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The Canada Medical Record.

MONTREAL, DECEMBER, 1878.

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PHARMACEUTICAL DEPARTMENT.

Original Communications.

Lecture on the Varieties of Phthisis. BY ANDREW CLARK, F.R.C.P., of London, England, Senior Physician to the London Hospital. Delivered in the Hall of the Natural History Society, Montreal, December 5th, 1878.

(Specially reported for the CANADA MEDICAL RECORD.)

On motion of Dr. R. P. Howard, Dr. G. W. Campbell took the chair. The latter said: I have very great pleasure in introducing Dr. Clark, Senior Physician of the London Hospital, who has been kind enough to say that he would give us a lecture on Phthisis. With these few remarks I shall call upon Dr. Clark.

Dr. Clark said:—"Dr. Campbell and gentlemen, —When I desired to have the privilege of laying these drawings before you, and of setting forth in short and simple outline the views which I have formed concerning the varieties of phthisis, I did not presume to think that, in a place so distinguished for its additions to science as this is, and in the presence of persons many of whom have contributed, and are contributing, to distinction, that I could say any thing particularly new; still I desired to lay these drawings before you, and to set forth the views which I have formed, after somewhat long study, on the subject of phthisis. I desired this that I might have the benefit of your friendly criticism of the subject, and that I might learn from it how far your experience corrected or affirmed those conclusions. It is not my intention, and it would be out of place, to enter into any critical or historical sketch of the various theories which have been promulgated regarding this disease. I shall proceed at once to the heart

of the subject, and endeavour, in the fewest words and in the plainest manner, to lay before you the conclusions at which I have arrived. By phthisis I mean 'the ulcerative or suppurative destruction of more or less circumscribed chronic deposits in the lungs.' I say, by phthisis I mean 'the ulcerative or suppurative destruction of more or less circumscribed chronic non-malignant deposits in the lungs.' I do not pretend that this definition is perfect, but I claim for it that it is an easy, good working definition, and it has this enormous advantage—an advantage which I should be glad to see many other terms in medicine possess—that it involves no hypothesis, and, whatever our views of Phthisis may be, we may retain the name whilst our ideas may change. You will observe in this definition I have set entirely on one side the disease with which we are all familiar as acute tuberculosis. The chief thing I have to say about that disease before dismissing it is, that I think it has no special relation to phthisis at all. In its methods of approach, in the phenomena which attend its progress, in the pathological anatomy which we find after death, in the state of the organs during life it exhibits almost all the characteristics of what we call zymotic disease; and I look upon acute tuberculosis really as a sort of fever which has for one of its anatomical expressions the little thing we call tubercle. I appeal to the experienced, and any one present who has had the opportunity (not very often acquired) of examining a number of cases of acute tuberculosis; I am sure he will endorse what I say, that acute tuberculosis rarely issues in what we call phthisis, or in any disease which would come within the terms of the definition I have made. The acute primitive phthisis beginning often either in

children or adults in apparently perfect health, producing fever with a sort of capillary bronchitis, and marked with an irregular fever, and usually terminating (in from three to six weeks) in death, and when the body is examined after death it is difficult to find any suppurative or ulcerative destruction thereof. With these remarks I dismiss the subject of acute phthisis altogether. The next point I might add here, as it has a little bearing, that, having been occupied at the same time as Villemain in performing experiments by inoculation, and having also tried other methods of producing tuberculosis, I have come to the conclusion, and long since stated it, that the disease produced by inoculation is not a true phthisis. I mention this now because it has a bearing on what may be afterwards said. In all my experiments on animals I have found that, with care, the so-called tubercle produced, invariably disappeared, and with it the malady, whatever it was, which was unattended except at the beginning with any fever; and if I say that inoculating an animal with any cheesy matter or indeed, by any matter, is followed by an eruption of deposits throughout the body, which deposits do not appear to affect the animal, and within five or six weeks disappear and leave the animal as well as before, I think you will agree with me that this cannot be called an acute tuberculosis in the same sense as the other malady, which is rapid in its progress and fatal in its issues. When we come, therefore, to what we call a true phthisis, and examine the lungs of the bodies of patients who have died of phthisis, I think we may without undue refinement classify those lungs under three groups. In the 1st group we shall find that the dominant destructive element is tubercle and its secondary consequences. We shall find in the 2nd group that the dominative anatomical element is Pneumonia, and its secondary consequences; but in the third group, that the dominative anatomical element is fibroid tissue. These are the three groups into which the lungs of phthisical patients may be divided. The first is one in which the tubercular element predominates. The second is some form of pneumonia, and, in the third, the fibroid tissue is the dominative. Now I have purposely used the word dominative. I have done so to protect myself from any adverse criticism which has no just foundation. The lung is a complete organ and several anatomical elements enter into its composition, and when these are irritated by any foreign body each comport itself after the manner of its kind, so you may have,

so to speak, different anatomical results. If the tubercle is implanted in the lung, and the part is susceptible of being irritated, we know that two secondary consequences prevail: one has the form of pneumonia, more or less extensive and the other is some form of fibroid change, and just as the one or other of these secondary results, in the future progress of the case—rapid and febrile in the pneumonic, slow and free from fever if the fibroid—so true is this that it has almost given rise to an axiom that in chronic tuberculosis *per se* it never kills. It is the tubercle, *plus* the secondary effects of the tubercle that is fatal. So, then, I have said that in each of these groups I have advisedly used the word dominative. In the case of three groups I think it right they should receive a distinctive name, and it is important in an art like medicine that new names should not be used if new names can be avoided, and with one exception I have endeavored to frame simple terms. For the first group in which the little body we all understand by tubercle is found I give the name of tubercular phthisis; in the second, pneumonic phthisis; for the third the fibroid element dominates, I give the term fibroid phthisis. At this stage contention begins. It would be averred, certainly in France and by a very considerable number of distinguished men in England, that this group of mine is an artificial and untrue one. They would aver: here is your tubercular phthisis, because tubercular is the dominative agent. We have examined and find out certain histological structural elements in relation to each other. They would say, go to phthisical cases, and if pure phthisis, and you will see the same constituents in each. They have carried this point still further, for, on looking at one of the representations of these drawings, they would say, this it is true gives no indication of tuberculosis, and the effect is this, that as fast as the tubercles were formed it was converted into fibroid tissue. Fibroid tissue, according to this argument, being the simple homologue of tubercle.

Time will not permit, and for my purpose it is altogether unnecessary, to enter into a physiological argument. I do what is much better, I deny the justness of the argument altogether, because I have a much better one. I say that the true criterion of the difference of nature in pathological products is much less likely to be found in the anatomical structure of a thing than in the life history of a thing. Now I contend that if I pass from the dead house into the wards, and ask myself, is there anything in the life history of phthisis which would justify the distinc-

tion that I have made pathologically? in short, is there a distinctive life history for the so-called tubercular phthisis, pneumonic phthisis and fibroid phthisis, and if there is, can it be so set forth that he who runs may read? Is it a pathological curiosity or is it easily recognizable? Now I venture to think within certain limits that it is so. There are, however, to be met with at the very starting certain difficulties. The first of these difficulties arises from this fact, which every practical man will recognize at once, that the symptoms due to diseased lungs are much more distinctly referable to impairment to the function of the lung than to the anatomical agent which is destroying or impairing the function. Recognition is sometimes difficult, but in the early stages with great care it can be done. Then there is a second difficulty which we meet with, and which is partly pathological, and that is with regard to terminology. There is no difficulty in understanding what is meant by a tubercular phthisis. We agree in this case; a suppurative destruction of the lung, where the anatomical element is tubercle, we will agree to call it tubercular phthisis, and if we wish to define a little further we call it a pneumonic phthisis or fibroid phthisis. When we come to pneumonic phthisis we at once meet with a considerable amount of complexity, not only the nature of the thing itself, but of the nature of the terminology which has been adopted. I do not pretend to make this quite plain, or to that maintenance or accuracy of knowledge on this subject which would enable me to speak on the subject with the same confidence as the other subjects.

There are three forms of pneumonia which we will readily recognize; there is the common inflammation which attacks the base of the lung and with a little pain or uneasiness at the side, and is followed by crepitation and tubular breathing, which usually terminates by resolution on the 5th, or 6th, or 7th day. That is the first and the most common form of pneumonia. Then there is a second form altogether different to this, which affects the upper part of the lung, which, instead of beginning abruptly, by fever—sometimes begins insidiously and continues to march downward. The characteristic of this disease is a kind of cheesy stuff like that found in the ripe scrofulous gland, that of common pneumonia being a granite red. The anatomical element of the cheesy pneumonia being a sort of link between these two, connecting them together. There is a third form of pneumonia that is called the catarrhal or lobular pneumonia. This sort of

pneumonia is common in children, resulting from capillary bronchitis and surrounding the smaller bronchii. There are these three forms of pneumonia, and every one of them, although with different degrees of liability, is capable of developing phthisis; that is to say, every one of these forms of pneumonia is capable of giving rise to exudations, and which, when not absorbed and undergoing suppurative destruction, comes immediately within the pale of phthisis. The common pneumonia may do this, although rarely. The cheesy and pneumonic does it commonly. The catarrhal with an intermediate degree of frequency. We have thus much complexity in enquiring into the definitions of these groups of phthisis. I will not venture to intrude too closely on this ground at present, because it would occupy too much time, and blur the outlines of a picture I wish to keep clear. I will confine my illustrations to cases arising out of croupous and cheesy pneumonic phthisis. Are we justified in distinguishing these three groups of phthisis? First of all there is a tubercular phthisis—the phthisis produced by the destructive agency of tubercles, and the consequence of tubercles in the lungs. My belief in chronic phthisis is that mere tubercle never kill. If one could keep them quiet from producing a secondary change they could keep the patient alive, and also from fever complications, I see no reason why they cannot live as well as anybody else. With regard to the 1st group the most distinguishing point is that, whilst the tubercular matters are at the beginning few and slight, the constitutional symptoms are many and profound.

Take a typical case in a girl. Here is a girl perhaps with the history of phthisis in the female portion of the family. She is about eighteen, has large eyes, blushes easily, and for some time has been getting out of health. The Doctor is called in, and, no matter how minute the examination is, he simply finds the temperature a little elevated, the breathing quick, and that is all. He has before him a case where the constitution is gravely distressed and in which there is nothing local to cause it. The experienced physician immediately suspects tubercular phthisis. The patient gets thinner, and a cough begins, bye-and-bye a little dulness is found, and the chest gets flattened; then the usual symptom of phthisis set in, and, although there is improvement from time to time, the main progress is nearly always downward, and, in from two to three or four years, the case terminates, as a rule, with death.

It is marked, as I have said, in the early stages by

the slightness of the physical signs, and the profoundness of the constitutional symptoms. It is also, I think, marked by the want of response to all methods in treatment. Now the second class of cases: I shall take the two forms of pneumonia. The best way is to tell the history of a case. Here is a drawing of a lung which I will hand around immediately: a case very well known at the London Hospital, that of Peter McIntosh. He came in and told us he, a few days before, had had a shivering and then a pain in his side. We examined him and found the usual signs of pneumonia, but also with these peculiar symptoms; around the lung there was a dullness, but, instead of tubular, there was feeble breathing, and above all the dullness was still increasing. You will observe at once that many of these symptoms were symptoms of pleurisy, but, as there was no displacement of organ, no friction, no variation in dulness with change in position and as there was no protrusion of the *intercostal* spaces, as the temperature was very high, there was no doubt about the case, it was a bad case of pneumonia. I said to my class at the time that this exudation will not be absorbed because it is my experience that, with all such cases where there is so much stuff in the lung that it cannot vibrate, there is in all such cases extreme difficulty in the absorption of the deposit. The pneumonia came to an end about the usual time, and the man expressed himself very much better; but after a few days there was no removal of the exudation, and he remained for months under my care without the smallest change in the solidity of the lungs. At the end of eight or nine months he wanted to go out, and he was dismissed. In a week he came back again, had caught cold, and soon after his admission for the second time the lung began to break. He continued with symptoms of phthisis for two years altogether, under my care at the London Hospital. Here a peculiar complication occurred, in which I made a mistake. I am very fond of firing off big guns at my students. I said his pneumonia is unabsorbed, and within a month you will get tubercles in the other lung. In McIntosh's case evidence of what I believed to be tubercle occurred in the opposite lung. He died in twenty-two months, and on making the *post-mortem examination* I found a very beautiful example of lobular pneumonia and no tubercles. This is a rather quick example of what may be called pneumonic phthisis, arising from a common inflammation. This was the first time I had not found tubercles produced by the suppuration of the un-

absorbed deposit. Such cases of pneumonic phthisis are to be recognized by the history of the case, by the fact that some sort of tubercular attack has occurred, also by the fact, that at the time of the examination of the patient, more or less suspicion of there being no absorption of the deposit, by more or less large solidification at the base of the lung, and instead of disappearing, the exudation breaks up, and induces all the usual symptoms of phthisis.

The second class of cases of pneumonic phthisis is not so easily recognized. It has usually no such history as this. On the one hand there is no history of insidiously rapid failing health as in tubercular phthisis. On the other hand, there is no history of acute attack, which may be considered as pleurisy. There is a history of cough creeping on with a little fever, which has gone on increasing without any material impairment to general health; and, when one comes to see a case of this kind, you will usually see a fair person, light eyes and perhaps a florid cheek. If you examine this patient you will find it very different from tubercular phthisis, as, whilst the constitutional symptoms are exceedingly few, the physical signs are many. You will find the middle part of the lung very solid. You will notice if you get a case of this kind that, instead of the exudation being absorbed or undergoing fibroid change, the lung breaks up, the cheesy matter breaks into small cavities, and then it either progresses like an ordinary case of phthisis, with this difference, that the patient seldom at the last gets emaciated or feverish, but at the end it terminates like an ordinary case of phthisis. There are several drawings on the table of these cases of pneumonic phthisis, some of them breaking up into cavities, and some partly becoming fibroid. I have spoken of *caseous* pneumonic phthisis as being very often, as it is, chronic, but it is not so rapid in its course as ordinary pneumonia, but still with all the signs of inflammatory disease. They are to be recognized, I think, immediately by the circumstance that the disease occurs in the upper lobe progresses rapidly from above downwards, and is accompanied by moderate fever, and either terminates at the end of about a fortnight, much longer than in a common case, or within a few weeks breaks up into cavities. This is the form of phthisis which used to be called galloping consumption, phthisis *florida*.

