the tumor and the deformity. Both of these cases recovered
without any bad symptoms, showing it is not the presence of the tumor,
but a chronic condition produced by loss of blood that causes the cardiac
and vascular symptoms these patients are subjected to.

Dr. L. W. Pearson said that six weeks ago he saw a case of fractured
patella, which he cut down upon. Part of the capsule intervened between
the fragments and there was a good deal of clot. The capsule was in a
ragged condition, and he thought then he should never try to get a frac-
ture of the patella to knit without operating on it. Dr. Figueira showed
a good result of fracture treated without operation. Notwithstanding
that and his large surgical experience, he expressed surprise that he
should treat such a fracture without exploring it. With modern methods
of asepsis we could open the knee without fear of infection and the results
are much better. The union when sutured is bony; when not sutured it
is fibrous.

Dr. Figueria's non-sutured case was two years old, but nevertheless, the speaker said, there is a tendency for these fragments to stretch as time progresses, and there is a danger of refracture. When sutured, if fracture takes place, it is in another portion of the patella, while in the ligamentous union the point of refracture is at the site of the former injury.

Dr. M. Figueria said that the fact that the fragments of the capsular ligament and shreds of tissue fall between the fragments is ancient history. In spite of that these cases do well treated by splints. He had seen them and all surgeons of experience had seen them. He had known of cases which were operated on that had died of septicemia. That happened to a good surgeon, and you can not say you can operate with a certainty that septicemia is not going to take place. He believed Senn said he never was sure.

Dr. W. S. Simmons stated that it seemed to him the question of operation or non-operation depended on the point Dr. Brinsmade made as to whether we are going to get a good functional result or not. A man who he had seen fell off a street car and fractured his patella, and had a ligament five inches long, could run up and down stairs and there was no limp in the injured limb.

The question of operation in fractured patella would depend greatly on the surroundings of the patient. He would not feel justified in opening a knee joint unless he could have the patient in a well equipped operating room. He saw no reason why it should not be operated on within twelve to fifteen hours. At that time the blood is easily washed from the joint, the fragments he had found in comminuted cases had been easily brought into opposition by the introduction of a heavy chromic gut suture surrounding the patella and then by apposition of the capsule he had good results.

His experience was those operated on recovered the function of the limb more quickly than those treated by the expectant method.—*Long Island Medical Journal*.

GYNÆCOLOGY AND ABDOMINAL SURGERY.

Under the charge of S. M. HAY, M.D., C.M., Gynecologist to the Toronto Western Hospital, and Consulting Surgeon, Toronto Orthopedic Hospital.

PERFORATION OF INTESTINE FOLLOWING TRAUMA.

Dr. W. L. Simmons related the case of a boy brought into the Swedish Hospital, who was struck by the fender of an automobile. The only

injury he sustained was that of an inguinal hernia, which he claimed never to have had before. The boy lied. He was struck in the left side of the abdomen by a child's head with whom he had been fighting. He had no increasing temperature and had a good pulse. His abdominal muscles were hard as a board, and in view of that extreme rigidity with a history of a blow on the anterior abdominal wall, it seemed advisable to open the abdomen. The hernial orifice was found to be an old hernial sac.

Another incision was made through the right rectus muscle and a mass of omentum delivered which had not yet become gangrenous but was in bad condition. It was ligated and removed and then a search was made along the small intestine for injury to it. After examining eight feet of small intestine they found a portion where the omentum was adherent to it, and, separating that adherent portion, they found a perforation the size of a lead pencil. It was a beautiful illustration of the protection the omentum affords of getting up to and sealing these openings. The boy had no systematic symptoms of shock even at the time.

The portion of the omentum was ligated and excised, the wound closed with Lembert sutures and the abdominal wound closed. There was no soiling of the peritoneum. He was washed out with saline. The child made an uneventful recovery.

INDICATIONS FOR IMMEDIATELY OPENING THE ABDOMEN IN ACUTE CASES.

Spencer, *Brit. Med. Jour.*, speaks of conditions in men for which an immediate operation is required. 1. Hernia. Practically it is always advisable to operate on an irreducible femoral or umbilical hernia, and to do so immediately that it occasions vomiting, however slight. Pain and tenderness are further signs, but both may be absent until strangulation is far advanced. The inguinal hernia which should be operated on at once is that which comes down suddenly in a strong man and causes marked pain. There is the further reason for operating that the hernia may be cured. In a child, unless late of course, the application of an ice poultice almost invariably leads to the reduction of the hernia, and the question of operation may be postponed. In an old man with an inguinal hernia of long standing, which has become irreducible, a hot bath should be given, with all watchfulness against faintness, after which a moderate application of taxis is indicated. But if taxis is not speedily successful an incision should be made without any further delay. 2. As to appendi-

cular inflammation he says there is no medical treatment which can possibly have any influence upon the course of the disease. The communication with the cæcum has been shut off from the beginning; the communication with the circulation is simply through a small artery; the only conceivable medical treatment would be an antitoxine, and that could hardly reach such a secluded spot, even if one had an antitoxine of the kind which would neutralize the toxins. He is entirely in favor of operating as soon as the diagnosis is made, and of always removing the appendix.

3. An immediate operation is required in the case of acute gangrene of the gallbladder, or the patient will die. The attack is that of acute infective peritonitis below the ninth rib on the right side causing pain, rigidity, impaired resonance, and soon brawny induration of the abdominal wall. The temperature is likely to begin with a rise, even a rigor, but, as in other cases of gangrenous inflammation, the later tendency of the temperature is to fall. Moreover, if there is jaundice, and according to the extent of the jaundice, the pulse may be kept from increasing in rate until later than would accord with the amount of infective inflammation. If there is delay, there is a double chance against the patient, not only from the infective peritonitis, but also from the extension of the infective inflammation to the branches of the portal and hepatic vein and the inferior vena cava, and along the hepatic ducts into the liver.

4. A dangerous but rarer condition is that of acute pancreatic hæmorrhage and abscess, which may resemble either a duodenal perforation or gangrene of the gallbladder. If found, the only thing to do is to plug with gauze and end the operation as quickly as one can, for the cases are most fatal.

—*New York Medical Journal.*

THE USE OF BISMUTH GAUZE IN GYNECOLOGIC WORK.

Not only in gynecologic but in general surgery it often becomes necessary to use gauze for drainage or for hemostasis. Almost invariably sooner or later such gauze, unless impregnated with iodoform or deodorizers, becomes foul owing to the action of saprophytic organisms. Iodoform gauze is expensive, is not very effective for the purpose employed, and not infrequently leads to iodoform poisoning. Wiener (*Journal of the American Medical Association*, October 23, 1909,) calls attention to a substitute for iodoform gauze which has been employed with highly satisfactory results in Mount Sinai Hospital for the past four months. The gauze is impregnated with subnitrate of bismuth in the following manner: Two ounces of bismuth and two ounces of glycerine are thor-

oroughly mixed and the mixture stirred with a quart of water to make a fine emulsion. This amount serves to impregnate twenty-one yards of gauze, passed slowly through the emulsion and wrung out. Such gauze is snowy-white in color, odorless, soft, and smooth. It should be cut into strips of desired size loosely packed and sterilized by steam at seven or eight pounds' pressure for thirty minutes. The bismuth gauze is much cheaper than that made with iodoform, and less irritating. It is very efficient in cases of incomplete abortions, curettages, and aseptic vaginal celiotomies. However, it has little or no power to mitigate the fetor arising from foul-smelling pus.

ACTION OF ROENTGEN RAYS ON THE OVARIES.

