DOMINION
MEDICAL MONTHLY

AND ONTARIO MEDICAL JOURNAL

VOL. XVI. TORONTO, JUNE, 1901. No. 6.

Original Articles

CLINICAL NOTES ON SOME INJURIES TO THE SHOULDER JOINT.

BY R. B. NEVITT, M.D., TORONTO,

Surgeon to the Toronto General and St. Michael's Hospitals, Toronto.

Injuries to the structures in and about the shoulder joint possess peculiar attractions on account of the difficulties of making an accurate diagnosis and because of the grave disabilities which may supervene from improper treatment. The difficulties in diagnosis to me have seemed greater in the slighter forms of injury. When a great wound has been inflicted easier access is permitted to the parts and a correct conclusion may be arrived at; but when a slight fall or a trivial blow is followed by swelling and pain, the parts are further removed from a thorough and satisfactory examination. The prominent position of the articulation and the great range of motion of the joint lead one to forget the thickness of the natural muscular and fascial coverings, and the swelling caused by the traumatism buries the osseous framework still deeper and obscures more effectually a slight separation or displacement of the structures.

The relation of a few cases which it has been my fortune to meet with in the last year or two may serve to illustrate these points and to show the utility or futility of certain modes of treatment.

Mr. B., aged about seventy, whom I saw with Dr. Chambers, was a stout, florid man, had had an epileptic fit in bed. When he recovered consciousness he complained of soreness and pain in the left

shoulder and was unable to use the arm. When I saw him in consultation, the left arm was hanging by the side, the elbow slightly removed from the side and projecting somewhat backwards; the shoulder was swollen and the head of the bone could be felt below the coracoid, leaving a depression between the head of the humerus and the coracoid, into which the finger could be pressed. The joint was practically immobile, the patient not permitting the slightest movement.

The patient was anesthetised, and after some trials by manipulation which did not succeed, I made traction downwards in the line of the humerus, at the same time rotating the arm. I felt something give at the joint and the head of the bone slipped into its socket. I was able at once to put the arm and shoulder through a variety of movements, placing the hand on the top of the head and on the opposite shoulder, the joint moving freely, but with an occasional light crepitus, which was thought to be due to effusion. The arm was put up with a body bandage and the hand carried in a sling. In ten days I saw him again; while the arm is at rest there is not much pain, but he resents movement of the arm. The head of the bone appears to be in place and moves with the movements of the arm. Five days afterwards pain on motion is as great as ever; the swelling is subsiding. The shoulder joint is broader from before backwards than the other shoulder, and a prominence which moves with the arm is found posteriorly under the spine of the scapula. There is also a depression below the acromion, and a slight edge is felt, which is tender on palpation; the shoulder girth is greater than that of the other shoulder by one inch. The next day Dr. Peters was added to the consultation and found things as stated above.

This was doubtless a case of sub-coracoid luxation of the humerus with separation of the great tuberosity of the humerus, the latter injury concealed by the swelling which occurred soon after the injury. The luxation was reduced, and the crepitus which was occasionally detected on moving the arm was not due to effusion, but to the occasional contact of the fractured tuberosity, which was not discovered until absorption of the effusion and subsidence of the swelling allowed the separated fragments to become more distinctly palpable.

In January, 1900, I saw a lady about 45 years of age, stout in build, who stated that three months previously she fell and sustained an injury to the shoulder. A medical man saw her at the time and diagnosed a luxation of the shoulder and fracture of the neck of the scapula. At the time of her visit to me the movements of the joint were restricted and painful, especially abduction and rotation outwards. The shoulder preserves its natural roundness, and the head of the humerus appears to be in its normal position. The axis of the humerus is considerably deflected from the normal,