I pause for a moment to recur to the anatomical question. It was said by anatomists that there is no distinction in point of fact between the histological structure of a tubercle and that of caseous

deposition. I ask you to mark what a wide distinction there is between these two things. In a case of tubercular phthisis you have the constitutional phthisis preceding or accompanying tubercle, but in a case of caseous phthisis you have a very large amount of local disease with a small amount of constitutional disturbance. You will see, therefore, into what a dilemma they are cast. Tubercle is a very little and curious thing. The least amount of anatomical element, the more profound will be the symptoms, and the more the amount of physical change in the lung the less the constitutional effect. I might use the same argument, viz., that I doubt very much that grey tubercles are really absorbed; I do not doubt that they may be converted into fibroid tissue, or transformed into calcareous stuff, but I have not once, but many times seen a very considerable caseous deposit occur in the summit of the lung, and often disappear, and some of the most ardent have said that tubercle assumes the form of tubercular infiltration and, under certain circumstances, disappears. He is forced to admit, also, that such an experience is extremely uncommon.

I pass on to the chronic course of fibroid phthisis. It is marked in the first place, as a rule, by an inflammatory origin, but not always. I have in the London Hospital now three cases on which I was occupied before I came across the Atlantic, and this will illustrate one of the modes of the origin of this disease. The first man had these symptoms: He is about thirty-six years of age, his right side is extremely contracted. The heart beats under the second rib. He is pretty well in his general health, has no fever, but he suffers from a slight cough, often a paroxysmal cough, which ends occasionally in vomiting, or the attempt of it, and by that act he ejects foetid matter from the bronchial tubes. This is a case of what I should call fibroid phthisis. On examination there are signs of two small cavities near the summit of the lung, not dilated bronchial tubes, and, as they are cavities, it is certain from the circumstances that they are formed in the creelæ of elastic tissue. Now one of the other cases has this history: He is a man about fifty-two years of age; he has been eight months under observation. He came into the wards of the Hospital with a common pleurisy. He had a little effusion at the base of the lung. I said we will put him to bed and keep him quiet, and the chances are that, the effusion being small, he will probably shortly be well. I always speak with some caution, for I examined him, and found that

the effusion had gone, and there was a to-and-fro friction. I thought not much about it, but this to-and-fro friction was going up the lung, and we continued to watch him, and the to-and-fro friction went up the lung, and, notwithstanding iodide of potassium and mustard plasters, it would not be influenced by these remedies. It went on for months, and, simultaneously in the later stages of its history, the right lung contracted, ribs fell in, the neck got a little swelled, the heart was drawn to the right side, and by and by he began to have slight spinal curvature, and in this state I left him. This form of fibroid phthisis can be recognized by a variety of characteristics: by its mode of origin; by contraction of the lung; by the paroxysmal character of the cough; by the absence of fever; by the slow progress which the disease makes, and by the displacement of the heart to the right side.

The drawing which I now show you is an interesting illustration of a lung which was converted into a fibroid mass, was surrounded by an enormously thickened pleura, and had upon its summit about an inch of fat, an appearance which I never saw before or since, although I have examined over four thousand bodies. The subject in whom I found this condition of the lung was my first patient at the London Hospital, some twenty-three years ago. He was by trade a bricklayer, and when he came to me he weighed fully fifteen stone and complained of a cough and a spitting of blood. At this time, being young in the profession, I did not know much of lung diseases. I, however, examined him with the greatest possible care, but found nothing to account for his symptoms. From the history of the case, I thought that perhaps he might be suffering from some internal growth, such as an aneurism. I found, however, that he had been treated a few weeks previously on the surgical side of the Hospital for a fractured rib, and thinking that it might have affected his lung, I directed him to have his side bound up. I took much interest in this man, but he did not improve, and months elapsed before I was able to discover anything wrong. The first thing that I noticed was a little crepitation, and the next a little contraction of the right side. By and by he began to have violent paroxysms of cough, which often ended in retching and the discharge of foetid mucus from the lung. I watched him for years, and step by step the right side continued to contract and curious changes made their appearance. The right side of the neck became smaller, and great veins traversed the thorax, the right arm and fingers were swollen,

and the latter bluish and he began to waste. In this state he complained of pain in his right side, and still the paroxysmal cough and inability to sleep. Everybody said he had a tumor—some people said that it was a cancerous tumor. I began at last to have my own faith shaken, and think that perhaps it was a tumor, for I could not recognize the symptoms with any disease with which I was familiar. However, the case went on and I became satisfied that I had to do with a lung which was undergoing fibroid change. He eventually left the Hospital, but I still kept him under observation from year to year. He was a great sufferer, and imbibed too freely of alcohol. His skin became dry and he showed signs of albuminuria, which disease is a clinical fact, in connection with fibroid phthisis, and at last, taking cold, he died. Before his death he said to his wife that perhaps the doctor would like to see his inside, and for all my care, attention and watchfulness of him he willed his body to me. I am sure all who will look at the drawing will say that they never saw anything like it. There was not any tubercle to be found anywhere, no evidence of disease anywhere in the left lung, which was perfectly healthy. Every organ in the body was sufficiently healthy as not to require notice, except perhaps the kidneys which were slightly congested and harder than usual. The right lung did not contain anything which, by any possibility, could be called tubercle. It had undergone a fibroid change, causing its contraction, and ultimately gave rise to the symptoms which caused death. Circumstances prevented my making a microscopic examination.

I have already encroached so long upon your time (No, no) that I will not venture to detain you but a very few minutes. With your permission I will, however, just mention one other case. I now present to you the drawing of the lung of a young man eighteen years of age, who was brought to me by Dr. Pollock of Charing Cross Hospital, who said he thought he had got one of my cases. This patient sprang from a bronchitic family, and had had repeated attacks both of bronchitis and pleurisy. When brought to me the whole of his malady was evidently on his right side. His chest was contracted, there was extreme dulness, feeble breathing, and a hard paroxysmal cough. His heart instead of beating between the fifth and sixth rib, beat between the third right rib. I believed it to be a case of fibroid phthisis. I exhibited the case before the Clinical Society of London and, unfortunately, it was set upon by three gentlemen of my own hospital who could not see

anything remarkable in it, and said it was an ordinary case of tubercular phthisis with contraction. *They were, unfortunately, too near to see things well enough.* However, I said nothing, and the case went on, and not long ago the man took it into his head to die, and after much difficulty, Dr. Pollock and myself succeeded in getting a *post mortem*. We did not find any disease except in the right lung. This lung was reduced to about one-fourth of its natural bulk. It was a perfectly solid mass; through it ran several dilated bronchial tubes, and in its summit there were several ulcerated cavities, but there was not anything found, which, under any possible circumstance, could be construed into tubercles.

I have now in my wards, in the London Hospital, three cases, in different degrees of development, which illustrate one of the modes in which fibroid phthisis arises. The first is the case of a man called Tenny. He is a thin, pale, and delicate man. He is liable to cough with expectoration; but he says he is pretty well, except that he is very delicate. The remarkable feature about the man is, that he has scarcely any lung to breathe by. His chest seems contracted, and he presents an appearance such as is seen in advanced phthisis; but it is not a case of phthisis at all. The more careful examination you make the more sure you are that you are dealing with a man who has semi-solid, contracted lungs, with but little space left for breathing, and, perhaps, slightly dilated bronchial tubes which hold a small amount of secretion. But there is no evidence of destruction of lung-tissue, and he has had a kind of interstitial pneumonia for many years. I have watched him from the beginning of the symptoms, which are like those in the other cases described.

The second case is that of a man called Douglas. He is in the position of having a contracted left lung, with crepitation all over it; bronchial breathing and bronchophony; but otherwise he is in tolerable good health. He, too, has the history of the third case.

The third case is that of a man who has been under observation for some time, but whose name I forget. But he has an irreducible fibrinous pleurisy. He declares that he is perfectly well, and it is only by the greatest strategy and ingenuity that we are able to keep him in our wards. It astonishes him that we should be so anxious to have him remain with us. But we are very desirous that he should do so, in order that he may be utilized for purposes

of our common instruction. But the moment the hand is placed on the chest you feel a friction motion, and, over almost the entire chest, you can hear the to-and-fro friction sound. This is an example of the beginning of these cases, and tenny's difficulty began in this way. They come into the hospital with some pain in the side, with little or no effusion in pleural cavity; probably an effusion has been present at some time, and they get apparently well; but the to-and-fro friction sound remains in some cases. In none of these case have I been able to render any therapeutical service whatever. In the last case it will be my endeavor to keep the patient in the hospital, so that I can trace the clinical history through its entire course.

I hope that it will be obvious from what I have said that anatomically there are three groups or classes met with in the lungs of persons dying from phthisis. I hope also that I have said quite sufficient to prove to you that it is quite possible to recognize these groups during life, and that they are not merely pathological curiosities. If this be the case I contend that, as these groups are distinct in their origin, different in their progress, responding differently to treatment, they ought to have distinctive names. There is but one other point I would like to mention, and that is that I have on the table drawings of two cases—patients who suffered from all the symptoms of phthisis, and died. In one case the destructive element was found to be syphilitic deposits—in the other hæmorrhagic extravasations. Lastly, I have had the opportunity of seeing hæmorrhage occurring from lungs quite free from tubercular deposit. Gentlemen, I thank you for the patience with which you have listened to my somewhat lengthy lecture, and although I cannot hope to have solved all the many difficulties which surround this complex subject, yet I trust that I have succeeded in removing some obscurity from your minds, and in opening up for your investigation fresh avenues of enquiry. If I have been able to do so, gentlemen, my time has not been occupied in vain. (Applause.)

Dr. R. PALMER HOWARD asked: 1st, Have you noticed whether tubercular phthisis and caseous pneumonic phthisis occur in children of the same family? Are you of the opinion that they may be alternative complaints in the same family? Are they equally transmissible by inheritance?

2nd. Have you ever met a case of primary fibroid phthisis not of inflammatory or tubercular origin? Are there means by which, in a case of pleurisy or

pneumonia, one might early suspect that this ulterior change of fibroid transformation might be set up; if so, how shall we recognize, at an early stage, the future life history of the original disease?

3rd. Can you distinguish those cases of chronic tubercular phthisis or caseous pneumonic phthisis, which undergo fibroid transformation from those cases of fibroid phthisis which begin in the *pleura* or as a consequence of pneumonia? Or, in other words, can you distinguish the fibroid transformation which occasionally occurs in the common forms of phthisis from the fibroid transformation which follows pleurisy, on the one hand, or pneumonia on the other?

Dr. CLARK:—To the first question I say that I do recognize as a fact that tubercular forms of phthisis and caseous forms of phthisis alternate in same family, and, furthermore, that people with caseous phthisis may beget children subject to tubercular phthisis? I recognize it fully. It is quite true, but I do not know if it would be fair to assume it as an argument against the position. I readily admit that, in children of one family, I have seen caseous pneumonia in one child and evidence of tubercular in another. I admit further, that the offspring of persons with caseous phthisis, may be tubercular. Even if I were not able satisfactorily to answer that argument, I should still say that the greater proofs of distinction ought to overrule what that fact suggests. The great facts of distinction are that tubercular history is almost unqualifiedly bad; the caseous history is relatively good, and the progress appears to be quite distinct from that of the other. While the tubercular mischief is scarcely amenable to treatment, the caseous is amenable to treatment. I apprehend that in these cases, the real explanation lies in the fact that, in these instances, during the life of a family, what is possessed by each of them is a vulnerability of lung, and that circumstances, distinctive in each case, determine in one tubercular, in another caseous phthisis. The two diseases from their very origin seem to be so distinct that I am disposed to give them a distinct name. I cannot contend that I have fully solved the difficulties of the subject. I think there is sufficient ground, even on the anatomical side, certainly enough on the clinical side for recognizing them as distinct.

The second question is: Have I ever met with cases of primitive fibroid phthisis? I am not quite sure. In all the cases of which I have been able to keep accurate records, I am bound to say there is

always some history or another of dry fibrinous pleurisy, frequent attacks of bronchitis, syphilis, &c. Such a thing may occur, but, speaking entirely from my own observation, I am not sure that I have ever seen a single primitive case of fibroid phthisis.

The third question is, whether there are any means in a given case of pneumonia or pleurisy of determining whether fibroid change is likely to occur. I think there is. If I had a case of pneumonia, and if this case went on past the usual period, and there were no signs of amelioration I should say one of two things will surely occur: Either this exudation will break down and we shall have evidence of it in the physical and constitutional symptoms, or it will wither and become converted into a sort of fibroid mass, and the evidences of that, constitutionally, will be inactive; the patient will get greatly better and declare there is nothing the matter. Locally, the evidences will be dulness, feeble breathing, slight and increasing contraction. If I had a case of simple dry pleurisy, and, notwithstanding all I could do it went on, I would say that, if it receives the remedy of rest and restricted movement, the chances are that it will go on and produce a fibroid change in the lung—how far I do not know, especially if he drinks alcohol.

I guarded myself against the possibility of misinterpretation by stating that, when these cases were advanced, it was exceedingly difficult to discriminate, because the symptoms offered were much more referable to mere destruction of the organs than to the destroying agent. If you find the disease begins in the lower part of the lung and progresses slowly upward and has been marked by fever and prostration and loss of flesh and strength and color, if you find the summits of the lung free, you may safely say you are dealing with an ordinary case of fibroid phthisis. If, on the other hand, you find none of these things, if you find the summit of the lung affected, I know of no means except the history of the case to distinguish between the two. The history of the case, if it were one of sudden origin, of a presumable inflammatory character, would lead to the conclusion that it was fibroid; the insidious origin of the disease would suggest tubercular. Further, if fibroid phthisis is not always confined to one lung, it is in the majority of cases. I have seen even in cases of tubercular phthisis, the appearance of a secondary fibroid change. So much is this the case that some people dealing with tubercular phthisis recommend their patients to become drunkards with a view of prolonging their lives.

Dr. OSLER said that it would add to the obliga-

tions which the meeting was already under to Dr. Clark if he would give a sketch of a few of the principles of the treatment of phthisis.