Reifferscheid reports extensive experimental research and six clinical cases in which the ovaries were removed after Roentgen exposures. In all degenerative changes were evident, providing a positive histologic basis for the numerous clinical successes in the therapeutic application of Roentgen rays. One patient was a woman of 37 with pulmonary phthisis on which account abortion was induced after seven Roentgen exposures. The ovaries were removed 18 days after the last exposure, 39 days after the first, and tubal sterilization was done at the same time. None of the follicles was normal in any of the ovaries; there were also signs of capillary hemorrhage.

OBSTETRICS AND DISEASES OF CHILDREN.

Under the charge of D. J. EVANS, M.D., C.M., Lecturer on Obstetrics, Medical Faculty McGill University, Montreal.

CAESAREAN SECTION IN THE TREATMENT OF VICIOUS INSERTION OF THE PLACENTA.

Monchotte, *Annal. de Gyn. et d'Obstet*, April, 1910, gives the analysis made by him of the treatment employed in the Klinik Baudelocque under the service of Prof. Pinard of haemorrhages due to a vicious insertion of the placenta raising the question as to whether Caesarean operation is ever indicated in this condition.

In referring to the statistics of Kustner, Bumm and Zimmermann he analyzes the archives and Klinik Baudelocque from 1895 to 1908.

During this time all cases of haemorrhage due to vicious insertion of the placenta were treated by absolute rest in bed, vaginal injections 50 deg. R (?) when the pulse is below 100 per minute. When the pulse is at or above 100 the membranes were ruptured and occasionally a Champetier de Ribes bag was introduced.

One hundred and eighty-three women are included in the statistics obtained out of 3,015 women delivered in the Klinik from 1895 to 1908, a proportion of 0.48 per cent. Four of these women died, a mortality of 2.18 per cent. Of the 183 products of conception 101 left the service alive; 82 died, not taking into account either the period of pregnancy or the foetal viability, a total foetal mortality of 44.80 per cent.

Of the women who died the first case entered the Klinik with an elevated temperature and chills, already infected. The haemorrhage was easily controlled by means of a bag. Death occurred on the third day, from peritonitis.

In the second case, death was due to haemorrhage owing to careless use of the hydrostatic bags.

The third case, treated also by hydrostatic bags, resulted in death from sepsis and the loss of the child. The sepsis was undoubtedly due to the bags tearing in repeated treatments necessary to keep them in position.

The fourth case, died almost immediately after admission to the Institution in an exsanguinated condition.

Of the 82 products of conception who died, three were destroyed by haemorrhage before the onset of labour, 56 died in the course of labour, and 23 shortly after birth. But 36 of these children were in a viable condition at the time of delivery. Of these 36, 11 children had their vitality compromised before the entry of the woman into the hospital. In six of these cases the foetal heart was not to be heard when the patients arrived in the Klinik.

Careful analysis of the causes of foetal mortality then follows and the author concludes that Caesarean section was contra indicated in a very large proportion of the cases judging from the standpoint of the infants alone. In but 12 cases was the general condition of the child such as to have led one to anticipate that if Caesarean section was employed the child's life might have been saved. Three of the mothers entered the Klinik after the rupture of the membranes or having been examined by midwives outside the hospital. In two other cases the labour was so far advanced on admission to the hospital that Caesarean section was absolutely contra indicated. Another case was the subject of hydramnios.

In the 82 cases of foetal mortality there were but five in which the conditions permitted the performance of Caesarean section in order to save a fully developed child in good condition, thus in five cases only was it possible to place Caesarean section in opposition to the treatment recommended by Pinard. This shows how rarely in practise the occasion to intervene by the abdominal route presents itself.

The author discusses as to whether Caesarean section indicated after the first haemorrhage or after the haemorrhages have become moderately severe and have affected the general condition of the patient. He points out also that Caesarean section gives a mortality itself of 6.32 per cent., while in Caesarean sections employed in vicious insertion of the placenta the mortality is 8 per cent. according to Fry of Washington.

He concludes that the operation is only exceptionally indicated in the class of cases under discussion especially when the condition is associated with pelvic deformity.

GRAVE SYNCOPE AFTER DELIVERY.

M. Duvernay, Deux cas d'accidents syncopaux graves sans cause apparente apres deliverance normale, *Bullet. d'Obstet. de Paris*.

Case I. Multipara twenty-five years of age. Patient suffered from pyonephrosis which had never been treated, dating from the first pregnancy. Her urine contained pus and albumin. There was nothing abnormal in the circulatory system. The first pregnancy terminated by eclampsia. The others were normal. Labour was uneventful. The third stage was perfectly normal and the uterus remained well contracted on expulsion of the placenta. A few moments later the patient complained of dizziness, became somewhat pale and the pulse rate at 90 was quite regular. She complained of feeling cold, and was given a stimulant and then seemed to be doing well. An hour later she was found in a condition of great exhaustion, the face pale, bow covered with perspiration and the pulse scarcely perceptible beating at 40 per minute. There was no sign of haemorrhage, and the uterus was well contracted. Active stimulating treatment resulted in the gradual restoration of the patient so that in three hours she had returned to her normal condition. The patient made a good recovery.

Case II. Multipara thirty-two years of age. Trigemellar delivery. The first child was a boy and presented by the vertex. The second, a girl presented by the breach. The third, also a boy presented by the vertex, and was much smaller than the others. The placentas followed

within five minutes and the uterus remained well contracted. The patient immediately sank into a state of collapse accompanied by palor and perspiration. She became unconscious and the pulse was small, threadlike and absolutely uncountable. There was no sign of haemorrhage and the uterus remained firmly contracted. Energetic stimulating treatment was applied and in 15 minutes the patient regained consciousness. The further convalescence was uneventful.

The author then discusses this condition of syncope following normal labour with out offering anything new in explanation of the development of the condition. The only treatment recommended is compression of the abdominal parties by means of a very tight bandage with the object of emptying the dilated blood vesels of the splanenic area. The generally accepted theory being that the condition arises from acute dilation of the vessels in this area.

PREMATURE DETACHMENT OF THE NORMALLY SITUATED PLACENTA.

Fabre et Bourret, *Bullet. de la Soc. d'Obstet. de Paris*, No. II., 1910, Page 78, reports the following cases.—

Case I. Sixth pregnancy. The first and second terminated in the expulsion of mascerated children. In two others the children showed plantar pemphigus. Patient at the time of the development of the symptoms herewith recorded was in the sixth month of pregnancy. About eight o'clock in the morning she noticed certain pains in the lumbar region, which by ten o'clock had so increased in severity as to cause her to quit her work. The patient noticed also that her abdomen had increased in volume.

About five o'clock on account of the continuation of the symptoms and the occurrence of a slight internal haemorrhage, the patient entered hospital. She was able to walk and give her history and didn't seem to think her condition at all serious.

The pulse was 76 to the minute, and somewhat feeble. The fundus reached 30 cm. above the symphysis. The uterus was very hard, wood-like and hyperdistended. The foetal heart was not heard and the cervix was dilated about 1 cm. The bag of waters was ruptured. Artificial saline solution was injected and the cervix dilated by Bonnaire's method, but this could only be done to the extent of 6 cm. The pulse at this time was 88. It was now decided to resort to a craniotomy.

Extraction occurred without difficulty but was associated with a violent haemorrhage. Following the foetus the placenta was expelled

with a mass of clots weighing 675 gms. A large tear was found on the left lateral wall of the lower segment of the uterus, which was tamponed. Patient died at 9.45 in the evening. The placenta was found to show specific lesions especially a well marked endarteritis.