the elbow projecting backwards; and about an inch below the acromion, about on a level with the coracoid process, is a sharp, projecting angular piece of bone, continuous with the shaft of the humerus and moving with the shaft. The rounded head of the humerus also moves on rotating the elbow. The arm is five-eights of an inch shorter than its fellow. On the posterior aspect of the joint continuous with the head of the humerus is felt a slightly prominent edge. From the axilla nothing abnormal is detected. Whatever had been the original extent and character of the lesion, I have no doubt that there was a fracture of the anatomical neck, which has united with the characteristic angular deformity anteriorly. Had there been a dislocation it would probably have remained unreduced as with a fracture so high up there would have been no hold upon the head of the humerus to effect its reduction, and there is no evidence now of a fracture of the neck of the scapula having taken place. I can only surmise that the presence of pain and swelling prevented the medical man from making a thoroughly satisfactory examination. Examination under an anesthetic would have been advisable and might have led to the institution of treatment which would have prevented the serious disability and unsightly deformity which were strongly in evidence when I saw the case.

S——, received a blow on the back of the shoulder, and the head of the bone was driven from the glenoid cavity, and appeared prominent below the coracoid process. The luxation was reduced but recurred, and under chloroform was again reduced and the arm put up in a Velpeau bandage. After being kept at rest for some time the bandage was removed and the hand carried in a sling. The voluntary movements of the shoulder were much restricted, but passive movement was free. The deltoid was much atrophied so that the bony parts were very prominent, and the appearance strongly resembled a dislocation, but the freedom of the passive movements, the presence of the head of the bone within the glenoid cavity and the decreased shoulder girth, along with the atrophied muscles, explained its true character.

A gentleman fell and struck his shoulder against a brick wall. The fall was so slight and the disability so trivial that he thought he had merely suffered a contusion or strain, and consulted a medical man only when after the lapse of some days he found the discomfort and disability had not passed away. Some three or four weeks after the injury I saw him; there was then, undoubtedly, an axillary luxation. Under an anesthetic this was reduced by traction downwards with the heel in the axilla, after failure by Kocher's method, though no doubt the repeated trials by manipulation served to loosen adhesions and rendered the traction successful. This was a case in which the violence was so slight that the patient belittled his injury and the doctor could not be certain of

the exact nature of the lesion until after the subsidence of the swelling.

On the other hand, a month or two ago, I saw a stoutly-built girl, ten years of age, who fell head downwards twenty feet, striking a hardwood floor, alighting on her head and shoulders. She was rendered unconscious for a while, but recovered and complained of pain in her head and shoulder. She bled from the nose and vomited blood. She relapsed into unconsciousness, which gradually deepened into a semi-comatose state. The next day she could be partially roused, could retain nothing on her stomach, and vomited frequently; the bleeding had ceased. She complained when the left shoulder was moved or handled. The shoulder was swollen, the clavicle intact. The bony parts about the shoulder were apparently in their normal relations. In her semi-conscious condition I manipulated the arm in all directions without difficulty, placing the hand on her head and with the hand on her opposite shoulder, bringing the elbow to the side, etc. In five or six days when consciousness had completely returned and nausea and vomiting had passed away, she complained of pain in the shoulder. I again manipulated the arm freely, eliciting objections on account of pain, but the movements were otherwise unobstructed beyond this natural resistance. She left the city, and I heard that after her arrival at home she had a convulsion and that the medical man who attended her said that the head of the bone was three inches out of position. This latter is only hearsay. I have had no communication directly with the medical man, nor with the girl's friends since she left the city. I am thoroughly convinced that on her departure from the city she had no luxation of the humerus, and can only conclude that the muscular actions during the convulsion, acting on the joint weakened by the contusion and perhaps by rupture of ligaments, were sufficient to cause the dislocation found by the second medical attendant.

A rare form of fracture was seen with Dr. Wallace. A laboring man fell on the floor; he complained of pain about the shoulder, but the movements were not greatly restricted except inasmuch as they produced pain. The displacement was curious. The clavicle and end of the acromion stood out prominently as a sharp, distinct edge of bone. The separated point of the acromion dropped downward, leaving a deep furrow between the clavicular end of the acromion and its tip. On raising the humerus directly upwards with the hand under the flexed elbow, the deformity was almost completely removed, and by manipulation in this position crepitus could be elicited. The head of the bone did not leave the glenoid cavity, but on removing the support from beneath the elbow, the head and glenoid cavity came down together, the scapula apparently tipping downwards. As the lifting the arm up seemed to relieve the deformity, I endeavored to keep it in this position by