Dr. CLARK said: I am afraid if I do so that I shall lose what little character I may possibly have gained. I pretend to no special knowledge of the treatment of phthisis. Whenever I encounter any chronic disease, I deal with it on principle. Every organism has a righting, a repairing, and a resisting power, and it exercises these powers in proportion as we give them fair play. I proceed always in a chronic case to determine what will be fair play for the organism suffering. Hence, diet, air, attention to the general functions, form always the first points of treatment in such a case. While the profession are ready enough to give a liberal supply of medicines, we too often overlook those minor details of daily life which, in the end, make and unmake life. Of tubercular phthisis, I have very little to say. The principal thing to do is to look after the general health. The tendency to resistance being lowered permits the advance of the disease with which the patient is threatened. If I can keep him free from colds and consequently from pneumonias, I am practically doing as much for my patient as I can. There are no principles in medicine; it is in fact one of the most unprincipled of arts. Every organism is somehow or other different from every other, and it contains within itself the laws for its own management. The wise man, he who has the gift as well as the knowledge of healing, is he who with an instinct is ready to discover the laws of the organism with which he is dealing, and governs himself accordingly. It would be foolish to say in detail how I should deal with a case of tubercular phthisis. Regulated diet, moderate use of alcohol, air, exercise, avoiding colds are the principal means to be used. I have tried this medicine and the other, hypophosphites, arsenic, iron, cod liver oil, &c., but I cannot say, looking at the whole with an honest, critical eye, I can lay my finger on any remedy which has any specific influence. As regards caseous pneumonic phthisis, I believe in the efficacy of treatment. In an acute case, I have great faith in treatment. I put my patient to bed and keep him there until his temperature falls below 100° no matter how long, that may be. In cases where the secretions are scanty, the tongue dry, temperature high, pulse quick, I satisfy myself with a free use of salines and with counter irritation. If I find the patient remaining feverish, I give up my citrate of potash, and put a drachm of antimonial wine into

a tumblerfull of water, and make him sup that during twenty-four hours. The skin breaks out into perspiration, tongue becomes moist, expectoration usually begins; then I immediately stop and treat my patient with effervescing alkaline salines with quinine and citric acid. I next feed him with milk and beef tea. We often forget, practically, that liquid food goes quickly to the lung. In cases where exudation is going on in the lung, we minister to it by filling our patients with fluid food at short intervals. In rapidly extending pneumonia, I have seen exudation hurried to a fatal end by the administration of fluids every half hour. Food should be given in a more solid form, and not oftener than every four hours. This is one of the forms in which I believe alcohol to be extremely useful. In cell proliferation, alcohol is useful, and I would extend it to scrofulous diseases generally.

Dr. RODDICK said the question of climate in connection with the subject of phthisis was one of great interest to the profession in this country, and begged that Dr. Clark would state his views on this very important subject.

Dr. CLARK thought that, notwithstanding the advice given very often, consumptives generally went to those health resorts which were most fashionable. He, unfortunately, had not yet been able to lay down for his own guidance any definite rules on this point. Before deciding where his patient should go for change of air, he first found out whether the most comfort was experienced in the valley or on high land, and would be guided accordingly. Hence what suited one person would be death to another. He deprecated the sending of patients away from home comforts when the disease was far advanced. Madeira and the South of France were the favorite and fashionable health resorts of English consumptives, but he knew of some remarkable instances where the murky atmosphere of London gave the greatest comfort to phthisical patients. He thought highly of our Colorado Canons and Florida, and regretted that they were not more easy of access to European phthisics. He had been informed when in Ottawa that lung troubles were almost unknown among the lumbering classes of that district, but, whether the mode of living or the atmospheric conditions were responsible for such a happy condition of things, he would not pretend to say. In fine, the important matter of climate in phthisis could, in the present state of our knowledge, be decided only by the condition of individual cases.

A cordial vote of thanks to Dr. Clark for his

admirable and instructive lecture was carried amid acclamation.

Case of Extra Uterine Pregnancy, Death. By RICHARD A. KENNEDY, M.D., C.M., Professor of Midwifery, Bishop's University. George Ross, B.A., M.D., Professor of Clinical Medicine McGill University, and William Osler, M.D., Professor of Physiology, McGill University.

(Read before the Medico-Chirurgical Society of Montreal, December 13th, 1878.

Mrs. A.—I first saw her in the beginning of February last, suffering from what I was led to believe, a threatened abortion. She considered herself to be pregnant with her second child. There was a bloody discharge per vaginam, great pain in the pelvis, vomiting *and high fever*, with great tenderness of the abdomen, which I diagnosed to be a *localized peritonitis*. She was six days under my treatment, and then went to the Hotel Dieu, under Dr. Hingston. She came out of the Hotel Dieu after a short term.

On the 24th February, I again saw her, but do not remember the circumstances of my attendance, though she stated I gave her something which relieved her. I did not see her again until the 24th July, when she called at my office to pay something on her account. At that time she called my attention to her condition. The abdominal enlargement being that of a woman at about the 6th month of pregnancy; she complained of the foetal movements, and at her request I placed my hand on her abdomen and am positive that I distinctly felt them. Of course not expecting but what it was an ordinary case of pregnancy, and that as usual it was all right, I did not examine her as closely as I now wish I had done. Her calculation was that confinement would take place about the middle of October, for which she wished to engage me. Early in August she called and stated that she feared the child was dead; she had hurt herself getting out of bed and had felt no movement since. The abdomen I found was larger than at the previous time when my attention was called to it. There was no foetal movement nor could I detect foetal pulsation; as there was no indication of uterine action, I counselled her to keep quiet and wait. At a subsequent examination I thought I could detect the *placental souffle* which was faint, and I thought that probably some circulation was continued in the fetus, which might account for there being no attempt at labour. From the end of

August she began to run down in health, got remarkably thin and debilitated, and had the appearance of a person suffering from the *absorption of septic matter*; chills and feverishness. I had considered the advisability of inducing labour; this she was averse to, and so were her friends, so that I placed her on iron and quinine, with a good diet.

About the beginning of *September* she complained of great pain in the right *inguinal region*. It was extremely tender to the touch, and there was an enlarged and distinct bulging; my opinion at the time was that the foetus was dead and had *changed its position*, the body getting into a transverse direction with the head in the right side; this was apparently confirmed by the altered shape of the uterine tumour. At this time I did not consider it advisable, even if allowed, to induce labour, and by making her lie on this side with a pillow under the swelling (which could be pushed downwards), it disappeared, leading me to believe that the body had again assumed its usual position. I wanted again to induce labour, but she preferred to wait, as she thought the child might be alive and labour would come on in due time.

She suffered severely from pain and diarrhoea with *fetid dejections*, and had a *bad cough*; morphine was given for the relief of pain, also a cough mixture, and the quinine continued. By the *end of September* she commenced to improve, got stronger, but she was also getting smaller, and on percussion there was evidence of gas or air in the tumour where it was before quite dull as in pregnancy.

At her own request I did not interfere as she considered her time to be up in the middle of October. The opinion that I now formed was that the child being dead had decomposed with the formation of gases and absorption of putrefactive matter which had been going on for some time. During the second week of October she sent for me, believing herself to be in labour. She was suffering from pain just as in the commencement of labour. A vaginal examination showed that there was a rounded tumour pushing downwards, the os uteri in the usual position but not at all dilated or dilatable, and the cervix entirely absorbed or obliterated. I then did not doubt but what the enlargement was in the uterus, and that the condition was such as I have stated. Finding in a few days that there was no advance in labour, no attempt at dilatation of the os, I began to suspect that I might be wrong in my opinion. I asked Dr. Finnie to see her. We tried to introduce the uterine sound, but could not, so it was decided that the os had better be dilated and an exploration made. I

could not enter the sound more than half an inch, but on trying to put in a laminaria tent, this latter took a course to the right side and went in easily to full extent. This was in the evening, next morning I put in a sponge tent to further dilate it. This went in the same way, and when dilated examined with my finger (under chloroform), but only could insert it about an inch and a half; thinking I could feel the membranes, it was a question whether an opening should be made in them or not. This I hesitated to do, as, if there was escape of contents, no uterine contraction might take place, so it was considered best to give ergot to induce them, and on their action to puncture the sac. This failed, however; its only effect was to again close the os more firmly. I again dilated with tents, being determined to explore more thoroughly and to puncture at the same time. On examination this time got my finger into the whole cavity of the uterus, which was directed to the right and shortened, and now found that there was nothing in it, the tumour apparently lying upon it and closely applied as percussion on the abdomen could be plainly felt. Of course no attempt was made at puncturing through the uterus.

This condition was verified by Dr. Finnie, and we considered as she was now better than in September, and the tumour was getting smaller, to leave it alone and continue the supporting treatment.

The opinion I have now formed from these examinations, the past history, &c., is this:—That the impregnated ovum had been arrested in its downward descent to the uterus, in the tube close to the uterus on the left side. There grown, its distension gave rise to the condition for which I was first called, probably rupture, that a new sac had grown around it, and in the entire growth had compressed the uterus and caused it to atrophy, and thus, as it occupied the median line, assumed the outline and position of the uterus. That there was a child I had no doubt, for I felt the foetal movements. From a growth in such a cavity slight causes would induce its death, and not being in the uterine cavity no effort at labour would follow. The subsequent septic condition, the evidence of gas in the tumour, are what would follow if the child was dead, and possibly ulceration may have occurred into the intestinal canal, which would account for the foetid condition of the discharge and the lessening size of the tumour which has been going on. I did not suspect it to be ovarian, until I made the examination in October, as it was not first observed at the side, but in the median line, besides, would it be possible for an

ovarian disease to cause those changes to occur in the cervix which did occur and caused it to be as at present entirely obliterated, and, at the same time, cause a total suppression of the menses for so many months.

The following are the notes of the case after the admission of the patient to the Montreal General Hospital, under Dr. Ross:—

She was admitted on Nov. 8, 1878.

Patient is thin, pale, emaciated, with sunken eyes. She complains of great pain across the lower part of the abdomen, and frequent vomiting. The abdomen is smooth, prominent, and somewhat tense. The lower zone projects considerably more than the rest, but no definite tumour as from a gravid uterus can be seen. By pulsation the upper margin of this swelling is felt to be just above the level of the umbilicus. The whole region occupied by it is quite tender upon pressure, and throughout gives a hollow tympanitic note upon percussion. On the right side low down (iliac region) there can be felt a distinct fulness and hardness, and it is here that the tenderness is most marked and the greatest pain is felt. She is feverish (101° F.), quick small pulse, very fretful and irritable. Says she is very restless at night and perspires a great deal. She was put upon a mixture of iron and quinine, and was ordered beef tea diet with port wine, and given doses of morphia at night to relieve pain.

Two days after admission she had a violent rigor, followed by high fever and profuse sweating, for which she got a hypodermic injection of morphia. Had two stools the last twenty-four hours—they were grayish-colored and very foetid, but contained no trace of foetal debris.

On the 12th, pain, sweating, and weakness as before. No vomiting. No chills. This forenoon had two stools of similar characters to those last described, but containing in addition some small macerated foetid bones without cartilages; these were three ribs, and a long bone, probably a tibia: also a number of pieces of tough shreddy greyish tissue, which are no doubt portions of decayed integuments. The next day she voided a well-formed temporal bone. Complains of sharp cutting pain when her bowels are being moved. A digital examination of the rectum was made; it appeared natural throughout; there was an impression conveyed to the finger, just at the top of its utmost reach, as though this point were the lower border of a rounded opening, but no aperture could be felt. Two days subsequently, the general symptoms in

the meantime remaining unaltered, the patient complained of very severe cutting pain in the rectum, so much so that it was feared a sharp portion of the foetal skeleton might be impacted there. A second rectal exploration, however, proved that it was empty.

Nov. 16th.—A severe chill last night and another this morning, followed by a temperature of 105° F., great anxiety and oppression, and then profuse perspiration. Quinine, iron, beef tea and wine, are being freely administered, with local anodyne applications and hypodermics of morphia at night.

This condition of irregular fever with occasional rigors, alternating with drenching sweats, continued until the 27th instant, when new symptoms were developed. A teasing cough had lasted for two or three days, accompanied by a small amount of frothy expectoration, but physical examination showed nothing abnormal. On this day, however, she was suddenly attacked, about 2 p.m., with a violent stitching pain in the right lower ribs, with a most distressing squeezing sensation round the chest. Auscultation revealed a loud rough and harsh pleuritic friction at lower part of the right latera region, extending less marked to the base of the lung behind. She was ordered morphia, the dose to be regulated at the discretion of the house-surgeon, and poultices. The next day the pain was relieved, but her pulse was very rapid, small, and compressible, and she gradually sank and died at two a.m., of the 30th instant.

Post Mortem, eight hours after death, (by Dr. Osler):—

Body that of a small, much emaciated woman; rigor mortis present; abdomen sunken; mammae flattened and wasted; panniculus adiposus very scanty.

On opening abdomen, the parietal peritoneum is adherent from the naval downwards, and extending into the flanks. The attachments are separated without much difficulty, when a tumour is discovered, occupying the superior part of the pelvis, the organs of which are concealed by it. Above it extends nearly to the naval; the transverse colon is closely attached at the upper part and descends along the left side. On the right there are firmer adhesions with the lower coils of the ileum. The tumour is firmly fixed, occupies a central position and is about the size of a child's head. On making a free incision the sac of an extra-uterine pregnancy is exposed, containing about ten ounces of dark greyish-black material, looking like a mixture of coal

ashes and water, and in this are the disconnected bones of a foetus, and discoloured, and entirely devoid of soft parts. A peculiar and horribly foetid odour is given off from the contents. The sac walls are about two millimetres in thickness at the front and lateral parts; thicker and more condensed in the pelvis. The lining membrane is roughened, of a dark gray colour, in places quite black. On separating the adhesions of the sac to the pubis the bladder and fundus uterus are exposed, when it is seen that the former (the sac) lies above and behind the uterus, extending between it and the rectum as low as the level of the os, but not much more to one side than the other, the balance, if any, being in favour of the right. A little to the left of the upper extremity of the sac is an oval orifice of communication with the sigmoid flexure of the colon, about $\frac{3}{4}$ ins. in length, edges rounded and dark in colour. On the right side there are several spots where perforation has almost taken place into the ileum, the coils of which could not be separated without tearing the sac-wall. In the broad ligament of the right side is a cyst the size of an apple, in communication with the main one by a narrow valvular opening, and filled with a similar ash-like material. It has thick walls, with a well formed lining membrane. The fallopian tube terminates at the upper part of this cyst, being slightly dilated in its course and at the extremity. The ovary of this side could not be found, but whether accidentally cut away or destroyed in the growth of the sac cannot be positively said, probably the former. The ovary of left side not seen, probably left in the body, though it was thought that the entire contents of the pelvis had been removed. The fallopian tube of this side is cut off about $1\frac{1}{2}$ in. from the uterus. The tissues of the broad ligaments on either side are much infiltrated and thickened, and on the right below the lesser sac there are several lines of suppuration passing down towards the vagina, and several of the veins contain thrombi. The uterus is slightly enlarged, measuring $5\frac{1}{2}$ in. in length, of which $2\frac{1}{2}$ in. are made up by the cervix. Mucous membrane is soft, that of the cervix covered with a dirty semi-purulent secretion.