Case II. Thirty-one years of age. Sixth pregnancy. The first five pregnancies were without incident and there was no history of any kind of disease. Three weeks before term the patient suddenly lost a quantity of blood from the vagina and at the same time very decided pains developed. This occurred at four o'clock in the afternoon, and five hours later the patient entered the hospital. The patient was able to walk up stairs alone. Pulse was 80. The most noticeable thing was the wood-like hardness of the uterus, the fundus being 32 cm. high. In a quarter of an hour it had risen another cm. The foetal heart was not heard. The urine contained a considerable quantity of albumin. The patient's general condition rapidly became worse and the pulse rose to 140. Respirations became irregular and painful.

On diagnosis being made it was decided to do a vaginal Caesarean section as the cervix was only dilated 1 cm., associated with craniotomy and extraction. The operation lasted $\frac{3}{4}$ of an hour, the patient dying 45 minutes later in spite of every means taken to sustain life.

In the first case the mucous membrane lining the uterus was found diseased, the condition present being that designated alveolar metritis. This condition has hitherto been noted only upon the maternal service of the placenta but in the author's case it was plainly manifest in the uterine mucosa adherent to the muscle.

The paper is accompanied by photographs of the uterine walls and placental sites.

The authors conclude from the examination of their cases that the anatomical cause of premature detachment of the normally situated placenta lies most often in a lesion of the uterine mucosa, an inflammatory lesion of which multiple pregnancy naturally predisposes.

OPHTHALMOLOGY AND OTOTOLOGY.

Under the charge of G. STERLING RYERSON, M.D., L.R.C.S., Edin., Professor of Ophthalmology and Otology Medical Faculty, University of Toronto, and F. C. TREBILCOCK, M.D., C.M., Ophthalmologist, Toronto Western Hospital.

AN ANALYTIC CRITICISM ON THE CARDINAL EYE-LID SYMPTOMS IN EXOPHTHALMIC GOITRE.

Suker (*Ophthalmic Record*, Volume XVIII, Number VII), after speaking of the great multiplicity and variability of the symptoms of

Basedow's disease, states that he considers the homogenetic etiologic factor to be a biochemic toxic agent engendered by a perverted physiologic thyroid activity, implicating principally the cerebrospinal and sympathetic system of nerves. Whatever element or factor induces this thyroid perversion is looked upon as a heterogenetic etiologic factor.

No single or group of ocular symptoms can be designated as pathognomonic of Basedow's disease. Organic or functional diseases, involving one or both systems of nerves, may give rise to ocular symptoms similar to, if not identical with, those of Basedow's disease.

The author mentions particularly the interrelationship existing between scleroderma and myxedema on the one hand and hysteria on the other.

The eye symptoms may be manifest early or late, regularly or irregularly, periodically or intermittently; and their intrinsic value is problematic. They cannot be classified into (a) Prodromal, (b) Ascendant, (c) Descendant, and they sustain rather a meager relation to the prognosis in the majority of instances.

"The cause of each symptom is difficult to explain because of their interdependence. Some observers maintain that exophthalmos is present in every case. The element of vascular congestion in the orbit and palpebral muscles, independent of that obligatory for the exophthalmos itself, is a contributing etiologic factor. Finally the role that the thyroid toxin exerts on peripheral nerves or central nervous centres, in addition to its direct influence upon the muscle fibres, is unquestionably of vital importance."

The author believes the role that the cervical sympathetic plays is an important one, but rejects the theory that a central nerve lesion is responsible not only for the lid symptoms, but for the disease itself. He believes that each of the above factors enters into the production of the symptoms. The predominance of one or more of these factors in certain muscle groups favors or accentuates the particular symptom in question. The purely intraocular symptoms are explained by the toxic factor. If fundus changes be present they are more frequently due to nephritis or cardiovascular lesions. The ophthalmoplegias depend upon a central or nuclear lesion.

The eye symptoms in Basedow's disease may be divided into the following categories:

- (a) Palpebral.
- (b) The ocular and ocular muscle symptoms.
- (c) The intraocular symptoms—including fundus change.

Of these three classes of symptoms the first and second are of great significance and serve for the purpose of diagnosis and differential diag-

nosis. The symptoms of group three are incidental and dependent upon lesions other than the Basedow's itself. For, diabetes and Bright's disease are rather frequent accompaniments of Basedow's, and to these we can ascribe the more serious and significant intraocular lesions.

The cardinal lid symptoms are:

- (1) Von Graefe's sign.
- (2) Stellwag's sign.
- (3) Dalrymple's sign.
- (4) Gifford's sign.
- (5) Suker's sign.
- (6) Lid quivering (lid tremor or Rosenbach's sign).

The minor ones are:

- (1) Palpebral pigmentation.
- (2) Palpebral edema.
- (3) Loss of eye lashes and eye brows.

The second group comprises the following symptoms:

- (1) Corneal anesthesia and inflammation.
- (2) Conjunctival edemas.
- (3) Nystagmoid movements.
- (4) Moebius' sign.
- (5) Exophthalmos.
- (6) Limited rotary excursions of the eye.
- (7) Ophthalmoplegias (other than single muscles).

The third group of symptoms comprise:

- (1) Retinal pulsations.
- (2) Choroidal and retinal inflammatory disturbances.
- (3) Pupillary and accommodative disturbances.

The author holds that not only all the lid symptoms but also Moebius' sign are accentuated by the exophthalmos, that the cervical sympathetic nerves play a definite causative role in these symptoms and discountenances their origin to a disturbance in the cerebral association centre. He ascribes the symptoms rather to muscle hypertonus. He then describes in detail the exophthalmos and the following named signs: (1) von Graefe, (2) Stellwag; (3) Dalrymple; (4) Gifford; (5) Suker.

Exophthalmos.—It sustains no causative relations to the lid symptoms. It only serves to add to their intensity. It is the last of the cardinal symptoms and is absent in about twenty per centum of the cases. It is variable in its appearance and is usually bilateral; if unilateral, most often on the same side of the struma.

The causative theories are, (1) Vasomotor paralysis of the orbital vessels dependent on sympathetic interference permitting a constant con-

gestion; and (2) eventuating a tonic contraction of Müller's orbital muscle also ascribable to sympathetic nerve irritation. The vasomotor paralysis being the true basis for the existing exophthalmos. The exophthalmos may be the only ocular symptom present during the greater part of the course of the disease, though it usually follows the other symptoms in point of time.

The lid symptoms are closely allied though not dependent upon one another.

Von Graefe's sign is present in from fifteen to sixty-five per centum of the cases. It may occur early or late in the disease and unilateral or bilateral. It may be of short duration and has a diagnostic value as some of the other lid symptoms. It may be present without an exophthalmos.

Normally the upper lid follows the downward rotation of the globe in a regular and even manner though somewhat later in point of time. When Graefe's sign is present the lid is tardy in following the downward movement of the globe and moves in a decidedly jerky manner. It is elevated, too, in a jerky manner and decidedly in advance of the globe in point of time. These three points will differentiate it from any similar lid manifestation, or the so-called pseudo von Graefe's sign which may be present in certain types of nuclear paralyzes and hysteria. The jerky movements being the essential characteristic of the von Graefe sign and the upper lid encroaches the normal distance upon the cornea as in the normal eye. The author emphasizes the importance of taking the visual fields in order if possible to eliminate the element of hysteria.

As to the cause of the von Graefe sign there has been much misunderstanding. A résumé of the views of Eulenberg and Guttman, Sattler, Long and Pringle, Sharkey, and Moebius are given.

Stellwag's sign—infrequent and incomplete winking is the most insignificant and, according to the author, the most difficult one as to a satisfactory explanation—once looked upon as one of the early lid manifestations, attributed to corneal anesthesia or a disturbance in the reflex arc of the sympathetic, fifth and seventh nerves. But as the corneal anesthesia is late, while Stellwag himself speaks of it as an early sign, the corneal anesthesia view is not consistent with facts.