putting a towel in the axilla and applying a broad piece of adhesive plaster, after the manner of the second strap in Sayre's clavicular dressing, binding the forearm and hand to the front of the chest, and making traction upward from the elbow. An additional loop of adhesive plaster was brought beneath the elbow, its ends crossing from the front and back over a compress placed over the clavicular acromial ends. The dressing was allowed to remain undisturbed for some weeks, and when removed, after a little careful passive motion, the hand was worn in a sling for a short while longer, and the patient recovered with an absolutely useful limb. The patient was a night-watchman, and during the entire course of treatment continued at his occupation.

There were two cases of fracture of the anatomical neck of the humerus, both in men, which occurred from falls on the shoulder. One at the General Hospital fell and struck the shoulder against the edge of the curb-stone. The deformity was characteristic. The sharp edge of the lower fragment could be seen, especially from a lateral view, projecting in front and below the head of the humerus and the edge of the neck could be easily defined posteriorly. There was some shortening and the axis of the humerus was deflected somewhat backwards; crepitus was easily elicited on motion. I treated this case by the application of Aikins' hoop-iron splint with most perfect results. The upper arm of the splint, curved to fit the shoulder, was fixed by adhesive straps to the front of the chest, the upright limb proceeding behind the arm and the lower section, bending at the elbow, was secured to the forearm and as the posterior limb projected about one and one-half inches below the elbow, it afforded a means of steady and continuous traction. The traction force was kept up by adhesive straps passing around the splint, and the force was distributed over the forearm by means of a wooden anterior splint. For this form of fracture, as indeed for any fracture of the shaft of the humerus, I know of no better or more satisfactory splint. It is far ahead of the old cumbrous shoulder caps, which I could never mould to fit securely, and which would never stay in position when they did fit, and besides the Aikin's splint allows of constant and very considerable traction, and permits the surgeon to inspect the seat of fracture at any time without disturbing it. This case recovered with absolutely perfect results.

The other case occurred at St. Michael's Hospital and caused me a very considerable amount of anxiety and trouble. The man was well advanced in years, in wretched health, and of irregular habits. It was one of the most typical cases I have ever seen of fracture of the anatomical neck of the humerus. Not having an Aikin's splint at hand, it was put up with an axillary pad, coaptation splints to the arm and a shoulder cap, which, as usual, could not be made to fit; during the night the patient removed all his bandages and

splints. They were replaced and a light plaster-of-Paris bandage put on over the splints. During the night he picked off all the plaster-of-Paris and again removed the splints. He apologized for doing so and said he was unaware of what he was doing; so he was given large doses of bromide at bedtime, and in the meanwhile the splints were reapplied, and the entire upper extremity and thorax was encased in a voluminous plaster-of-Paris jacket. The thickness of this plaster and the influence of the nightly doses of bromide preserved this dressing from destruction, and it remained in position for some weeks. When it was being removed I confess to a considerable perturbation of spirit as the parts came into view; but fortunately my anxiety was without cause, for the results were sufficient to cause satisfaction to a mind more higher critical than mine.

Another case in which the Aikin's splint was of excellent service was that of an excitable woman, who fell and fractured the left humerus at its surgical neck, the upper fragment was displaced outwards, and the lower projected inwards. An Aikin's splint was applied, leaving a good two inches free below the elbow. A straight, padded, wooden splint was placed anteriorly on the fore-arm and served to distribute the pressure of the counter traction straps to the iron splint. This patient was obliged to remain on her back for ten or twelve weeks till a fracture of the neck of the femur united. The Aikin's splint held the arm in good position and facilitated the unavoidable handling and moving the patient in a way, and with results, I feel sure, no other splint would have accomplished so satisfactorily.