Heart presents nothing of note beyond five or six small perforations in the auricular septum.

Pleura over bases of both lungs inflamed and covered with flakes of lymph, about four ounces of exudation in right side.

Lungs.—Posterior part of lower tube slightly collapsed and dark in colour. One or two firmer

spots are felt, which on section prove to be patches of pyæmic pneumonia, one of which is beginning to soften. In the lower tube of left lung are several of these nodular, superficially placed spots; two have softened into small abscesses.

Nothing of note in the abdominal viscera.

Progress of Medical Science.

ON THE ABSORPTION OF LIME SALTS.

The opinions of physicians concerning the therapeutic effect of lime salts differ widely. Some think that they act only *locally* upon the mucous membranes, the secretions and contents of the intestines, but that they have *no general* action upon the system. Others consider them as powerful remedies in all so-called dyscrasies. The differences in opinion caused the author to experiment with animals, to see if lime salts *enter the system*, and become excreted with the urine. He found that soluble lime salts, when brought into the body, become *absorbed*, though only to a small degree. We may therefore expect that a deficit of lime in the body may be balanced by the introduction of a soluble lime salt in a sufficient quantity, provided the general condition of the body favors a return to the standard. The administration of these salts in the proper diseases seems therefore to be well founded.—*Dr. Perl, in Virchow's Arch., Vol. 74, September, 1878.*

REMOVAL OF THE LOWER PORTION OF THE LEFT LUNG—RECOVERY.

Fordyce Grinnell M.D., physician to Wichita agency, Indian Territory (*Cincinnati Lancet and Clinic*, September 14th, 1878,) reports the removal by himself of the lower portion of the left lung of an Indian boy, eight years old, who had been wounded by a barbed arrow, and had pulled out this portion of the lung when he pulled out the arrow. The arrow penetrated between the fifth and sixth ribs, just to the left of the median line. Twenty four hours after the injury the doctor saw the case. Meanwhile the "medicine man" near at hand had failed to cause the lung to return by his enchantments. When the doctor arrived, the protruded portion of lung was congested and fast becoming gangrenous. The extended portion of lung was ligated and removed; the cut surface was touched with perchloride of iron and returned within the small opening made by the arrow. The portion of the lung removed was four and one-half inches long and two and three-fourths inches broad at its widest part. Some degree of suppuration took place, and two weeks after the ligature came away with a quantity of pus. The boy has steadily improved since the ligature came away, and is now beginning to resume his wonted sports.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON OBSTETRICS.

Stated Meeting, June 17, 1878.

SORE NIPPLES.

Dr. F. V. White directed the attention of the Section to his method of retreating sore nipples. He received the idea from the patient. He had had between one and three thousand cases of confinement, consequently an extended experience in the management of that difficulty. He had resorted to almost every method of treatment, embracing the various local applications which had been recommended, but without satisfactory results. During the last eight or ten years he had employed the method suggested by his patient, and had come to regard it as specific, for, with only one or two exceptions, the plan of management, in his hands, had been uniformly successful. The plan was to simply protect the nipple with an ordinary nipple-glass, such as was worn to protect the nipples from the clothing. It could be secured in position by means of a bandage. The pressure of the glass upon the breast removed more or less of milk, which became a serviceable lotion for the sore nipple.

Dr. Hubbard remarked that he had employed the nipple-glass for several years to protect the breast from the clothing, but he had never used it for the cure of sore nipples. He had used it more as a protector against irritation. He had not, however, always succeeded in curing the nipple while using the glass. He had frequently questioned whether keeping the nipple constantly moist with milk was not injurious rather than beneficial.

Dr. A. C. Post suggested that when the nipple-glass was employed, the hole should be so large that the nipple would not be at all dragged upon; the drawing should be from the breast, and not from the nipple.

Dr. S. S. Purple remarked that when the nipples were simply sore, without excoriation, he had managed them successfully by making a local application of

R. Tannin.....	3 i.
Syr. acacia.....	ʒ ij.
Aquæ.....	ʒ ij.
M.	

It could be applied to the nipple and breast with the finger, and should remain exposed to the air until perfectly dry. The glass could then be worn over the nipple to protect it from the clothing, and he usually had no trouble in the management of the case.

Dr. E. F. Ward said that local applications, such as nitrate of lead, tannin, etc., had, in his hands, been rather disappointing in the treatment of sore nipples. For several years he had not used any local application to the breast

or nipple, but had directed the woman to use a nursing tube, consisting essentially of a glass-shield with a broad brim, and an opening sufficiently large to admit the nipple without constriction, and a rubber tube with a mouth-piece attached. The glass shown by Dr. White he also used to protect the parts from the clothing, but had not used it to cure the nipples. He had experienced little or no difficulty in managing his cases successfully.

Dr. O'Sullivan had not for many years used local applications in the treatment of sore nipples. His method of treatment had been to keep the nipple perfectly at rest, never allowing the child to nurse unless the nipple was protected. He had used the nipple-glass as a protector from irritation.

Dr. Kennedy thought the nipple-glass did nothing more than protect the breast from irritation produced by the clothes. So far as treatment of the sore nipple was concerned, he usually left it to the experience of a physician or to the experience of the nurse, however poor that might be.

Dr. Caro remarked that the nipple-glass was used extensively in Sicily, but simply to protect from irritation produced by the clothes, and not for the cure of the nipple. He thought local applications were of no avail. To give the nipple perfect rest was the best treatment. To protect the nipple from irritation, he had used the glass shield very extensively.

In cases in which it was desirable to keep the air from the nipple, he had found gold-beater's skin to be the best application. The idea of keeping the nipple wet with milk was objectionable on the ground that the milk itself was soon so changed as to be a source of irritation; consequently, the cleaner the nipple could be kept the better. If local application was to be made, pure cold water was all that was necessary. The paramount principle in the treatment was perfect rest for the nipple.

Dr. O'Sullivan remarked that he had used cold water, and associated with it glycerine, which was very soothing. The main element in the treatment, however, was rest.

Dr. Compton said that he had seen the following mixture act very favorably as a local application.

R. Tr. Benzoin co.,
Glycerine, aa.
M.

To be applied just after the child had nursed, and wiped off before nursing was renewed.

MANAGEMENT OF THE BREASTS IN CASES IN WHICH NURSING IS NOT ADOPTED.

Dr. Hubbard asked the question, What should be done for the breasts in cases in which the child was still-born, or the mother not disposed to nurse her child? His practice had been to let the breasts entirely alone, and he had yet to see a mammary abscess following

that method of management. He had recommended that method in the Infant Asylum, where most of the mothers were not disposed to nurse their children. He was at first opposed by his colleagues, but finally they consented to give the plan a trial, and during his entire connection with that institution there was not a mammary abscess formed. The method, however, wherever recommended, met with opposition from nurses and friends, and it was with the greatest difficulty that the physician could prevent drawing milk from the breast. The pain in the breasts, if any was present, as a rule subsided within twenty-four or forty-eight hours, and no further trouble was experienced if no attempt whatever was made to draw the milk. If the milk was drawn only once, the character of the case was entirely changed.

Dr. Ward remarked that it had been his practice in such cases not to draw the milk at all, and he had found that the pain ceased within one or two days.

Dr. O'Sullivan said that it had been his practice not to interfere with the breast under the circumstances mentioned. He had seen only the most favorable results follow, when a rigid adherence was given to the method.

Dr. Purdy remarked that his experience had been in accord with Dr. Hubbard's. If the condition of the patient warranted it, he usually administered a brisk cathartic—indeed, kept up a slight diarrhoea for a few days—and thought it caused the milk to disappear more rapidly than it otherwise would.

Dr. Hubbard thought that in accordance with a somewhat late suggestion, a bandage could, with advantage, be applied with the view of preventing the formation of the milk.

Dr. Munde referred to suppurative mastitis which had occurred in cases in which the bandage was used. His general practice was to let the breasts entirely alone. He had used belladonna, but did not think it necessary. It was soothing however, and was not specially objectionable.

Dr. Caro believed that where the woman proposed not to nurse, it was the best treatment to let the breasts alone. But suppose the woman wished to nurse, and did nurse the child from one breast, and was unable to nurse from the other breast, what should be done? For example, a woman came under his care who had had the right nipple completely destroyed by a burn when a girl. She nursed her child from the left breast, and after three or four days there was considerable fever, and she complained of considerable pain over the right breast. Upon examination, it was evident that secretion of milk had begun in the right breast, and he thought it necessary to resort to some means for its arrest. He applied fluid extract of belladonna twice a day for five

or six days, and all evidence of milk disappeared. Whether the result was due to the belladonna or not he was unable to say.—*N. Y. Medical Record.*

OBSTETRIC SECTION.

Stated Meeting, Sept. 16, 1878.

SORE NIPPLES.

Dr. F. V. White read a paper upon the above subject. Preparatory to a proper understanding of the pathology and the therapeutics of this morbid condition, he referred to the anatomy of the part as given by Astley Cooper and some more modern authors. According to the authorities consulted, the doctor stated that there was no erectile tissue in the nipple, such as was found in the penis. The most common varieties of sore nipples were abrasion, fissures, and ulcerations, and their occurrence was most frequent in primiparous women.

PROPHYLACTIC TREATMENT.

With reference to prophylactic treatment, such as bathing the nipples prior to confinement, with alcohol, astringent lotions, etc., Dr. White had great doubt concerning its actual value.

He regarded sore nipples as the most frequent cause of the superficial and the deeper-seated mammary abscesses which occurred during lactation.

The doctor did not discuss the therapeutics of this subject further than to re-affirm his confidence in the use of the nipple-glass, which protected the nipple from irritation, from variations in temperature, and from engorgement by milk. It should be applied as soon as the nipple commenced to be tender.

Dr. Hubbard regarded it as a point well taken, that mammary abscess very seldom occurred unless preceded by sore nipple. He had been inclined to the belief that constantly bathing the nipple with milk, as was the case when the nipple-glass was worn, was injurious rather than beneficial. In that respect, however, he might be in error, and was willing to give the glass a trial.

DOES THE NIPPLE POSSESS ERECTILE TISSUE?

Dr. A. C. Post remarked that, while there might be some histological difference between the nipple and the penis with reference to the erectile tissue, at the same time there was present in the nipple a tissue which rendered it capable of becoming erect. He regarded it as an error to say that the nipple did not contain erectile tissue, and, in that particular, he thought the language of the paper should be corrected.

Dr. White remarked that Cooper did not regard it as erectile tissue proper, and that the same view was held by Flint, as stated in his work on physiology.

Dr. Caro believed that Dr. Post was correct when he stated there was erectile tissue in the nipple; for it was a positive fact that such tissue was present. Whether it was equal to what was found in the penis and the clitoris, he was unable to say: but that the nipple became erect when titillated, and remained so for a certain length of time, had been repeatedly observed. Besides, he believed there was an intimate relation existing between the erectile tissue of the nipple and the erectile tissue of the genital organs of the female, for, when the nipple was sucked, it very commonly happened that a certain kind of voluptuous feeling came over the woman.

Again, it had been long known that friction of the nipples, such as sometimes attended measures prophylactic of sore nipples, might be followed by abortion. Velpeau, Bedford, and some other authors had suggested tickling the nipple for some time as one of the means of producing premature labor.

For that reason, active interference with the breasts and the nipples prior to labor had been objected to in the prophylactic treatment for sore nipples.

With reference to remedies for preventing excoriation and fissure of nipple, he had never found any more serviceable than the saliva of the mother applied two or three times a day.

As for treatment, the application of clear cold water had served him most satisfactorily for hardening the nipple and preventing extension of excoriations after they had been developed. The water was best applied by means of small cloth-compressors. In obstinate cases he had found nothing better than gold-beaters' skin applied to the nipple, and covered, perhaps, with a slight layer of collodion, which would not be removed by a single nursing.—*N. Y. Medical Record.*

MOIST HANDS.

The following replies were received to a communication in the *British Medical Journal* asking a remedy for moist hands:

"In answer to 'A Member's' query on the above subject, I beg to recommend a remedy which I found most useful in hydrosis manuum—namely, extract of belladonna painted around the wrist in the form of a bracelet once a day. It would be of interest to me to know if the above remedy is successful in your correspondent's case."

"I think that it would be worth the while of 'A Member' to try the effect of terebinte soap in the case in question; or, what would do equally well, if not better, of a drop or two of terebinte itself used upon the hands while washing. The great power which terebinte possesses of dissolving fatty matters of all

kinds makes it a powerful detergent. I am constantly in the habit of using it in this way when my hands are unusually dirty from any special cause; but, though most effective in this respect, it has the slight drawback of leaving the skin very dry, and it has struck me that it might in this way correct the excessive moistness by which your correspondent is troubled."

"If 'A Member' have not prescribed belladonna for the relief of this unpleasant complaint, I venture to suggest his doing so. It is of service in the treatment of excessive perspiration of the feet, when it is generally ordered in the form of liniment; but as an application to the hands, an inodorous solution of atropine would probably be preferable. The internal administration of belladonna will also help to bring about a satisfactory result, as it does in cases where it is necessary to prevent the secretion of milk."

"I would advise 'A Member's' patient not to wear gloves or any covering for the hands until cured. Let him drive, garden, row, or perform other slight manual labor with bare hands. By these means the palmar surfaces will become somewhat hardened and less liable to the profuse perspiration complained of. This has been the most effectual treatment in one or two cases I have had to attend. Physic I found of no avail."