Moebius is inclined to assume that the Stellwag's sign is a forerunner of the von Graefe as it reaches its maximum intensity with the full development of the latter and recedes with the disappearance of the von Graefe. Clinically, the Stellwag is more often definitely associated with a von Graefe than with any other lid symptom, not excepting the Dalrymple with which it is but seldom present. The author emphatically shares the opinion of Milbrand and Sawyer that the Stellwag and Dalrymple signs are but one symptom. The diagnostic and prognostic significance is not

very great because of the difficulty of differentiating between the normal and infrequent act of winking.

The idea of a sensory reflex disturbance on the part of the cornea, retina, and conjunctiva is not consistent with the facts, as corneal anesthesia is seldom seen in Basedow's disease and then only in the latter stages, while clinical observation does not show it to ever persist after the disappearance of the von Graefe and the Dalrymple signs.

The Dalrymple sign—an increased palpebral aperture—is likewise dependent upon an underlying muscle tonus; an increased tonus of the lid retractors over and above that existing in the lid contractors. Its effectiveness is added to by the coexisting exophthalmos. As stated the author much prefers to look upon this sign as a part of the Stellwag, for if considered apart it is but an insignificant phenomenon and seems exceedingly difficult of explanation, and could only find its origin in the presence of an exophthalmos. Of all the lid signs it is the most deceiving and evanescent.

Gifford sign—difficult eversion of the upper lid—rests upon the same basis as the von Graefe, Dalrymple and Stellwag signs. It is not entirely dependent upon excessive stimulation of the sympathetic nerve fibres and the contraction of the palpebral superior muscle. The only direct influence of the sympathetic is the apparent vasomotor paralysis permitting vascular engorgement of the muscles in question, mechanically shortening them. The author found this sign to be definite, especially when concomitant with the von Graefe and Stellwag signs. It is due to direct increased muscle tonus and the perchance anatomically shortened conjunctival fascia. No more significance can be attached to this sign than to the von Graefe, as its existence is due to identical factors. The Gifford sign is accentuated but not caused by an exophthalmos as it is often present when the exophthalmos is wanting.

Suker sign.—Upon downward rotation of the globe the lower lid is gently fixed and the patient requested to rapidly rotate the globe upward while gentle retraction is made on the lower lid, when the globe ascends in an unsteady manner. This sign is dependent upon the same underlying factors and is markedly accentuated in the presence of an exophthalmos. It is variable and is found more often in the absence of exophthalmos than with it.

Conclusions.

“From the above description and analysis of the various signs we can, with propriety, discard all the various theories advanced for the causation of these signs excepting the increased muscle tonus which is brought about by the direct activity of the thyroid toxin—either by way of the

nerve fibres or directly upon the muscles themselves. No doubt the individual size of the globe are but incidental contributing factors. Also, that the so-called Müller's muscle is not the important factor while the cylinder of plain muscle fibres springing from the septum orbitale (Landstrom) is all important. It can also be seen that all of the lid signs are exceedingly closely related as to the direct cause, but symptomatically independent of one another. That there is a causal relation between the Stellwag and von Graefe sign must be conceded. One sign is just as valuable as the other in all its aspects and the characteristics of all are very similar. The exophthalmos sustains a slight relation to all—a contributing factor. The vasodilatation which necessarily results from the sympathetic interference is but a secondary consideration in each sign. The anatomic variance in the conjunctival fascia is at no time a direct etiologic factor. Each one of the signs can be intrinsically modified by the absence or presence of an anatomical lesion.

Finally, all of the lid signs are dependent upon a stimulation of the sympathetic nerve fibres and the palpebral muscles supplied by them; in addition there is a direct increased muscle tonus. This view is further substantiated by the fact that a paralysis of the sympathetic produces the exact opposite train of lid symptoms. Above all, it is more than passing strange that the iris seldom is involved though the sympathetic are so profoundly implicated.

Lastly, the writer wishes to say that literature references are rather abundant to sustain the contentions made and that his personal observations are in accord with these facts.—*The Physician and Surgeon.*

CATARACT EXTRACTION,

Or expression, as some would like to call it, is, unlike operations for chronic glaucoma, a singularly successful procedure; hence there are very few alterations to chronicle; in fact, there are only two worth mentioning. The first is concerned with the conjunctival flap. It has been found that where a conjunctival flap is left adhering to the corneal edge of the wound healing takes place sooner and is more effectual. The wound is also protected from the entrance of germs that may be present in the conjunctival sac. The disadvantage of this flap during the operation is that there is much bleeding, which unless constantly mopped up, thereby delaying the finish of the operation, obscures the view; furthermore, if the flap be turned down over the cornea, so as to be out of the way while the iridectomy is made, it prevents one seeing the points of the iris for-

ceps and also the beak of the cystotome, which ruptures the lens capsule, so that one has to work in the dark and trust a good deal to Providence. Several operators—again the question of precedence crops up—suggest now that the conjunctival flap should not be completely cut through, but that the upper end (the cornea having been divided) should be left adhering to the remainder of the conjunctiva and the lens expressed under this bridge, and so eventually extracted. Seeing that the ordinary results are so good, this seems to one an unnecessary complication to the operation; and although the suggestors, or rather, we might say, the resuscitators (for the operation was suggested by Czermak many years ago, but allowed to fall into disuse), claim brilliant results, the usual method is good enough for most people. The second improvement in cataract operation is the revival of the McKeown method of washing out the lens debris from the anterior chamber. This is found to be a useful procedure in cases where the cataract is not quite ripe, and some clear debris may be left behind. The modification of McKeown's method is that, instead of using a syringe to either suck out the debris or wash it out, a constant stream is used from a douche, the raising or lowering of the receptacle for the warm saline solution, which is employed now, providing the necessary force for the stream. One of the advocates of this proceeding mentions at the end of his article that perhaps the method, unless in the hands of the very experienced operator, may do more harm than good, and is perhaps better left alone.—*Bristol Medical Journal*.

LARYNGOLOGY AND RHINOLOGY.

Under the charge of FERRY G. GOLDSMITH, M.D., C.M., Fellow of the Laryngological and Rhinological Society of Britain; Assistant Laryngologist and Rhinologist, Toronto General Hospital.

SOME COMPLICATIONS AND DANGERS OF NASAL SURGERY.

H. B. Tawse, *The Lancet*, Nov., 1909, thinks that ethmoidal curetting, the only operation worth doing for nasal polypi and apparently a dangerous procedure, is one which in skilled hands is attended with brilliant results. The dangers are: Hemorrhagic effusion into the eyelids and orbits: orbital abscess: necrosis of the frontal bone: necrosis of the superior maxilla: fracture, puncture and laceration of the cribriform plate suppurative meningitis: suppurative meningitis apart from injury, severe hemorrhage and optic neuritis and blindness. The first of these effusion into the eyelids and orbit is very common and of no moment. Orbital abscess very rare, requires external incision, as does

necrosis of the frontal bone and superior maxilla, but such unfortunate occurrences should not deter one from thoroughly clearing out the disease. To be timid with ethmoidal curetting, will certainly deprive the operation of much of its success. The cribriform plate of the ethmoid—that bug bear of most nasal surgeons in their early days—is occasionally punctured, fractured, or lacerated, and fear of this has time and again led to failure. But really a little care in watching the position of the cutting end of the curette with regard to the plane of the cribriform plate will prevent any damage. The serious and almost universally fatal complications of the radical operation of the frontal sinus are osteomyelitis of the skull, meningitis and cerebral abscess. As to the treatment of frontal sinus suppuration Tawse says, that in cases where pus escapes freely from the frontal sinus and is producing no ill effect on the general health, and only an occasional headache is complained of and if the patient can be seen periodically, the risks of operation more than counterbalance the damages. Intranasal treatment will suffice for the patient's comfort. If, however, any signs of cerebral involvement occur, if the health is undoubtedly suffering from septic absorption, if the headache is intense and persistent, or the infundibulum is narrower and is causing retention, then an operation must be performed. A few not unimportant sequelae which one notices after operation, and which, though not of vital importance, are responsible for much discomfort to the patient, he mentions. Dryness of the throat and nose, sometimes with crust formations, may follow turbinal and extensive ethmoidal operations, and after the latter post-operative ozena. The risk of infection of healthy sinuses must not be lost sight of, and although this at times is unavoidable, still strict attention to the ordinary principles of antiseptic or aseptic surgery will considerably reduce the risk.—*Laryngoscope*.