There was the case of a stout woman in which the excessive amount of adipose tissue prevented the exact location of the fracture, which was made out to be near the insertion of the deltoid. The injury was received by falling downstairs. The arm, in addition to the fat, was the seat of an extensive ecchymosis. The accident happened at night and I had no Aikin's splint at hand of a size suitable to the magnificent proportions of the lady. In this case I adopted a suggestion made by Mr. Tobin in the *British Medical Journal*. A piece of poroplastic material, oblong in shape, and wide enough to take a good hold of the trunk, was folded lengthwise so that the arch of the fold fitted into the axilla and the outer limb acted as a support to the arm, reaching as far as the bend of the elbow. At the axillary bend lateral incisions are so fashioned that the edges of the poroplastic could be bent outwards, encircling the arm, forming a sort of trough splint; the ears formed by the lateral incisions passing up in front and behind the shoulder, act as a shoulder cap—the thoracic piece is fixed to the trunk by broad strips of adhesive plaster, and the parts enclosing the arm are secured also by pieces of strapping. In this case the dressing acted very satisfactorily and afforded good and comfortable sup-

port to the fractured limb, permitting easy inspection, and I obtained an excellent result—good union without loss of function and without deformity.

Reports of Societies

THE MEETING OF THE CANADIAN MEDICAL ASSOCIATION.

The thirty-fourth annual meeting of the Canadian Medical Association, will be held in Winnipeg, on August 28th, 29th, 30th and 31st, 1901.

The following are some of the papers that will be read: On Surgery, O. M. Jones, F.R.C.S., Victoria, B.C.; on Gynecology, Dr. T. S. Cullen, Baltimore, Maryland; on Medicine, Dr. J. R. Jones, Winnipeg, Man.; on Tuberculosis and Milk, Professor Russell, University of Wisconsin; the Sanitarium Treatment of Tuberculosis, Dr. Richer, Montreal; the Present Smallpox Epidemic, Dr. H. M. Bracken, St. Paul, Minn.; Hematology, Dr. L. H. Warner, New York; Skin Diseases, with Lime-light Illustrations, Dr. F. J. Shepherd, Montreal.

A free excursion through the great wheat belt of the Province has been arranged, and a trip to Lower Fort Garry, the scene of many incidents in the history of the Hudson's Bay Company.

Special Selections

ECZEMA IN RELATION TO AGE.

By Malcolm Morris, F.R.C.S., Edin.,
Surgeon to the Skin Department at St. Mary's Hospital, and Lecturer on Dermatology at St. Mary's Hospital Medical School.

Heinrich Heine, the poet, when he was on his "mattress grave" suffering from a terrible form of paralysis, used to spend a part of his time in reading medical books about his disease, and, according to Matthew Arnold, one of his friends asked him one day what advantage he supposed this reading would be to him. His answer was that he was preparing to give a lecture in heaven as to the want of knowledge of the doctors on this earth concerning the diseases of the spinal marrow. I think that if Heine were alive to-day and suffered, as he might suffer, from a terrible attack of eczema, with all its tortures and its frightful irritation, he might study the works which are published at the present time and might have given the same answer. The painful truth is that what he said about spinal diseases might equally be said about this particular disease. The various books and papers which are published upon eczema differ enormously in almost all particulars concerning the disease. There are hardly two of them that agree even on a definition. Is it, therefore, to be wondered at that the disease is an exceedingly difficult one to understand? In the whole range of dermatology, as far as my experience goes, there is no subject which at present more eludes our mental grasp than the pathology and treatment of eczema. This statement will doubtless sound discouraging, but we must look the truth in the face, otherwise no progress is possible. Those who have devoted their lives to the work, who have been studying eczema for years, still find the same difficulties that others have found before them. There are difficult points that arise and meet us at every phase of the disease, from the beginning to the end. In my remarks to-day I propose to take certain of the commonest forms, those common types which every practitioner meets in his daily work. I do not propose to go into the various theories of eczema or to discuss problems in connection with them; these are better discussed at congresses, international or otherwise. I would ask you to imagine that we are actually at the bedside of

* Delivered at the Medical Graduates' College and Polyclinic on Jan. 9th, 1901.

a patient, and that we are confronted with problems which we have to try and solve; the various difficulties that meet us we will discuss in detail according to the different forms. The first thing which has to be recognized is that this disease presents certain well-marked differences corresponding to different ages in life. I shall divide the subject in this way: (1) the eczema of the infant; (2) the eczema of the young child; (3) eczema at the age of puberty; (4) eczema in the adult; (5) eczema in the adult woman at the change of life; and (6) eczema in the aged.