"The particulars of a case of hyperidrosis which came under my notice some time ago, and the result of the treatment adopted, may be of interest and use to your correspondent, 'A Member,' writing on the subject of 'moist hands.' In my case the patient had been a sufferer from hyperidrosis of the feet for years. The secretion was of an offensive nature, and a source of constant annoyance to himself and his friends. He had tried various 'remedies' without effect. I prescribed the treatment first recommended, I believe, by Dr. Sydney Ringer, viz., the local application of belladonna. The result was successful beyond my anticipations. The action of this drug appears to be as efficient in checking the secretion from the sudoriferous glands as it does in arresting that of the mammae. I would recommend the unguentum belladonnae to be rubbed in twice daily, or the liniment may be substituted if a greasy application be objected to. If the belladonna treatment should fail, I would advise a trial of the method originated by Hebra, and highly recommended by M. Pardy and others. This plan consists in covering the affected parts with strips of diachylon plaster, so that the hand or foot, including the fingers and toes, is completely shut in. The plaster must be renewed each day, after thoroughly wiping the parts with a warm dry flannel. This should be repeated daily for a fortnight. It has occurred to me that by using the emplastrum

belladonnæ we should derive the benefits from the local application of that drug, together with the advantages of the diachylon treatment, at one and the same time. Constitutional means and the ordinary astringent lotions are useless in these cases of partial sweating."

"A Member" should consult Ringer's Therapeutics on the subject. He will find it recommended to apply the liniment of belladonna to the hands, or a solution of atropine. An ointment containing belladonna liniment may be used with gloves at night, or a small quantity of atropine (which is more decided) may be injected under the skin. If these fail, the hands should be wrapped up at night in Hebra's lead ointment, and nerve tonics given. A strong solution of tannin in alcohol is a remedy worth trying. The atropine should be injected into the arm. One hundred and twentieth of a grain is sufficient to begin with. If the malady continue, the ninetieth and subsequently the sixtieth of a grain may be used. Every second or third day is frequent enough to inject.

A CLINICAL LECTURE.

Delivered at Jefferson Medical College Hospital by SAMUEL W. Gross, M.D., Lecturer on Disease of the Genito-Urinary Passages and on Clinical Surgery in Jefferson Medical School, Philadelphia (Reported for the *N. Y. Hospital Gazette*.)

EXTERNAL HEMORRHOID.

This is a trouble for which you will be very frequently consulted. You notice this little tumor on the verge of the anus. It is characteristic in appearance, and is the cause of great pain. The man first noticed its presence yesterday afternoon following a passage accompanied by a good deal of straining. The tumor is uncommonly large for a pile. It is of the usual bluish color, and imparts a decided sense of tightness to the touch.

Hæmorrhoid tumors are of two kinds, external and internal. The internal pile is within the sphincter ani muscle, and consists of a knot of hypertrophied arteries and veins. It is commonly soft and spongy in texture. The external hæmorrhoid is of a very different character. It is external to the sphincter ani muscle, but is very often strangulated by the contraction of that muscle. It consists of an extravasation of blood from the hæmorrhoidal vessels, is, in fact, a sort of apoplexy at the verge of the anus.

As regards the treatment of an external hæmorrhoid, Erichsen of London, and Bryant of Guy's Hospital, advise its immediate removal with a knife. This is a truly villainous practice, and attended with great risk of obstinate hæmorrhage. The American surgeon incises the tumor with a bistoury, and presses out its contents, *i.e.*, the contained clot of blood. The structure of an external hæmorrhoid consists

entirely of this clot of blood. The slight operation relieves the pain and tension at once. As an after-treatment the parts should be well bathed with cold water and some medicine given to act on the liver and bowels. [The above remarks were made by Prof. S. D. Gross, who had taken his son's place for a few minutes.—REPORTER.]

NÆVUS MATERNA.

You notice this soft, elastic tumor over the upper portion of the left frontal bone. It is as large as an almond, and is traversed by veins. When the child cries the tumor grows hard and tense. This is what is vulgarly known as a mother's mark, a *nævus materna*. These tumors are called cavernous *angiomæ* and consist of dilated veins, or arteries, or both—sometimes the veins predominate, sometimes the arteries. These veins and arteries are, of course, of capillary size.

There are a great many ways of operating in a case like this. In a recent instance I tried to cut away the growth under the skin so as to avoid a bad-looking scar, but I found it of no use. On another occasion I tried cauterization, heating the bulb of the cautery and perforating the tumor in many places, but it did no real good.

The proper way to treat such cases is the one which I shall now adopt. I push two oiled pins right through the base of the growth so that they cross each other at right angles. I then take a sharp knife and cut a groove in the skin between the points of insertion and of exit of the two pins, and then pass a stout ligature round the base of the *nævus* and underneath the pins. I draw this ligature just as tight as I possibly can, so as to completely strangulate the growth. When this is done the vessels of the tumor are obliterated, new matter is thrown out, and the tumor itself sloughs off in the course of four or five days, leaving an open, granulating wound, which must be protected by some mild ointment. Before dismissing the case I cut off the ends of the pins so that they will not catch in the clothing. There is no use whatever in temporizing in these cases by the use of the cautery, or by the injection of irritating substances in the body of the tumor.

MAGIC EFFECTS OF HYPODERMIC PUNCTURE OF MORPHIA IN CASES OF DYSENTERY.

By J. E. WASHINGTON M.D., Augusta, Ga.

As I have never seen mention made of the use of morphine by hypodermic puncture in cases of dysentery, I have concluded to give my own experience with it. I was first induced to try it by being called to a case in which there was terrible suffering from tenesmus and vomiting. In this case the man begged me, "Doctor, for God's sake give me som

thing to relieve me, for I can't stand it much longer." He was covered from head to foot with cold, clammy sweat, lips blue and cold. I gave him about the third of a grain of morphia by puncture, not with any idea that it would relieve the vomiting and purging, but solely to obtund him to the severe suffering, but to my surprise in a few moments he was perfectly quiet, and the vomiting and purging almost entirely relieved; another puncture did the work, and he was convalescent in a little over forty hours.

Having such success in this case, I was emboldened to try it in several other cases, with equally as good results. After having treated a number of cases in this way, I was taken with an attack of dysentery myself. In my own case there was severe vomiting and tenesmus, in fact, a movement from the bowels every five or ten minutes, and sometimes I could not leave the stool more than three or four steps without having to return.

I tried opium to quiet me, but could not retain it. I then thought of the *hypodermic puncture*, and although so weak and faint that I could not sit up, prepared the instrument (being by myself, and gave myself a good puncture, and lo! in a few minutes I was perfectly relieved. I then applied a wet bandage over stomach and bowels, and was soon convalescent.

Now we have not only the evidence of the beneficial effects of hypodermic puncture of morphia in cases of dysentery, as derived from a trial upon others, but also from personal experience. When we come to consider the severe, debilitating effects of this disease, and also how frequently its effects are prolonged for days and weeks, it behooves us to try those remedies which will cut short the duration of the disease.—*Nashville Journal of Medicine*.

THE ARSENICAL TREATMENT OF CHOREA.

By L. C. GRAY, M.D.

In regard to the efficacy of our therapeutics, there is abroad in the profession a feeling of skepticism, which, albeit often unconsciously actuating its possessor, is yet, on that very account, the more deleterious in its influence upon medical thought and action. It is scarcely to be wondered at. At a time which I have no doubt is within the memory of gentlemen present to-night, every dispensary had its "bleeding-room," and the lancet was considered to be a more indispensable instrument than any which the general practitioner now carries. To-day I question whether there will have been a dozen, nay, half a dozen, venesections in this large city in the last twelve calendar months. All the sedatives, depressants, revulsives, nauseants, emetics, low dietaries,

have fared the same fate, in the same period of time. Every one of these remedies had its advocates among experienced and distinguished observers, who cited cases in support of their views every whit as satisfactory as many of those which satisfy medical gentlemen of the present day. Nevertheless, they have, one and all, been almost entirely discarded. The experience of generations, venerated, often justly, in other particulars, has been inexorably and indiscriminately scouted in this. What wonder, then, that the sudden crash of so venerable a system should inspire men with profound suspicion of human testimony in matters therapeutic, and should hamper the erection of the new structure that is progressing so painfully, slowly, gropingly. This attitude of incredulity is very natural. It is, moreover, of good omen for the future, as long as it is judiciously maintained, and does not degenerate from scientific alertness into a blank nihilism which nothing can convince. It is time that writers upon therapeutics should scrupulously conform to the requirements of this sentiment. It is time that men should know that we want facts in the stead of opinions; or, at least, the facts first, the opinions afterward. Such facts are to be gathered, not from our present inconclusive experimentation upon animals and physiology, but in the actual treatment of disease, so recorded that it can be offered to the inspection of every one who may choose to judge for himself of its value. Thus, and thus alone, can speculation be avoided, inaccurate observation prevented from misleading, and accurate observation receive its proper recognition.

In accordance with these views, the following remarks are offered as a contribution to the subject indicated by the title of my paper.

During the past year I have treated some twenty-seven cases of chorea with arsenic. The average age was nine, the minimum five, the maximum sixteen. Six of the patients I have been enabled to keep continuously under my own observation from the beginning of treatment to the entire disappearance of the symptoms. It has, of course, been necessary to accept the statements of relatives and friends as to the exact period of onset. I have made use, in every instance, of Fowler's solution of arsenic, the *Liquor Potassæ Arsenitis*, commencing invariably with three drops thrice daily after meals, and increasing this amount every second day by one or two drops, until there was either distinct abatement of the disease, or until some slight toxic effect appeared, as an occasional nausea, or quickening of intestinal peristalsis, or a slight puffiness beneath the eyes, or a passing cephalalgia. Should any more decided toxæmia than this have resulted, I have reduced the dosage drop by drop, being careful, however, not to diminish the quantity too hastily or too much. As a vehicle for these doses I have

employed the Tr. Cinchonæ Comp., one drachm or half a drachm at a time, for I have found that the arsenic is less apt to cause gastric disturbance when given in this manner than when administered simply in water. It has been my custom, nevertheless, to largely dilute even this mixture with water, since I deem it a matter of great moment to take every available and harmless precaution—even though it may often be superfluous, especially in children—to prevent any decided irritation of the stomach.

Four of the six cases were cured after attaining a dosage of seven drops three times daily, while five drops thrice daily sufficed for another, the remaining one recovering with two drops given at the same intervals. In three individuals of the twenty-seven the medicine could not be pushed to the proper extent. The mother of one of these children, a very stupid woman, insisted that the little patient would vomit immediately after being given one drop, but I had reason to doubt whether the parent could measure so small a quantity. In the second patient, likewise through the blunder of the parent, dangerous symptoms were induced, while there supervened a decided nausea, cephalalgia, and gastralgia in the third, which speedily passed away upon the discontinuance of the remedy. I would have it borne in mind that every case was cured that was retained under treatment for the adequate period of time, which I shall specify in a moment, and that in no one of those uncured because of insufficient length of treatment did signs of improvement fail to appear, the more marked in proportion as the medicament was longest continued. The exclusive treatment in all these cases was by the Liq. Potass. Arsenitis. No directions whatsoever were given in regard to hygiene or food; and as all these patients were seen at my clinic in the out-door department of the Long Island College Hospital, neither the hygiene or food could have exerted any material influence upon the result.

The average duration of the six cases, from the beginning of treatment to the absolute cessation of *tremor* movements, has been 24 days, the maximum 38 days, the minimum 13 days; while the average period from the earliest symptoms to their disappearance has been 55 days, the maximum 103, the minimum 21.

An attempt has been made of late, with earnest ability and an imposing array of clinical material, to prove that the duration of chorea treated upon the so-called "expectant" plan is no greater than it is under the exhibition of any drug; or, in other words, that when a choreic patient is surrounded with the favorable hygienic influences of a hospital or an infirmary, and at the same time supplied with wholesome, nourishing diet, the cure will be effected as speedily as when arsenic, iron, zinc, and others

of this ilk are administered. In 1862 Dr. Wilks,* inaugurated this era of doubt by citing four cases which he had managed in this manner. The subject seems to have passed out of memory for upwards of a decade. In 1871 Drs. Gray and Tuckwell† again enthusiastically lauded the merits of the "expectant" method, publishing eighteen cases in support of their views, to which they added twenty in 1876,‡ making a total of thirty-eight. Up to the present day these claims would seem to have been accorded a general acceptance; or, at least, I am not aware that any public opposition has been made to them. Are they valid? is a question which I have long been asking myself, which has prompted me to an investigation of this subject, and to which, I think, an answer can be found in my own observations, of which I have just spoken. The average duration of Dr. Wilks' cases under the "expectant" treatment was 50 days, while if the duration after admission to the hospital be computed in the cases of Drs. Gray and Tuckwell, it will be found to be 36 days. As the average duration of my cases treated with arsenic was 24 days, there is evidently a difference in favor of the latter of 15 days as against the cases of Drs. Gray and Tuckwell, and of 26 days as against those of Dr. Wilks. It may be objected, seemingly with force, that my six cases are so disproportionate in number to the thirty-eight of Drs. Gray and Tuckwell as to render the comparison unjust to the latter. The objection, however, is more apparent than real. In the first publication of these gentlemen Dr. Gray gave the details of six cases, Dr. Tuckwell those of twelve, while in their last paper Dr. Gray narrated the histories of nine cases, Dr. Tuckwell giving those of eleven. It is clear that if the average be reckoned in each of these groups, and compared on the one hand with the average obtained from all these cases while on the other hand it be compared with the average of my cases, a very correct idea can be obtained of the discrepancy that may exist between the averages of a small and a large number of cases. If this be done it will be ascertained that Dr. Gray's first six maintained an average duration under treatment of 38 days, his later nine cases of 36 days, while the earlier twelve cases of Dr. Tuckwell lasted 32 days, the eleven more recent ones 36 days; or, in brief, the difference between the lowest average of any individual group, thirty-two, and the average of all the cases, thirty-five, may be 3 days. This possible source of error being admitted, as I am perfectly willing to do, there still remains a balance of twelve days in favor of the arsenical treatment of chorea; this balance, by comparison with some of the groups,

* Med. Times and Gaz., March 22, 1862.

† Lancet, 1871.

‡ Lancet, Feb., 1876, p. 710.

mounting as high as 16 and 18. It is thus manifest that the average duration of thirty-eight cases of chorea treated with arsenic would not vary essentially from the average duration of six cases so treated. Denial of this certainly would be hypercriticism.