DANGERS OF TAMPONADE OF THE NASOPHARYNGEAL SPACE.

E. Mayer, *Munch. Med. Wehnschr.*, Oct. 26, 1909, reports a case in which the nasopharyngeal space of a boy, sixteen years old, was tamponed to control a violent nosebleed and the tamponade resulted in bilateral acute purulent otitis media with involvement of the mastoid, bilateral purulent inflammation of the antrum of highmore, extension of the inflammation on the right side to the orbit, and the formation of an orbital phlegmon. These complications were ascribed to two causes, the long continuance of the tampon in place and the presence of a purulent catarrh in the nasopharyngeal space of the patient. The

tampon should be left *in situ* until the bleeding vessel is occluded by a thrombus, which is not certain till after the third day, and many authors state that no harm results if the tampon is left five days. But if a purulent process is present symptoms may be produced which call for the removal of the tampon after a much shorter time.—*Laryngoscope*.

TAKING COLD.

D. Braden Kyle, *Ann. of Otol., Rhinol and Laryngol.*, Sept., 1909, after reviewing the systemic conditions which bring about irritation of the mucous membrane which resembles taking cold, believes that in a large percentage of cases of so-called cold in the head, no one remedy can be applied, and that the individual must be studied as carefully for the predisposing cause or underlying element as though typhoid fever or a beginning pneumonia were suspected. In other words, every individual case should be studied from an individual standpoint. The individual study of cases enables the physician to scientifically apply his remedial agent, and not empirically prescribe a cold remedy. His own experience has been that out of one hundred persons presenting themselves for relief of what they call a cold in the head, or having taken cold, or frequently taking cold, at least eighty per cent. belong to the class of systematic conditions, either constitutional, organic or chemic.—*Scheppegrell (Laryngoscope)*.

PERSONAL AND NEWS ITEMS.

ONTARIO.

Dr. D. F. McKinley, of Preston, will go to China as a missionary.

Dr. W. H. B. Aikins, of Toronto, will move in fall to his new residence, 130 Bloor Street West.

The Hamilton Board of Health has decided to placard houses where there are cases of infantile paralysis.

Sir James Grant, of Ottawa, has been sojourning in Scotland, and was presented with the freedom of Inverness.

The new wing to the Toronto Isolation Hospital will cost over \$100,000. It will enable the medical health officer to effect a much better separation of the various infectious diseases.

There is a distinct increase in the number of typhoid fever patients in Toronto. This means bad water. It is of note that many of the Toronto cases contract the disease out of the city.

Dr. F. Montizambert, of Ottawa, Director General of Public Health, is making a tour of inspection of the quarantine stations in the west. He is going to the coast. He is looking into the first aid work on the route.

On 13th August, Oshawa opened a new hospital with a capacity of 22 beds, and is very finely equipped with every modern convenience. It is free of debt and has some cash surplus over on hand.

Dr. G. Sterling Ryerson has returned. He spent some time at the Laboratoire Physiologique du Radium, in Paris, and afterwards attended the meeting of the British Medical Association in London.

Dr. Sheard, Medical Health Officer for Toronto, states that he has known of many instances of children coming to the Isolation Hospital suffering with two contagious diseases. The experience of medical men bears out the possibility of mixed infection.

There is a movement on foot to have a sanitarium for tuberculosis for the counties of Waterloo and Wellington. A meeting was held in Guelph recently with the object of bringing about an amalgamation. It was proposed that it should be a memorial to the late King Edward VII.

The doctors who were deputed to make compulsory vaccination in Eagle District, Brantford, have met with so much opposition, and have been so grossly insulted in some places that they have requested that the people be required to call at their offices in order that they may be vaccinated.

A short time ago smallpox became very prevalent in Brantford. There were at least fifty cases. Dr. Bryce, Dominion Health Officer, consulted with the local health officers. No children will be allowed to enter school until vaccinated. Dr. Bryce strongly urged general vaccination. This was carried into effect.

Rabies has been almost stamped out in Ontario. No cases now exist outside of the counties of Perth, Middlesex and Welland. Since May, 1907, there have been 481 cases among dogs. At the present there are only five places under quarantine. There have been over one hundred persons who have taken the Pasteur treatment, but there has been only one death, that of a boy in Hamilton, who did not have the treatment in time to be of any service. Muzzling of dogs will be continued for some time.

QUEBEC.

Dr. T. G. Roddick, of Montreal, in spending a holiday in Britain. Typhoid fever still rages in Montreal. This year there have been up-to-date about 800 cases and over 150 deaths.

In the week ending 7th August, there were 175 deaths in Montreal. Of these 100 deaths were children under 5 years of age.

From the Carnegie report Laval Medical College in Montreal is said to have 217 students. There is a teaching staff of 8. The college is maintained by the students' fees.

The Laval Medical College in Quebec has 92 students and 22 of a teaching staff. It is kept up by the students' fees and an appropriation from the university.

In the medical schools of McGill and the Montreal and Quebec branches of Laval Medical College, the courses are now of five years' duration according to law.

Dr. J. George Adami, of Montreal, represented the Canadian Association for the Prevention of Tuberculosis at the Tuberculosis Conference in Rome.

The Carnegie Foundation Report gives McGill Medical College as having been founded in 1824, having 328 students on its roll, 19 professors and 80 other instructors, having an endowment of \$350,000 and an income from fees of \$43,750. The expenses for the year are \$77,000. The report speaks highly of its equipment.

The Annual Calendar of the Faculty of Medicine of McGill University is just to hand. It is got out in very attractive form and well illustrated. It contains full information regarding the various courses of study, and by whom the lectures are given. There is also some interesting historical information, and a description of the new building. All who think of studying medicine should send for this year's announcement.

MARITIME PROVINCES.

The Victoria Hospital in Fredericton, N.B., will be much enlarged and improved.

The Halifax Medical College has 63 students, and a staff of 33 teachers. It receives \$1,200 a year from the government. The fees from the students amount to \$5,000. There is a small endowment of \$200 which maintains the library.

The Carnegie report rather condemns the equipment of the medical college and suggests that it is not in the interest of the University of Dalhousie that the connection should be maintained. The remedy is to improve the medical college, rather than not abandon it.

The students' Representative Council of Edinburgh University has appointed Dr. A. W. H. Lindsay, of Dalhousie University, as Honorary Academic Consul in Halifax. His duties are to give information and introductions to those who wish to study in Edinburgh, to assist worthy graduates of Edinburgh who come to this country, and to report on matters of interest to the University of Edinburgh.

At the annual meeting of the Yarmouth Medical Society, the following officers were elected: President, James Ross, Halifax; 1st Vice-President, G. Kennedy, New Glasgow; 2nd Vice-President, J. S. Morton, Shelbourne; Sec.-Treas., J. R. Corston, Halifax; Ex. Committee, J. L. Bethune, L. P. Bissett, R. G. Gunn, W. Huntley, McDonald, Jost, L. R. Morse, Putnam, T. C. Lockwood. Halifax was chosen as the next place of meeting.