Eczema in Infancy.

First, with regard to eczema in the infant. We will suppose that the practitioner has attended a woman in her confinement, and that after the child is born the nurse calls his attention to the fact that there is a little circular patch on the scalp. The patch is generally about the size of half-a-crown, or a little bigger, of a dirty-brown color, and composed of greasy material which is very adherent to the scalp. The nurse asks what is to be done. The usual answer, or at any rate a very common answer, is that it is of no consequence—that it is nothing, and that it will disappear in the course of time. This little patch is a patch of sub-orrhea; sebaceous matter has been secreted and has dried. This little patch is of the greatest possible importance, and it will therefore be well if the practitioner pays considerable attention to it. It is very often the focus from which an eczema of the scalp in an infant will start. The first thing that happens if it is left alone is that around the brownish patch in the centre of the scalp a red areola appears, and from that red areola other circular patches will appear on other parts of the scalp. Now if care is taken to treat this in the very earliest stage I believe that a considerable amount of eczema in the young child will easily disappear. The question is how it should be treated. We have first of all to recognize the fact that in the child there is a great blood-supply to the brain. It is necessary that this should be so, as abundant nutritive material is required for the formation of bone and the building of the brain. Owing to the great vascularity of the scalp the slightest irritant is very likely to convert what is in the first instance a trivial condition into a very acute one, and to make the eczema spread from that particular spot. As a rule nurses are very fond of scrubbing the infant very freely with soap and water. I think that is much overdone, and I think a word of warning should be uttered by the practitioner, especially if the child has the slightest sign of irritation of the scalp. Washing should not be done with any violence. If a

soap be used, it should be a superfatted one; it should not be the ordinary yellow soap. The scaly material should be treated with the greatest possible gentleness, and should only be removed by degrees.

Next, should the child's head be kept covered? I think infants' heads are kept far too much covered; and if there is the slightest tendency to any inflammatory condition of the scalp it is better that the child should not wear any form of cap, especially in the house, and when taken out should not be too warmly clad about the head. Friction tends to increase the blood-supply and to cause irritation. If the patch of eczema does not disappear it will go on to a more acute condition and will spread in the form of circular patches, not only on the scalp but also on the face. Thence it will come down the front of the chest, and it may pass down behind the ears and so down the neck, and in that way there may be a complete collar formed around the neck. Then patches may appear upon the abdomen and the back, and subsequently on the limbs. These patches may be red, slightly raised and scaly, and to a slight extent irritable. But after a time the disease will suddenly assume an acute character, and will pass from the first dry red stage into an exudative stage, and there will be discharge. In parts there may be acute vesication or pustulation. It is in a young child that eczema tends more especially to become pustular. In a certain number of days—or it may be hours—the discharge will dry and form crusts, and then the typical condition of eczema of the infant will be met with, with thick crusts all over the scalp and face, and scattered about the body. In the later stages there is a considerable amount of irritation. In the case of the adult it is often explained that the eczema spreads by means of scratching, but this cannot be so in a small infant, which has hardly strength enough to scratch; therefore there must be some other explanation why these patches spread. Many mothers are often in the habit of tying infants' hands or of enveloping them in bags so as to prevent them scratching themselves. I think it is a wrong and cruel thing to do. If I had an eczema I should not like to have my hands tied or enclosed in bags, and I do not see why the defenceless infant or young child should be so treated. It must be our endeavor so to modify the process that we can give the child relief without putting it to that extra torture.