In computing the average duration under their method of treatment, Drs. Gray and Tuckwell have included the duration of the disease *prior* to the patient's admission into the infirmary. This is obviously improper: Their own figures show that this prior duration may vary from 3 to 84 days! The average of this prior duration in my cases was, moreover, 39 days, while in theirs it was 31 days; my cases, therefore, having been ill some 8 days the longest. Unless, then, it be asserted that chorea will last the same length of time, whether the hygiene and nutrition be good or bad—an assertion which I am certain these gentlemen do not make—this prior duration must be excluded. Were I, however, to admit it, there would still remain a balance of 12 days in favor of the arsenical treatment, the total duration of my cases having been 55 days, as against 67 in the English patients.*

In singular corroboration of the figures at which I have arrived, twenty cases of chorea treated with Fowler's solution of arsenic in St. Thomas' Hospital in London, in 1858, averaged 26 days. No details are given. And these figures, in their turn, add substantiation to the opinion so long prevalent in the profession, as to the unsurpassed value of arsenic in the disease under consideration; an opinion which, be it said to the honor of American medicine, was first emphatically enunciated in a communication published in 1839 † by Dr. D. M. Reese, of Albany, and to whom, therefore, and not, as is generally stated, to Dr. James Begbie, of Edinburgh, whose paper was read in 1858, belongs the credit of having been the first to call the attention of the profession to this important clinical fact. ‡

I have sought, but only with measurable success, for statistical material wherewith to institute a comparison between the arsenical and other modes of treatment. Sulphate of zinc in increasing doses, as well as the preparations of iron, were administered to a number of patients in St. Thomas' Hospital in the year mentioned above. Of eight cases to whom the zinc was given, five only were cured, the remaining three being merely improved, whilst the average duration under treatment of the cured cases was 29 days. The ferruginous preparations

affected a cure on the average in 44 days. Five cases are recorded by Mr. H. T. Butlin* as having been cured by the sulphate of zinc in 37 days upon the average, whether with increasing doses or otherwise is not stated. Other reliable figures than these I have not been able to find. It is needless to point out that these bear no comparison with those obtained in the treatment by Fowler's solution.

But, notwithstanding that the arsenical treatment of chorea in the manner described checks, as I am persuaded, the course of the disease more quickly than any other remedy of which we possess knowledge, the "expectant" treatment is by no means to be contemned. I dispute simply its relative, not its actual, value. Of the latter there is abundant proof, which can be found partly in my preceding statements upon the subject, partly in the histories of many of the cases detailed by Drs. Gray, Tuckwell and Wilks. The latter gentleman tells of one patient, for example, who had been ill two years, under treatment in the out-door department for twelve months, and who was cured in two weeks after admission to the hospital. And it would be equally unjust to deny that the sulphate of zinc or the ferruginous preparations possess efficacy. On the contrary, I believe that, were the treatment of chorea to be directed in rigidly logical accordance with what accurate information we can command, it should consist of a judicious combination, according to the circumstances, of two or more of these remedies. Foremost of all in effectiveness I should deem the administration of Fowler's solution of arsenic, accompanied by good hygiene and a sufficiency of nourishing food. The arsenic should be administered in promptly and steadily increasing doses to the supervention of slight toxæmia or the distinct remission of the movements; and the patient should live in well-ventilated apartments, should have necessary but not excessive exercise, should be well protected by adequate clothing from atmospheric changes, should have abundant sleep at seasonable hours, should be removed from all sources of excitement, and especially from all emotional disturbance, and should be properly supplied with savory, nutritious aliment. Should there happen to co-exist anæmia or a similarly indicative condition, it would be eminently proper to add iron. The conviction almost forces itself upon me that a series of cases carefully subjected to this conjoint treatment would show more favorable results than any yet obtained. Should the arsenic for any reason be inadmissible, the sulphate of zinc should take its place, commencing with two grains, and gradually increasing every few days by a grain, until the drug produces some slight ill symptoms, or until improvement, whereupon the dosage-

*The total duration of their cases, as given by Drs. Gray and Tuckwell, is 69 days. But I have omitted case three of Dr. G.'s latest publication because of the relapse from an accidental cause, not connected with the disease. I have thus reduced the time by 2 days.

† N. Y. Journ. Med. and Surg., Oct., 1839.

‡ Ed. Med. Journ., vol. 3, 1857, 1858, p. 961, read before the Med. Chir. Soc., Edin., April 7, 1858.

* Lancet, Oct. 21, 1871.

should be maintained to the rice. In a certain proportion of cases, however, as in the vast majority of those seen in dispensary practice, proper hygiene and nourishment cannot be had; and it is precisely in this class that it becomes of paramount importance to determine the relative value of the drugs, upon one or more of which we must alone rely. In regard to this class, I should arrange a scale, headed by arsenic, to which should succeed respectively, sulphate of zinc and iron; and any combination of these should be in pursuance of the preceding rules.

ON THE USE OF CHLORAL-HYDRATE ENEMATA

Dr. Starcke, of Berlin, has a paper on the employment of chloral-hydrate enemata in the *Berliner Klinische Wochenschrift* for August 19. He observes that there are great prejudices, especially in England, against the continued use of chloral, occasioned, probably, by the not unfrequent misadventures occurring in connection with its use in habitual drunkards. Last year Dr. Starcke himself fell ill of a chronic gastric catarrh, with great acidity of the contents of the stomach, and considerable emaciation and prostration. The principal and most distressing symptom, however, was persistent insomnia, only half an hour to an hour's sleep being obtained at night. At the suggestion of his colleagues Dr. Starcke resorted to the use of chloral, but the irritable state of the stomach forbade its use by the mouth, and hence he determined to take it *per rectum*. An aqueous five per cent. solution of chloral was warmed to about 95° Fahr., of which he injected first 10 grammes, and after a quarter of an hour a further quantity of 10 grammes, so that in all 1 gramme (15½ grains) of chloral were thus taken. This was in a few minutes followed by a feeling of warmth, comfort, and repose, and lastly by sound sleep, which lasted uninterruptedly for five hours. In this manner Dr. Starcke continued the injection of chloral for five months, taking in all 120 grammes of the drug. Decided convalescence set in after almost the very first dose, which was followed every morning by a sense of vigor and a desire for food, without any headache or other discomfort. Nor did the efficacy of the dose of chloral diminish, and latterly even half the quantity, *i. e.*, 0.5 gramme, was sufficient. Frequently the attempt was made to obtain sleep without resorting to the chloral, but in vain, until within the last month, when Dr. Starcke found he could discontinue it altogether. This employment of chloral *per rectum* has decided advantages in cases of gastric irritability. Dr. Starcke tried twice to take it by the mouth, and each time it was after a few minutes completely rejected, and no sleep ensued. The absence of all unpleasant results when administered by the rectum

is doubtless due to its undergoing no decomposition, as is generally the case when it comes into contact with the contents of the stomach. Of course the drug should be absolutely pure. The sensation of burning and tenesmus which at first follows an injection, may be materially obviated by well oiling the nozzle of the syringe. And since the site of the tenesmus is chiefly in the region of the sphincter, contact of the chloral solution with this part of the gut should be avoided by passing the injection pipe as high up as possible. And if the injection is made by one's self, the position on knees and elbows will be found the most convenient. It is also of consequence that the solution should be complete, and that it should be warmed to the temperature of the body; also that the dose required is a moderate and even small one as compared with that usually given by the mouth. Dr. Starcke has subsequently used chloral in the same way in various cases and with the same uniformly safe and favorable results. It seems especially applicable in the case of aged people, and in no case need the dose exceed one gramme (15½ grains).—*London Med. Record*, Oct. 15, 1878.

THE PHYSIOLOGICAL ACTION OF PURGATIVES.

Med. Times and Gazette: This subject has recently been re-investigated by L. Brieger (*Archiv. für Exp. Pathologie*). Large dogs were used. Dilute solutions of saline aperients (sulphate of magnesia and common salt) were absorbed without causing any change in the bowel; but as the strength of the solution was increased, the ligatured bowel contained more and more clear yellow alkaline liquid, containing flakes of mucus, intestinal epithelium, and mucous corpuscles. Drastic drugs (croton oil, colocynth) caused the secretion of a bloody liquid, or even set up diphtheritic inflammation of the mucous membrane, while laxatives, such as senna, rhubarb, aloes, gamboge, and castor-oil invariably caused firm contraction of the muscular coats, the injected drug, its watery parts being absorbed, being found spread over the whole mucous membrane, which was *not* inflamed. It thus appears that laxatives mainly act by exciting peristaltic contraction of the intestine; whereas salines, as was previously known, attract water into the bowel, and also induce abundant secretion from the intestinal glands. On the other hand, drastics in small doses have a similar action to laxatives, but in large ones they cause inflammatory exudation and hypersecretion. Brieger's results, therefore, differ from those of Moreau and Brunton in the *role* he assigns to the laxatives. If we remember rightly, the latter observers found that the various purgatives used agreed in producing a copious transudation of watery fluid into the bowel, and this Brieger only admits in the case of the saline and drastic aperients.

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MONTREAL, DECEMBER, 1878.

Our subscribers will please look at the labels on their paper. *If the date is past please remit.* We beg to state that, as most of our city subscribers have their RECORD delivered direct from the office, labels are not placed on them.

We give in this number of the RECORD a report of a lecture on "the varieties of phthisis," delivered in Montreal, on the 5th of December, by Dr. Andrew Clark, Senior Physician to the London Hospital. Dr. Clark accompanied Her Royal Highness the Princess Louise to Canada, as Medical attendant. During Dr. Clark's stay in Montreal, extending on the first occasion to three days, and upon the occasion of his lecture to two days, he visited our various Medical Institutions and Hospitals, and made the acquaintance of a number of the members of our profession. On the evening of the day of his lecture he was entertained at a public dinner in the magnificent ladies' ordinary of our palatial Windsor Hotel, Dr. G. W. Campbell occupying the chair, and Dr. Rot-tot, President of the College of Physicians and Surgeons of the Province of Quebec, filling the vice-chair. The entertainment was one of the *most recherché* of its kind that has yet been given at this hotel, and was largely attended. Dr. Clark, in replying to the toast of his health, expressed the great pleasure which he experienced at the very flattering way in which he had been received by his professional brethren. He alluded to a request which had been made to him by a number of the prominent members of the Council of the British Medical Association, that he should, while in Canada, lay before the profession the desirability of forming branch Associations in connection with that great representative of the English Medical profession. He thought that a reciprocal amount of good might be done; the Canadian branches, perhaps, however, doing more good to the British Association than it would be able to reciprocate. Upon this proposition we propose at a future time to express our opinion. The lecture on "the varieties of Phthisis" was an able effort, exceedingly interesting, and proved that

its author had been an earnest and thoughtful worker in that school, from which so many shrink, the *post mortem* room. The attendance of medical men was large, and in addition the students of the three medical schools in Montreal were present in large force. Dr. Clark after a brief visit to New York sailed from that port on the 11th of December for his home, carrying with him, we trust, pleasant memories of his brief visit to the Dominion of Canada, and leaving behind him an impression which we feel certain will be as lasting as it is favorable.

MALTINE.

At the late meeting of the British Medical Association at Bath in August last, among the exhibits of pharmaceutical and medical preparations, much interest was shown in one called *Maltine*, which may be described as a highly concentrated extract of *malted barley, wheat and oats*.

Extracts of malt (*i.e.*, malted barley) are pretty widely known, but this is the first example of a combination of the nutritious principles of these three cereals that we have seen, and the greater value of this combination is apparent, as wheat and oats are especially rich in muscular and fat-producing elements. This preparation is entirely free from the products of fermentation, such as alcohol and carbonic acid, and is very agreeable to the taste. Clinical experience enables us to recommend it as a nutritive and digestive agent, in virtue of its albumenoid contents, and its richness in phosphates and diastase, likely to prove an important remedy in pulmonary affections, debility, many forms of indigestion, imperfect nutrition, and deficient lactation. It will in many cases, take the place of cod liver oil and pancreatic-emulsions, where these are not readily accepted by the stomach, and we are disposed to believe that Maltine, which is less known here than abroad, is well worthy of practical attention.—*The British Medical Journal*, Oct. 19, 1878.

HUNYADI JÁNOS, AND APOLLINARIS WATER.

These two waters have now for some time been advertised in the RECORD, and for fully a year and a half we have been using them extensively in our practice. We feel therefore that we can from experience express our opinion with regard to them,

The Hunyadi János water is a moderately mild purgative, and has the very great advantage of being administered in comparatively small quantity. Its taste is not disagreeable, being saline with a slight bitterness. All these are advantages which cannot be overlooked when comparing it with other purgative waters which have already been brought to the notice of the profession. Its action is speedy, and is unattended, except in an odd case, with any griping. To persons who may require a periodical aperient we know of none better. It deserves to be very largely used by the profession throughout the Dominion.

The Apollinaris Water is indeed the queen of table waters. It is a natural effervescent mineral water, being bottled directly at the spring near Neuenhar, Prussia. In weak stomachs and in cases of prolonged illness, the refreshing effects of Apollinaris we have seen well marked again and again. It is said to be useful in dyspepsia, rheumatism and biliary calculi. Both these waters can be obtained from any druggist, first-class grocer, or wine merchant.

It is generally known to the medical profession and those interested in bibliography that Dr. John S. Billings, Surg., U. S. A., in charge of the National Medical Library at Washington, is now ready to print his great "National Catalogue of Medical Literature," as soon as Congress grants an appropriation for the purpose. This indexes under subjects, and by authors, books, pamphlets and original papers in nearly all the medical periodicals of the world; including over 400,000 subject entries, and making ten volumes royal 8vo of 1000 pages each. This will be of the greatest value to physicians the world over, as it enables them to find analogues for peculiar and difficult cases, and thus often to save lives. In continuation of this work, it is now proposed to publish monthly, under the editorship of Dr. Billings and of his assistant, Dr. Robert Fletcher, M.R.C.S., a current medical bibliography under the title of the *Index Medicus*. It will be issued by F. Leypoldt, the bibliographic publisher, 37 Park Row, New York, at \$3 per year, and will enter all medical books and index the leading medical journals and transactions in English and other languages. A full list of the latter, numbering over 600, will form a part of the specimen number of the *Index*, soon to be issued.

SCRIBNER FOR JANUARY.

The January *Scribner* has a decided flavor of good cheer. "The Tile Club at Work," by W. M. Laffan, describes the methods of an association of artists and others whose work speaks for itself in the illustrations, which include drawings by E. A. Abbey, (a tiled mantle-piece), W. M. Chase, Hopkinson Smith, Winslow Homer, Alden Weir, Reinhart, Quartley, Wimbridge, Laffan, and Paris, and a tile in relief by O'Donovan, the sculptor. A companion paper, "The Tile Club at Play," is to appear in the midwinter number, with a large variety of illustrations.