WESTERN PROVINCES.

Edmonton, Alberta, has voted \$175,000 for hospital accommodation.

There is to be a new Isolation Hospital for Victoria, B.C., the city will raise \$45,000 towards it.

The Vancouver Daughters of the Empire will erect a memorial hospital to King Edward for incurables.

Dr. Brydon Joch, of Vancouver, has been busy. In his inspection of the schools he has examined over 10,000 children.

Winnipeg is to have a tuberculosis hospital for advanced cases, with accommodation for 40 patients. It will cost \$25,000, and is to be built by the city. The city council decided to call for tenders.

The Sanitorium for Consumptives at Ninette in Manitoba was opened a short time ago. It cost \$65,000. It has accommodation for about 80 patients.

FROM ABROAD.

The honorary degree of D.Sc. was conferred on Professor Osler by the University of Leeds.

The Radium Institute in London finds it difficult to secure the five and a half grammes of radium for its equipment.

Dr. Robert Saundby, of Birmingham, has been appointed the president-elect of the British Medical Association.

In Britain 1,000 school medical officers have been appointed, of whom 70 are women. There are about 300 school nurses.

King George V. gave his consent to become a patron to the British Medical Association.

Mr. P. MacLeod Yearsley, F.R.C.S., proposes to establish a society for the suppression of quack advertisements.

Sir William Turner, Vice-Chancellor, of Edinburgh University, presented the Cameron prize to Dr. August Bier for his work on spinal anaesthesia and on hyperæmia as a means of treating disease.

Travelling hospitals have been adopted in Egypt as a means of dealing with the ophthalmia which is so common in that country. It is stated that over 500,000 are blind in one eye, and over 300,000 are blind in both eyes. The population of the country is about 11,000,000.

The General Medical Council of Great Britain consists of 5 appointed by the Crown, 22 representing the qualifying bodies, and 5 from the profession which numbers some 40,000. There is a good deal of discontents with the present state of affairs.

EPIDEMIC POLIOMYELITIS.

August 11th, 1910.

To the Editor of THE CANADA LANCET,—

At the meeting of the Congress of American Physicians and Surgeons held in Washington in May, 1910, a joint session of the American Orthopedic and American Pediatric Societies was held and the subject of epidemic poliomyelitis was discussed. The following resolution was adopted:

"It having been shown by recent epidemics and investigations connected with the same that epidemic infantile spinal paralysis is an infectious communicable disease that has a mortality of from 5 to 20 per cent., and that 75 per cent. or more of the patients surviving are permanently crippled, state boards of health and other health authorities are urged to adopt the same or similar measures as are already adopted and enforced in Massachusetts for ascertaining the modes of origin and manner of distribution of the disease with a view of controlling and limiting the spread of so serious an affection."

A committee with Doctor Robert W. Lovett, President, Boston, Mass.; Doctor Irving M. Snow, Secretary, Buffalo, N.Y., was appointed to urge the various state and municipal health authorities to take up the work of investigation of the various foci of epidemic poliomyelitis, to study its epidemiology and to instruct the public that the disease is at least mildly communicable.

May we ask you to publish this letter and the resolution in your journal, and also to allude to the matter editorially, urging the Health Commissioners of the various states of the United States and of the provinces of Canada to follow the example of the Massachusetts health department in studying the epidemiology of poliomyelitis.

Respectfully yours,

ROBERT W. LOVETT, M.D., *President*,
Committee on Poliomyelitis, American Orthopedic
and Pediatric Societies.

IRVING M. SNOW, M.D., *Secretary*.

476 Franklin St.,
Buffalo, N.Y.

BOOK REVIEWS.

DISEASES OF THE HEART AND AORTA.

By Arthur Douglas Hirschfelder, M.D., Associate in Medicine, John Hopkins' University, with an introduction by Lewellys F. Barker, M.D., LL.D., Professor of Medicine, John Hopkins University. 329 illustrations by the author. Philadelphia and London: J. B. Lippincott Company.

A large volume of 630 pages should tell us a good deal when it is devoted to the diseases of one organ. This volume makes its entry for the first time. It is given the recommendation of Dr. Barker, whom most of us know and esteem. The entire study of heart affections has undergone very marked change during the past 20 years. The circulatory system was at one time viewed almost solely from the standpoint of the heart; but now the influence of the blood vessels and the varying conditions of blood pressure are being carefully considered. It is in this way that a new field has been opened up, and the need for new books and a new statement of the whole case has become urgent. Of recent years this want has been met to a fair degree by some of the newer books. The present volume by Professor Hirschfelder comes at an opportune time, and does much to consolidate the work of recent investigators and place the latest views in a clear manner before the student of cardiology. For this we are thankful. The author groups his observations under four headings: 1. General Considerations and Methods of Diagnosis; 2. Diseased Conditions due to Diffuse Pathological Processes; 3. Diseased Conditions due to Localized Lesions; 4. Functional Diseases without Anatomical Lesions. The latest methods of diagnosis are carefully discussed. It is in this aspect of the author's teachings that a good deal of satisfaction will be found. The parts devoted to treatment are also full and explicit, and will prove very helpful. The author is somewhat of an optimist in the management and prognosis of cardiac affections. This is a wholesome position to take, and its influence upon the younger readers will be most beneficial. The illustrations are numerous and excellent. We bespeak for this work a wide sale.

FRACTURES AND SEPARATED EPIPHYSES.

By Albert J. Walton, F.R.C.S., Eng., M.D., Lond., L.R.C.P., M.B., B.Sc., Lond., Surgical Registrar, London Hospital, London: Edward Arnold, 1910; Price, 10s. 6d. All rights reserved.

Every phase of the healing art is being tilled by men of marked ability. This medium-sized volume of 288 pages is a monograph of

marked merit. In the first place the skiagraph has revolutionized the illustration work in such books, and has done much to improve the technique of treatment. There are very many instances, however, where it is quite impossible to make use of the x-rays for diagnostic purposes. It is very necessary, therefore, that the surgeon and especially the general practitioner in the country, should be well posted in the principles of diagnosis so that he can come to correct conclusions as to the nature of the fracture, or injury at a joint without the aid of the x-rays. In this respect this work of Mr. Walton is of the first importance. As an aid to diagnosis the book is all that could be desired by the most exacting. Nor is it less valuable in treatment. The most modern and approved of methods are recommended. There is no useless padding and idle theorizing about what to do. A dogmatic guide is a very reassuring one; and in this respect the reader will have no cause for complaint. The author does not halt between two opinions. He has a well-formed view as to what should be done in each case, and gives it in such a manner as to leave no doubt. The lines of making the diagnosis are clearly laid down, and then in plainest manner is set forth what should be done. When the teaching is sound as it is in this book, it cannot be laid down with too much emphasis. This is a book of distinct usefulness.

THE PRINCIPLES OF GYNÆCOLOGY.

By W. Blair Bell, B.S., M.D., Lond., Assistant Gynæcological Surgeon, Royal Infirmary, Liverpool. With 6 colored plates and 357 illustrations in the text. Longmans, Green and Company, 39 Paternoster Row, London, New York, Bombay and Calcutta, 1910: Price, 21s. net. All rights reserved.