The serious side of the holiday season is touched upon in a paper on "Leonardo da Vinci," by Clarence Cook. Among the cuts are two important blocks by Cole: the well-known "Last Supper," and the "Head of Christ," supposed to be a study for its central figure. The "Mona Lisa," by Henry Marsh, is considered to be one of his finest blocks. Detail drawings of the "Last Supper" are given for purposes of comparison with Raphael's "Last Supper" which is also reproduced in whole and in detail. A number of other pictures, drawings of inventions, caricatures, etc., appear through the text. The paper is of a critical-biographical character, and is the first of several by Mr. Cook on the Old Masters. There is also a Christmas ballad, "Biorn the Bold," by Constantina E. Brooks, with a large drawing by Mrs. Mary Hallock Foote, which opens the number.

Of the unillustrated matter there are two stories: "Century Plants," by Miss Isabella T. Hopkins, light and fanciful; and "Ninon," by Miss Annie Porter, a pathetic story of New Orleans. The sixth instalment of Boyesen's "Falconberg"; papers on "College Hazing," by C. F. Thwing; and "The Amendment to the Patent Law," by the Secretary of the Western R. R. Association: and Mr. Bayard Taylor's "Epicidium," on the death of Bryant,—are also given. Other poetry is by R. R. Bowker, Amanda T. Jones, the late Richard Realf, and R. W. Gilder.

In his department, Dr. Holland discusses "Religion in these Days," "Art as a Steady Diet," and "Popular Despotisms." Mrs. Oakley's "Hints to Young Housekeepers" are continued in "Home and Society," the special

topics being the engagement, treatment and duties of servants. "The World's Work" department is especially interesting, and, among the appliances described, are a wonderful "Machine for Measuring Plane Surfaces," a "New Electric Lamp" (others to be described hereafter), "Hydraulic Fire-Escapes," "New Insulated Telegraph Wire," etc., etc. "Bric-à-Brac" is fanciful, numerous and satirical.

By reference to our last number (p. 48) it will be seen that our subscribers, desirous of subscribing to this splendid Magazine, are offered considerable reductions from regular subscription price.

MEDICO-CHIRURGICAL SOCIETY.

NOVEMBER 15TH.

A regular meeting of this Society was held this evening, Dr. Henry Howard, the President, in the chair. There were present Drs. Henry Howard, President, F. W. Campbell, Bell, Ritchie, Molson, Ross, Reddy, McConnell, Guerin, Roddick, Trenholme, Armstrong, Loverin, Blackader, Proudfoot and Edwards.

Minutes of last meeting read and approved.

Dr. C. N. STEVENSON was balloted for, and unanimously elected a member of the Society.

Dr. OSLER exhibited the following pathological specimens:

1st. A portion of liver with microscopic sections from a case of hypertrophic cirrhosis of that organ. The woman, a patient of Dr. Ross in the Montreal General Hospital, was intensely jaundiced, febrile, no ascites. The abdomen was filled with a large liver, which had during her illness been very tender on pressure. Towards the last week of her life, hemorrhagic symptoms had set in the organ weighed seven lbs., very firm and dense, but pale in color, looking fatty. The microscopic sections exhibited showed the lobules uniformly surrounded with connective tissue, and a new growth of the same was very abundant within the lobules separating the liver cells. The case corresponded in many of its chemical and pathological features with the hypertrophic cirrhosis described by recent French writers. Dr. Osler remarked that this was the second case of hypertrophic cirrhosis in the Montreal General Hospital, in neither of which was there any special involvement of the biliary canaliculi described by French writers.

The 2nd case exhibited was in contrast to

the last. It was the ordinary atrophic cirrhosis of the liver. The organ was reduced in size, granular, and hob-nailed. Dr. Ross said this patient had had marked cerebral symptoms. Towards the end there was profuse excretion of urea, and coincident with this, sensibility, which had previously been lost, returned. This lasted for three or four days, but the patient finally died comatose.

The 3rd specimen exhibited was sent to Dr. Osler from Dr. Kerr of Londonderry, N. S. It proved to be a gastric ulcer occupying the lesser curvature of the stomach. The base was thickened, the edges undermined, and on the floor two branches of the pyloric artery were seen ulcerated through. In the zone of the pylorus, but not involving the ring, the coats of the stomach were quite thick. This was due to an hypertrophy of the muscular coats. The history of the case was not forwarded, but it is probable that the patient died of hemorrhages.

The 4th was a set of specimens from a woman brought into the Montreal General Hospital with profuse diarrhoea and vomiting, and died within twenty-four hours after admission. The large intestine was in a condition of advanced ulceration, particularly in the transverse and descending colon. A large tumor, nearly the size of a child's head, occupied the entire pelvis, and on removal with the uterus was found to be in the situation of the right ovary. On section it proved to be a dermoid or piliferous cyst, containing a large quantity of inspicated sebaceous matter mixed with hairs. In the cyst wall near the attachment of the fallopian tube a well-developed tooth was found, and numerous long hairs were attached to various parts of the cyst. In the heart from the same case a remarkably large eustachian valve was present in the right auricle.

Dr. OSLER remarked that these dermoid cysts grow in other places besides the ovaries, showing that they are not extra uterine. A satisfactory explanation of the origin of these tumors has not yet been arrived at.

Dr. HINGSTON said these tumors are sometimes seen in very young children and consequently cannot be extra uterine.

Dr. Ross remarked that the character of the stock on which this tumor grew was interesting, the pedicle was different from that of any ovarian tumor which he had ever seen.

A vote of thanks to Dr. Osler was moved by Dr. Reddy and seconded by Dr. F. W. Campbell, and carried.

Dr. TRENHOLME gave a paper upon the value of the Hodge Pessary in cases of retroflexion of the uterus. He remarked that the value of this instrument was not so much insisted upon as it should be by modern writers upon gynaecology. After reviewing the opinions of various authors, he stated that his experience had led him to give the instrument the first place among the means we possessed for the cure of retroflexion of the uterus. He controverted the idea that the *only* bearing that ought to be allowed for the pessary should be such as the vagina alone can afford, and that in many cases, were this view acted upon, a cure would be impossible, and much of the great value of the support remain unrealized. The mode of the action of the instrument was dwelt upon, viz., that the elevating force of the pessary and the resisting force of the sacrum combined to throw the uterus forward and place it in its natural position in the pelvis. The restored position of the organ allowed the force of gravitation to come to our aid, and we could confidently count upon a cure if we wisely persevered in our treatment. The value of Campbell's method of replacement as a valuable means of assisting in both sustaining the uterus and relieving the pains apt to follow the use of a closely fitting pessary were spoken of and commended.

The different forms of the Hodge Pessary were alluded to, and that modification known as the *Albert Smith*, as the one most likely to meet the expectations of the medical attendant.

The importance of appreciating the pelvic curve so as to form the pessary to suit each case should not be overlooked, otherwise rectal and urethral trouble would be apt to annoy us.

Dr. REDDY stated that the Hodge Pessary, in his opinion, was most valuable. It often had to be altered in shape to suit the case—this is done by heating it. When the pessary cannot be retained, he advised, as his custom, the introduction of small balls of cotton wool dipped in equal parts of oil and glycerine.

Dr. HINGSTON stated that he had no experience of the Hodge Pessary. The difficulty

is in restoring the uterus to its position, not in retaining it. It was his custom some time since to use Simpson's Stem Pessary, but had become dissatisfied with it, as it had on one occasion disappeared, and he experienced great difficulty in removing it. Latterly he had used the Ring Pessary, and was more in favor of it than any other.

Dr. LOVERIN said that there was generally more or less relaxation of the vagina itself. He advised the use of astringents and tonics, treating the vagina rather than the uterus.

Dr. TRENHOLME, in reply, said want of tone in the vagina was a recognized cause of prolapsus uteri. In nine cases out of ten retroflexion was due to hyperplasia of the organ itself. Violent exercise would produce retrortion ending in retroflexion. He did not favor the bag pessary on the ground that it filled the vagina and interfered with the rectum and bladder. He had found the Ring Pessary powerless in the treatment of these cases, and looked upon the Hodge as the most useful pessary in our possession for the reasons before stated.

Dr. BLACKADER said he had used the Ring Pessary of Salt & Son, Birmingham, and found it a most excellent instrument.

A discussion followed on the subject of small-pox, Dr. Hingston remarking that some medical men were most remiss in their duty of reporting cases of small-pox to the Board of Health. Dr. Molson stated that he had experienced much difficulty in gaining admission for patients into the Small-Pox Hospital, and considered the health authorities careless in not properly using disinfectants in cases that demanded it. Dr. Roddick suggested that the present unsightly ambulance for conveying patients to the Hospital should be dispensed with, and something more respectable put in its place.

The meeting then adjourned.

OLIVER C. EDWARDS, M.D.,
Secretary.

BIRTH.

In Montreal, on the 17th of December, the wife of Dr. J. B. McConnell of a son.

MARRIED.

At the Church of the Good Shepherd (Episcopal), St. Paul, Minn., on the 9th of December, by the Rev. Wm. C. Pope, Archibald S. Campbell, M.D., Brainerd, Minn., to Miss H. O'Connor, Ottawa, Canada.

Pharmaceutical Department.

A. H. KOLLMYER, M.A., M.D., Editor.

ESERINE.

Compiled from various sources by

HENRY R. GRAY, MONTREAL.*

In 1863, it was discovered that the poisonous nature of calabar bean depended upon an alkaloid to which the name physostigmine was given. Jobst and Hesse, the discoverers, produced it in the form of an amorphous mass, alkaline, soluble in much water, and on exposure its aqueous solution became red.

In 1865, Hesse obtained it perfectly colorless and *tasteless*, and gave its chemical formula.

In 1867 Vée and Leven prepared an alkaloid from the bean which they named Eserine. This alkaloid differs from Hesse's in forming rhomboidal tabular crystals of a *bitter taste*, melting at 90°C., and combining with acids to form soluble salts, which are hygroscopic and non-crystalline as a rule. It is assumed by most writers that Eserine is only the pure form of what Jobst and Hesse called physostigmine, but in Flückiger & Hanbury's *Pharmacographia* it is stated that "we feel hardly warranted in admitting the identity of the two substances."

The following is the method of preparing the alkaloid of calabar bean, as recommended by a Commission on "Standard Formulas" appointed by the Pharmaceutical Society of Paris.

Exhaust powdered calabar beans mixed with 1 per cent of tartaric acid by means of repeated digestion and percolation, with hot alcohol (about three times the weight of powder for each digestion). Distil most of the alcohol off, filter the remainder, and heat on a water bath until all the alcohol has been dissipated. When cold, add a small quantity of distilled water and filter to separate resinous matter. Shake the filtered liquid with several portions of washed ether, until the latter ceases to become colored. Now add to the aqueous liquid remaining a slight excess of bicarbonate of potassium, again shake several times with ether, unite the ethereal solutions, and allow to evaporate spontaneously, when the Eseria will be left behind in crystals, which are rendered pure by a second crystallization.

Bromhydrate of Eseria is prepared by dissolving the foregoing alkaloid in colorless bromhydric acid, and evaporating to a syrupy consistence. In a few days fibrous, slightly colored,

but not deliquescent crystals make their appearance.

The bromhydrate being the only non-deliquescent crystalline salt of Eserine, and possessing equally with the others the power of contracting the pupil, will doubtless be the one most employed by oculists.

The neutral sulphate, which is the only salt obtainable commercially as yet, is prepared by *exactly* saturating a given quantity of Eserine with a solution of sulphuric acid (one part to nine), and immediately evaporating to dryness. This salt, although it is generally said to be amorphous, may with considerable difficulty be obtained crystalline. It is generally in the form of yellowish and sometimes reddish brown masses. A sample before the writer from Merck is in a dark colored mass, about the color of pale socotrine aloes and only slightly deliquescent. Another, freshly opened from I. Darrasse & Co., Paris, resembles the above, but is nearly as dark as gum guaiacum, and is slightly more deliquescent than Merck's, while a sample from the pharmacy of Dr. Vée, of Paris, made by his successor H. Dusquenel, and freshly opened, resembles amber rosin when reduced to coarse powder, the small particles having a shining fracture, and although examined during very damp weather appears very slightly hygroscopic. Its solution is colorless while the other samples are of a pale straw tint and even darker in the case of Darrasse's.

The position in the list of therapeutic agents to be assigned to the Salts of Eserine is hardly as yet determined. That they possess invaluable properties when administered hypodermically in tetanus has been demonstrated, but whether they can claim any advantage over the very efficient extract of the *Pharmacopœia*, which may perhaps contain other active principles of the bean, remains to be proved.

The dose of the sulphate is 1-64 of a grain internally.

Dr. Desjardins, oculist to the Hôtel Dieu, and Dr. Buller, oculist to the Montreal General Hospital, both speak in the highest terms of the great value of Eserine in eye diseases. Dr. Buller uses the sulphate in the proportion of 4 grains to one ounce of distilled water, and states "that there are several important diseases of the eye in which its action is very beneficial."

Dr. Desjardins is of opinion, from an extended experience of this remedy, that it is not only valuable as *myotique*, but it is one of the best remedies for deep-seated ulcers and large abscesses on the cornea; he also adds that it possesses great advantages over atropine after operations for cataract.

The great drawback to an extended use of this valuable therapeutic agent is its great price. As the demand increases this objection will gradually disappear.

* The writer is indebted to the "Proceedings of the American Pharmaceutical Association for 1877;" *Chemist and Druggist*, London; *New Remedies*, New York, and Flückiger & Hanbury's "Pharmacographia."

THE LATE MR. BENJAMIN LYMAN.—It is our painful duty to announce the rather the sudden demise of an old, well-known and greatly respected citizen of Montreal. Mr. Benjamin Lyman, senior member of the widely-known firm of Lymans, Clare & Co., of this city, and of Lymans Brothers, of Toronto, wholesale chemists and druggists, was the lamented gentleman in question. He died in Toronto, at midnight, last Thursday (5th inst.) night, of inflammation of the lungs, with which he had been ill only about a week. He was in that city in connection with the business of the branch establishment, and intended to come home to be present at the viceregal reception, but, falling ill, was unable to do so. His decease is a great shock to his family and friends, whose loss is irreparable.

Mr. Lyman's history is in a very large degree that of the city of Montreal for the past half-century. Born in Derby, Vermont State, in 1810, when a young boy came with his parents to Montreal, where he had resided ever since. His business began and closed in connection with the house of which he was the able head at the time of his death, and which was established by his uncle, Dr. M. J. Lyman, in 1803; it was a very successful and honorable career. As senior partner of the firm he was the successor of his eldest brother, the late Mr. William Lyman, and his only remaining brother, Mr. Henry Lyman, will now, doubtless, succeed the deceased in that position. His two sons are also connected with the establishment, namely Charles, in this city, and Edwin, in Toronto. The deceased was a director of the Federal Bank of Canada. He was one of the founders of the Mount Royal Cemetery and President of the Company that owns it. His father, Mr. Elisha Lyman, was one of the founders of the American Presbyterian congregation in this city in 1822, and Mr. Benjamin Lyman was a member from the first, and for many years before he died an elder and a trustee. He was a leading promoter of the Montreal Auxiliary Bible Society and of the Montreal Temperance Society, and was also active in the promotion of nearly all benevolent enterprises in this city. He was a man of the kindest and most sympathetic nature, and exceedingly generous in response to every call for help to the needy. He organized, about 1840, and was Captain of the Union Fire Company, and was for twelve or fifteen years a member of the City Corporation. He commanded the efficient 5th company of Montreal Rifles—known as "The Cold Water Company"—which did service as volunteers in 1837-38. Mr. Lyman was one of a family of nine children, only two of whom survive him, namely, Mr. Henry Lyman and Mrs. Mills, of London, formerly of Montreal. He leaves a wife, two sons and two daughters, and a host

of intimate friends to mourn his loss.—*Montreal Daily Witness.*

FUNERAL OF MR. BENJAMIN LYMAN.—The funeral of Mr. Benjamin Lyman, of Lymans, Clare & Co., took place this afternoon from his residence, No. 714 Lagouchetiere Street. The ceremony throughout was a most imposing one, and the procession of mourners on foot and in carriages, which consisted of the leading business and professional men of the city, reached at one time from the Windsor Hotel to Beaver Hall square. The top of the coffin was covered with white exotics tastefully arranged. The pallbearers were Hon. L. H. Holton, Messrs. E. F. Ames, S. H. May, Geo. W. Reid, H. A. Nelson, M.P.P., Thos. Workman and Henry Mulholland. The church was draped in black, and Rev. G. H. Wells read the service used in the American Presbyterian Church. At the conclusion of the service the cortège was reformed and proceeded to Mount Royal Cemetery, where the body was interred.—*Evening Star.*

RESEARCHES ON THE TREE WHICH PRODUCES "GOA" POWDER.—(Dr. Da Silva Lima.) The author has received the following information from Dr. Ramiro A. Monteiro:

"The tree which yields the Araroba or Goa powder is known in the districts where this industry flourishes, under the name *Angelim amargosa* ("bitter angelim"). The word *angelim* is not now understood. The tree belongs to the nat. ord. Leguminosæ; and the appellation "bitter" arises from the fact that the ligneous portion resembles good cinchona in flavor and bitterness. It is found in company with another tree belonging probably to the same genus, namely, *Andira anthelmintica* Benth., which has anthelmintic properties. There is also an *angelim doce* ("sweet angelim," *Andira vermifuga*) and an *Angelim pedra* (*Andira spectabilis*)."

The araroba tree occurs abundantly in the forests of Camamu, Igrapiuna, Santarem, Tape-roa, and Valença of the province of Bahia. It attains a very large size, one to two metres in diameter, and twenty to thirty metres in height.

The Goa powder is contained in more or less narrow fissures and chinks in the ligneous portion, running mostly through the whole length of the trunk, and becoming narrower above. It is customary to cut down the tree, to saw it into sections, and then to split the blocks open in the direction of the fissures, when the powder is readily obtained. There is scarcely any doubt that the original tree is either an *Andira* or a *Cæsalpinia*.—*L'Union Pharmaceutique.*

TOXIC EFFECTS OF THE BROMIDES.—Dr. E. T. Basley, of Little Rock, Ark., writes to the *Amer. Med. Weekly* an account of a case in which $\frac{5}{4}$ iij. instead of 3 iij. of bromide of potassium was order-

ed for a patient suffering from epileptic convulsions of a particularly severe character. The convulsions were not entirely arrested by the amount taken (quantity not stated), but intense bromism was produced, the symptoms of which Dr. Easley summarizes thus: The tongue was thickened; slowly and partially protruded by great effort, and covered with a thick, tenacious secretion. 2. The articulation was drawling, difficult, and imperfect. When a question was asked, the answer would be intelligent as far as it went, but it would frequently break off in the middle of a sentence. If the patient were again aroused when this occurred and the interrogatory repeated, she probably would reply as if vexed: "Well, I have told you." 3. The heart-pulsations were diminished in force and frequency, the pulse falling as low as 60, the temperature to 80°. Respiration, without the stertor of opium-poisoning, was slow and easy. The breath was not only fetid, but nauseous, the nausea peculiar to bromism, and which cannot be well described. 4. The pupils were dilated, the lids of the eyes heavy and opened with difficulty. When shaken and desired to do so, patient would make the effort, and the voluntary elevator muscles could be seen to strain before accomplishing their function. 5. Constipation, which is the rule under such circumstances, attended in the present instance. Hammond says diarrhoea occurs in rare cases. 6. The kidneys acted freely, and the patient's safety is perhaps due to the rapid elimination of the drug by these organs. The eruption mentioned by some writers was not observed in this case, and the patient made a good recovery.

NEURINE.—This alkaloid, existing in the yolk of egg and in bile, has lately been used with good success in diphtheria, and deserved to be further studied. Neurine has been variously identified heretofore with choline, sinkaline, trimethyl-oxyethyl-ammonium-hydroxide, hydroxyethylen-trimethyl-ammonium-hydrate. It has, however, been recognized as trimethyl-vinylammonium-hydroxide: $3 \text{ CH}_3. \text{NC}_2 \text{H}_3. \text{HO}$ or $\text{C}_5\text{H}_{13}\text{NO}$; and it is regarded as identical with amantine, a non-poisonous alkaloid, occurring in certain poisonous mushrooms. Its mode of preparation is the following:

From Eggs.—Yolk of egg is extracted by shaking with ether, the residue is once more extracted with warm alcohol, the ethereal and alcoholic solutions are mixed together and distilled, and the residue in the flask boiled for one hour with excess of solution of baryta. The latter having been precipitated by passing carbonic acid through the mixture, the whole is filtered, the filtrate evaporated at about 80° C. to the consistence of syrup, and extracted with absolute alcohol. The alcoholic solution is then precipitated by platinum chloride, whereby a double chloride of neurine and platinum, insoluble in strong alcohol, is produced. This is collected, dissolved in water, the platinum precipitated by sulphydric acid, and the filtrate evaporated to a syrup, or dried over sulphuric acid in vacuo, or else dissolved in absolute

alcohol and covered by a layer of ether. In either case the product is crystallized neurine hydrochlorate. This is then dissolved in water and macerated with freshly-precipitated silver oxide, to remove the chlorine. The filtrate, evaporated on the water-bath or, better, dried over sulphuric acid, yields pure neurine.

From Bile.—Bile is boiled with baryta solution in excess, the solution filtered, the filtrate again boiled for twelve hours with baryta-water, then mixed with dilute sulphuric acid, as long as any precipitate is produced, concentrated on the waterbath, and mixed gradually with sulphuric acid, as long as vapors of hydrochloric acid escape. The mass is then extracted with alcohol, the alcoholic solution evaporated, the residue boiled with moist oxide of lead, the filtrate deprived of lead by sulphydric acid, evaporated, and the residue dissolved in absolute alcohol, and, when necessary, filtered. It is then precipitated with platinum chloride and further treated as above stated.

Properties.—Neurine is a colorless, syrupy, hygroscopic, alkaline liquid, which absorbs carbonic acid from the air, and is converted into a carbonate. It is soluble in all proportions in water and alcohol. On boiling its aqueous solution, it is decomposed into trimethylamia and glycol. With acids it forms partly crystallizable, partly deliquescent salts. The hydrochlorate is best prepared by mixing the double chloride of neurine and platinum with potassium chloride and exhausting the dry mass with absolute alcohol. On heating anhydrous neurine hydrochlorate with very concentrated nitric acid in a glycerin-bath, it is converted into the poisonous alkaloid muscarine (naturally occurring in poisonous mushrooms), and vapors of nitrous acid escape.

Tests of Purity.—Neurine, as obtained generally from (the lecithine of the) yolk of eggs, should form a clear solution in water and alcohol, and the solution should be strongly alkaline. On mixing 1 gram of it with 0.6 grams of powdered oxalic acid, only a trace of carbonic acid should be given off, and, after heating in the water-bath and cooling, a solid saline mass should remain. Viscosity would point to some adulteration, most likely glycerin. On heating it in a small retort, trimethylamia distils over.

Further reports on its use in diphtheria are shortly to be expected.—*Pharm. Centralb.*

TREATMENT OF BOILS—NOTE ON A NEW PROPERTY OF ARNICA.—As the result of physiological experiments, Dr. Planat (*Lyon Médical*) has been led to the use of arnica in all cases of superficial acute inflammation, as furuncles, anginas, erysipelas, etc. He states that arnica aborts all furuncular eruptions, except those accompanied by diabetes, with remarkable promptness.

ON PELLETIERIA* AN ALKALOID OF POMEGRANATE BARK.—Mr. Tanret has discovered in the bark of the branches and roots of the pomegranate a volatile alkaloid, to which he has given the name *pelletieria*, in honor of the well-known chemist, Pelletier. The alkaloid may be obtained by the following process: Pomegranate bark, from the branches and roots, is reduced to a coarse powder, the latter moistened with a rather thick milk of lime, and packed in a displacement apparatus. It is then treated with water, and the percolate divided into two portions, each of which is several times shaken with chloroform. The latter, after being separated, is treated with dilute acid, and the slightly acidulous aqueous solution is evaporated, when the crystalline salt of the alkaloid will remain behind. This may be obtained pure, by decomposing the salt with potassium carbonate, and dissolving the alkaloid out with ether or chloroform. On evaporating the latter solution at a low temperature, or even on distilling off the ether or chloroform, the pure substance is left as a residue. One kilo of the dry bark yields about four grams of sulphate of pelletieria.

Pure pelletieria is oleaginous, colorless, and volatile (boiling about 180° C.). It emits vapors at ordinary temperature, and is very soluble in water, alcohol, ether, and chloroform. The sulphate, muriate, and nitrate are crystallizable, but exceedingly hygroscopic. It is precipitated by most of the alkaloidal reagents. Whether the tænicidal properties of the pomegranate-bark are due to this alkaloid remains to be shown by further researches, which are promised by the author.—*Répert. de Pharm.*, 1878, 241.

LACTOPEPTINE.—This is a preparation which is acquiring no little reputation in the profession. It is composed of pepsin, pancreatine, diastase or vegetable ptyalin, lactic and hydrochloric acids, and sugar of milk. It is said to digest three or four times more coagulated albumen than any preparation of pepsin in the market. It has been found to be an excellent remedy in gastritis, chronic dyspepsia, in the diarrhœa and dysentery of children, in the vomiting of pregnancy, etc. It has received much praise, indeed, in the wasting diseases of children, which is attended largely with improper digestion of food. We feel confident that our friends will be pleased by a fair trial of it, and we hope they will make such, and some of them furnish us with a report.—*Cincinnati Medical News*, February, 1878.

SALICYLIC ACID AND BORAX.—It may be interesting and perhaps useful for some readers of the *Journal* to know that while a solution containing ten grains of salicylic acid and ten grains of borax in one ounce of water has a very

bitter taste and an acid reaction, a solution containing ten grains of salicylic acid and fifteen grains of borax has no disagreeable taste, and is nearly neutral. This solution appears to possess all the valuable properties of salicylic acid, and forms an agreeable means of using the acid internally or as a gargle.—*London Pharm. Jour.*

CHROMACOME.—This is a French preparation which "contains nothing injurious to health." This hair dye consists of two fluids. The first, "Le chromacome, teinture supérieure de William W. A. T., No. 1, Bonn," weighing about forty-five grammes, is tincture of galls. The other, No. 2, is a solution of acetate of iron with a little nitrate of silver. When gray hair is moistened first with No. 1, then with No. 2, it becomes blackish-brown or black. Terreur, hairdresser, 117 and 119 Rue Montmartre, Paris, is the chief agent for this preparation.—*Schadler*.

ANOTHER MRS. PARTINGTON.—A lady quite well known in Philadelphia, who spent the summer at Newport this year, asked her physician (also a well-known Philadelphian), if he did not think the atmosphere of Newport enervating? The physician assured her that his opinion was quite the contrary, that he considered it decidedly tonic. "Do you, really?" was her rejoinder. "It seems to me as if there is not enough *sozodont* in the atmosphere!"

TABLE SALT IN MILK FOR CHILDREN.—Dr. J. Q. Smith says that, when cow's milk disagrees with young children, the addition of a small quantity of table-salt will often correct the difficulty.—*New Medicines*.

A Great School of Pharmacy is being constructed in a portion of the grounds attached to the Luxembourg at Paris which will occupy in all the large space of 17,000 square yards, of which the laboratories will accommodate 600 working students. The school will be open in 1880.—*Boston Journal of Chemistry*.

CHILLAN SULPHUR.—Sulphur in immense quantity has been discovered in Chillan. The quality is so fine it is said to require only to be ground and sifted to be ready for market.

CANADA BALSAM AS AN EXCIPIENT FOR PILLS.—Danney proposes, as an excipient that will preserve pills for an indefinite period, a mixture of one part of wax and three of Canada Balsam.—*Boston Journal of Chemistry*.

MORPHIA POISONING.—The *Philadelphia Medical and Surgical Reporter* states that a death has occurred at Washington from the hypodermic injection of one-sixth of a grain of morphia. This is, perhaps, the smallest fatal dose recorded.

PERMANGANATE of potash relieves the condition in which lumbar pain, frequent micturition, and urine with profuse brickdust sediment and intestinal indigestion, are associated symptoms.

* In place of this awkward name, Dr. Hager proposes the much more rational name *punicéise* (punicia).