The author states in his preface that "This small work on the Principles of Gynæcology, has been undertaken with the object of presenting to the general practitioner and student, if possible in an interesting and palatable form, a complete and modern survey of the foundations on which gynæcology is established." The author is modest when he speaks of his work as being "a small" one. The book is an octavo volume of 550 pages. He declares that he has "cast aside the recognized method—time-worn and too long honoured—of gynæcological compilation." He has adopted a simpler and more direct plan, and one that gives more of his own experience and less of that of others, although authority is not ignored. While attempting to be brief he has given due space to all the important points and conditions. The arrangement of the contents of this volume is very scientific and satisfactory. Beginning with the evolution of the female genital organs, he passes on to their anatomy, then to

their physiology, to the methods of case-taking, to congenital derangements and to acquired derangements in their anatomy. Then to derangements in physiological function in menstruation and conception. Then followed the infective and parasitic disorders. Next follow the retention and effusion cysts. The author then takes up the innocent neoplasms, which is followed by the malignant neoplasms. There is then a careful statement given on the subjects of the preparation of the patient and the technique of operations. We have examined this work with care and feel that it will be a welcome addition to the library of every practitioner who may possess a copy. It will make a good addition where the owner already has several works on the same subject, and a most valuable book when it may be the first one on gynecology. We could wish that every practitioner should begin his reading on this subject by the study of such a work as this. It is as brief as clearness permits of, it is scientific as our knowledge enables one to be, and it is thoroughly trustworthy on treatment. With the instructions laid down in this volume, few mistakes in diagnosis need be made. The illustrations are numerous and do really answer a definite purpose, which is not always the case in medical books. The publishers have done their part well. The paper and typography are all that the most exacting could desire. This book should have a rapid sale. On the rule of the survival of the fittest we think this must be so, as there are in this volume on gynecology all the evidences of fitness.

RONTGEN RAYS AND ELECTRO-THERAPEUTICS.

By **Mihran Krikor Kassabian, M.D.**, Director of the Rontgen Ray Laboratory of Philadelphia Hospital; formerly in charge of the Rontgen Ray Laboratory and Instructor in Electro-Therapeutics in Medico-Chirurgical Hospital and College. Octavo, 545 pages. 245 illustrations. Cloth, \$3.50 net; Half leather, \$4.00 net. J. B. Lippincott Company, Philadelphia and Montreal, 608 Lindsay Building.

With the announcement of this second edition comes the news of the death of the author. This is a matter of deep regret, as he was recognized as one of the ablest exponents of electro-therapeutics. That this book is a complete one on this subject, the contents amply show. We give these in detail as a means of setting forth the field covered by the author in this work.

PART I.

Electro-Therapeutics.

- I. Elementary Principles of Electricity and Magnetism.
- II. The Static, Franklinic, or Frictional Current.

- III. Galvanic, Continuous, or Direct Current.
- IV. Faradic, Interrupted, or Induced Currents.
- V. Cataphoric Method. Ionic Therapy. Hydro-Electric Baths.
- VI. Electro-Diagnosis.
- VII. Electro-Physiology.
- VIII. Practical Applications in Diseased Conditions.
- IX. Applications in the Specialties.
- X. High Frequency Currents.

PART II.

The Röntgen Rays in Diagnosis.

CHAPTER.

- I. The Röntgen Ray Apparatus and its Manipulation.
- II. The Principles of Technic.
- III. The Clinical Application of the Röntgen Rays.
- IV. Application of the X-rays in Diseases of the Thoracic Organs.
- V. Application of the X-rays in Diseases of the Abdominal Organs.
- VI. Application in the Specialties.
- VII. Application in Dentistry.
- VIII. The Röntgen Rays in Forensic Medicine.

PART III.

Radiotherapy, Radium, and Phototherapy.

CHAPTER.

- I. Action of the X-rays on Bacteria.
- II. Histological Changes Induced by the Action of the X-rays.
- III. Changes Induced in Various Diseased Tissues by the Röntgen Rays.
- IV. Technique of Röntgen Ray Therapy.
- V. Therapeutic Value in Disease.
- VI. Radium and Other Radio-Active Substances.
- VII. Phototherapy.

APPENDIX. Technic of Röntgen Ray Treatment.

The material gathered under each chapter is well arranged, clear and practical. The author knew his subject, and also knew who to tell what he knew. These are the two essentials in the making of a book. They are both here. The volume is highly attractive in appearance and well illustrated.

MEDICAL EDUCATION IN CANADA AND THE UNITED STATES.

A Report to the Carnegie Foundation for the Advancement of Teaching by Abraham Flexner. With an introduction by Henry S. Pritchett, President of the Foundation. Bulletin No. 4. New York City, 576 Fifth Avenue.

This volume reports on all the medical colleges in the United States and Canada. It contains a vast amount of information on these colleges. In Canada we have 8 medical colleges, located thus: Winnipeg, London, Kingston, Toronto, Montreal (McGill and Laval), Quebec, Halifax. We would urge that those colleges in which the facilities for teaching were found to be so very inadequate should take steps to remedy the difficulty at once. It is neither necessary nor wise that they should suspend their work of teaching, but it is necessary that they should improve on the present state of affairs. McGill and Toronto colleges are well recommended, the colleges in London and Halifax are classed as poor. But there is a fact that must ever be borne in mind that plant is not everything, and teaching itself of minor importance. We rather view it the other way; and we do know that those colleges which are classified as poor, so far as equipment is concerned, are doing excellent teaching. This does not relieve them of the necessity to go ahead and put their houses in order. They cannot always do good work with poor facilities.

AMERICAN DERMATOLOGICAL ASSOCIATION.

Transactions of the American Dermatological Association at its Thirty-Third Annual Meeting held in Philadelphia, June 3rd, 4th and 5th, 1909. Official Report of the Proceedings by Grover W. Wende, M.D., Secretary.

This is an interesting collection of papers and discussions. This association always gives its readers a good report. The material contained in this year's volume is bound to be of use to all who are engaged in the study of skin diseases. The papers cover a wide range of topics and are by men of large experience, and prepared from the practical standpoint.

THE EVOLUTION OF ANTISEPTIC SURGERY.

An Historical Sketch of the use of Antiseptics from the earliest times. Burroughs, Willcome & Co., London, New York, Sydney, Cape Town, Milan, Shanghai and Montreal.

This little book contains an excellent review of the gradual development of surgery. It contains a number of interesting illustrations of old

time methods of operating. There is much of interest about the work of such men as Pasteur and Lister.

OBITUARY.

JOSEPH SMILLIE, M.D.

Dr. Smillie died at Binbrook, Ontario, on 30th July, 1910. He was in his thirty-eighth year and was married, leaving his widow. His remains were removed to Hamilton for interment.

JOHN TURNER MULLEN, M.D.

Dr. John Turner Mullen, Medical Health Officer of Brampton, died at his residence in that town on Sunday morning, 14th August. Dr. Mullen was born in St. George in 1832, and after graduating from Dr. Rolph's Medical School of Toronto, he practised medicine in Peel County for over 50 years. In addition to being Medical Health Officer, he took an active part in Brampton municipal matters, having been both Mayor and Councillor. Dr. Mullen was a member of the Anglican Church. He is survived by his widow, five sons and two daughters. He celebrated his golden wedding two years ago.

WESLEY ROBINSON, M.D.

On August 4th, at Markham, Dr. W. Robinson, an old resident, was found dead in his bed. His family was away from home at the time on the Georgian Bay. It is thought that he had an attack of apoplexy through the night. He had been in practice in Markham for many years.

P. A. McINTYRE, M.D.

Dr. P. A. McIntyre, aged seventy, ex-Governor of Prince Edward Island, died at Souris, P. E. I., on Saturday evening, 18th July, after a long illness. He was born at Peterville, near Souris, and educated at St. Dunstan's College, Quebec Seminary, Laval and McGill, receiving the M.D. degree at McGill in 1867. He was a Railway Commissioner from

1872 to 1873. He was elected to the Dominion Parliament in 1874, 1882, 1887, and Governor of the Island from May 23, 1899, to October 1904. He leaves a widow and family.

JOHN GILCHRIST, M.D.

Dr. Gilchrist died on 4th June, 1910, at Central Norton, N.B. He had practised in St. John, but retired two years ago from active work.

He was a native of Sheffield, Sunbury County. He graduated from Bellevue, New York. He was very popular with all who knew him.

WILLIAM E. EMPEY, M.D.

Dr. W. E. Empey was shot on 18th August, 1910, in the Village of Vars, Russell County, Ont., where he practised, and lived with his sister. He was called about noon to see a person named Albert Blondin, who had been complaining of some abdominal pains. On arriving at the house, Dr. Empey was told to go up stairs. Just as he got to the top of the stairs he was mortally wounded by a gun in the hands of Mr. Blondin. Mr. Blondin's wife, daughters and son-in-law were down stairs at the moment of the shooting. Dr. Empey died at 4.30, as the result of the wound he received in the abdomen. Every effort was made to secure medical aid for the injured doctor, but it was nearly two hours before any one arrived. Dr. Webster, Ottawa, arrived by a special train, and Drs. McDougall and Cheverier reached the wounded doctor about the same time. It was found that he was too weak to permit of his being removed to the hospital to have an operation performed.

Dr. Empey made the following ante-mortem statement:—

"Blondin sent for me in my capacity as a medical man. When I arrived at his house, his son-in-law, Larry Gros Louis, was there, and told me to go up stairs. Just as I got to the top, Albert Blondin drew a gun and fired at me. He did so without any provocation, cause or appearance of accident. The message summoning me to Blondin's was delivered to my sister Mary by one of Blondin's daughters. He fired both barrels of the gun."

Albert Blondin said to a newspaper man: "It was an accident."

The doctor was very popular with all classes, and Albert Blondin was regarded as an industrious, hard working man.

MEDICAL PREPARATIONS, ETC.

THE ANEMIA OF THE NEPHRITIC PATIENT.

Like that of any organic disease or constitutional infection, is secondary in nature and is caused by, or is dependent upon, the original lesion or infection. There is, however, another element to be considered in this connection, *i.e.*, the influence of an iron-poor milk diet in increasing the degree of anemia from which the patient suffers. It is pretty generally conceded by authorities and clinicians of experience that a bland milk diet is best suited to the needs of the nephritic invalid, as the damaged kidneys are thus spared the irritation which results from the excretion of the products of the metabolic changes of the meat proteids, etc. It is well known, however, that milk contains but an infinitesimal proportion of iron and the patient who subsists entirely upon this fluid for any length of time, is deprived of the food-iron that is normally supplied to the blood to maintain its hematin and hemoglobin. This deficiency can be readily made good by administering Pepto-Mangan (Gude) both during and after the milk diet period. This palatable, organic, ferruginous compound is entirely free from irritant action upon the kidney and it does not disturb the digestion or cause constipation. The essential iron is supplied in tolerable and promptly assimilable form, and the use of the remedy does not, in any way, interfere with such other treatment as the physician may see fit to adopt.

RHEUMATISM DUE TO GRIP.

In speaking of the treatment of articular rheumatism, Hobart A. Hare, M.D., Professor of Therapeutics in the Jefferson Medical College and editor of *The Therapeutic Gazette*, says: "Any substance possessing strong antipyretic power must be of value under such circumstances." He further notes that the analgesic power of the coal-tar products "must exert a powerful influence for good." The lowering of the fever, no doubt, quiets the system and removes the delirium which accompanies the hyperpyrexia, while freedom from pain saves an immense amount of wear, and places the patient in a better condition for recovery. The researches of Guttman show conclusively that these products possess a direct anti-rheumatic influence, and among those remedies, antikamnia stands pre-eminent as an analgesic and antipyretic. Hare, in the latest edition of his *Practical Therapeutics* says: "Salol renders the intestinal

canal antiseptic." This is much needed in the treatment of rheumatism. In short, the value of salol in rheumatic conditions is so well understood and appreciated that further comment is unnecessary. The statements of Professors Hare and Guttmann are so well known and to the point and have been verified so often, that we are not surprised that the wide-awake manufacturers placed "Antikamnia & Salol Tablets" on the market. Each of these tablets contains two and one-half grains of antikamnia and two and one-half grains of salol. The proper proportion of the ingredients is evidenced by the popularity of the tablets in all rheumatic conditions, and particularly in that condition of muscular soreness which accompanies and follows the grip.

THERAPEUTIC USES OF ADRENALIN SOLUTION AS SUMMARIZED BY SAJOUS.

The list of disorders in which adrenal preparations have been tried could be greatly extended, but I have limited myself to those in which their use has proven advantageous in the hands of a sufficiently large number of practitioners to warrant their being added to our trusted remedial agencies. Of these, a certain number may even be said, interpreted from my viewpoint, to exceed other means at our disposal in value.

These are:—

1. Addison's disease. In this affection adrenal preparations compensate for the deficiency of adrenal secretion, and, therefore, for deficient general oxidation, metabolism and nutrition. The dosage should be adjusted to the needs of each case. Beginning with three grains of the desiccated extract three times daily after meals, the dose should be gradually increased until the temperature and the blood-pressure become normal, when the last dose should be maintained.
2. Surgical heart-failure, collapse from hæmorrhage, shock, asphyxia and submersion. Here the adrenal active principle (suprarenalin, adrenalin, etc.), as a catalyser and a constituent of the hæmoglobin, promotes energetically the intake of oxygen and its utilization by the tissue-cells, including the muscular elements of the cardio-vascular system, and thus causes them to resume their vital activity. It should be very slowly administered intravenously, five minims of the 1-1000 solution to the pint of warm (105 deg. F.) saline solution. In urgent cases, ten drops of suprarenalin or adrenalin in one drachm of saline solution can be used instead, and repeated at intervals until the heart responds. Artificial respiration hastens its effects.

3. The toxæmias, including bacterial infections, surgical septicæmia, etc., when collapse threatens, especially when a persistently low blood-pressure, hypothermia, and cyanosis, are present. Besides enhancing pulmonary and tissue respiration, the adrenal principle, administered in the same way, enhances the efficiency of the immunizing process.

4. Capillary hæmorrhage from the pharyngeal, œsophageal, gastric or intestinal mucous membrane. The mastication of tablets of adrenal substance, or the oral use of powdered adrenal substance in five-grain capsules arrests the flow, by causing active metabolism in the muscular elements of the arterioles of the mucosa and constriction of these vessels.

I may add to these a series of disorders in which adrenal preparations will probably prove of great value when sufficient evidence will warrant a final conclusion. These are:—

1. Sthenic cardiac disorders with dilatation of the right ventricle, dyspnoea, and possibly cyanosis and œdema, owing to the direct action of the adrenal principle on the right ventricle and improved oxidation and metabolism in the cardio-vascular muscles and the tissues at large. Tablets of from one-half to two grains of the desiccated gland can be taken after meals.

2. Asthma, to arrest the paroxysms, by augmenting the pulmonary and tissue intake of oxygen and cardio-vascular propulsion of arterial blood. From five to ten minims of the 1-1000 solution of suprarenalin or adrenalin in the vein or hypodermically.

3. To prevent the recurrence of serous effusions in the pleura, the peritoneum, the tunica vaginalis, etc., after aspiration, by reducing the permeability of the local capillaries and restoring the circulatory equilibrium. From 8 minims to 2 drams according to the size of the cavity, of supra-renaline or adrenalin should be injected into the cavity.

4. In neuralgia or neuritis, applied to the cutaneous surface over the diseased area to produce ischæmia of the hyperæmic nerves and thus arrest the pain. One or two minims of a 1 to 1000 adrenalin ointment should be applied by inunction.—*Monthly Cyclopaedia*.