As regards the treatment of this form of eczema in the first stage, when it is only in circular scaly patches, it is to my mind purely a local condition, and requires no constitutional treatment at all. The local treatment should be of the very simplest and

gentlest character; strong ointments or lotions are not appropriate. The applications should be of an antiseptic character. There is no better one, especially in the first instance, than an extremely weak sulphur ointment—five grains of precipitated sulphur to one ounce of benzoated lard. When the discharge stage begins it is necessary to consider what particular factor it is that has converted the simple, patchy, dry form into an acute condition. That is one of the greatest problems connected with the subject. Every practitioner has his own views on this particular point. The probable answer to the question is that it is a complex factor or several factors which produce the change from the simple seborrheic condition to the acute eczema in the infant. One of the first causes always alleged is that the child is improperly fed, but I have seen eczemas commence and become extremely severe, and go through their other phases, and relapse, though the child has been fed in every way properly, when it has been taking its mother's milk and the mother is in good health. Therefore, that particular factor at that time need not necessarily be the cause of this sudden change. It is possible that there is something inherent in the skin itself which causes the change, but what that is is an unknown x, something which is added to the original condition which converts it from a quiet stage into an acute discharging one. But a little later, as the child gets older, there are factors which unquestionably have an influence. The first of these is vaccination. We are constantly asked what is the relation between vaccination and the eczema of infants. Now, the usual rule with vaccination officers is that they are not to vaccinate a child who has eczema. What is the reason of that rule which, I believe, is one of the regulations of the Local Government Board? The chief reason is that the vaccination will not take if there is a discharging surface. So that in the acute condition vaccination is not appropriate, simply because the vaccination will not take. In some rare instances the acute stage is shortened and moderated by it, and the eczema dries up and disappears, apparently under the direct influence of the vaccination. On the other hand, if vaccination is done when there are only circular scaly patches of the seborrheic type and nothing acute, the vaccination as it comes to its height with the fever which is produced will rouse these patches into a state of violent inflammation. This rarely occurs, but it does occur, and it ought to be recognized at its true value. Not only will vaccination do it, but other zymotic diseases will. It is not at all an uncommon thing for a child with scaly, dry patches, to have them suddenly aroused into an activity by an attack of measles. I

have seen many such cases. There are other factors which are also irritating and which do harm in a reflex way. One of the commonest of these is intestinal worms. Young children with worms will have their eczema aroused into a state of the greatest possible activity, and it is necessary, therefore, that we should direct our attention to that. If, therefore, we have got a child who is being well fed, who is having food which is appropriate, and in whom the simple, dry, scaly condition has been converted into an acute eczema, what internal treatment can we give which is likely to modify the process and relieve the symptoms? I believe there is no drug or combination of drugs which has such a good effect internally as mercury in some form. I believe it to be the experience of every general practitioner that if children are out of sorts a small dose of mercury will do wonders for them. Certainly that is the case as far as acute eczema is concerned. Of all the preparations of mercury there is none better than a small dose of calomel. It should be given at bedtime, and repeated in two or three nights. So far as the constitutional treatment is concerned it is the best that I know of for this condition.

Then, as regards local treatment of the acute stage, it is first necessary to do everything in our power to dry up the discharge, and the best way to do that is to apply powder. But if powder be applied to the skin a crust is formed which is sometimes exceedingly difficult to get off, and in the process of trying to get it off the condition is again aroused into activity. Therefore, it is not a bad plan to apply the powder in a muslin bag. Then comes the question, what particular kind of powder should be employed—whether it should be simply starch or rice powder, or whether it should be some antiseptic powder? I think that the best way out of that difficulty is to mix them. One part of finely triturated boric acid, and one part of starch, and perhaps one part of oxide of zinc, should be taken. These combined make an exceedingly useful drying powder. If it is put into a muslin bag, not too tight, and loosely applied over the head, that will tend to moderate the discharge. Immediately after that something extremely soothing should be applied to check as far as possible the formation of scabs. One of the prescriptions which I am fond of using at that particular stage is what I call "zinc cream." It consists of oxide of zinc, lanoline, olive oil, and lime-water. The proportions best suited for it, I think, are seven drachms of oxide of zinc, one drachm of lanoline, one ounce of olive oil, and one ounce of lime-water. It will at once be seen that the olive oil and lime-water make carron oil, to which are added oxide of zinc and lanoline. If oxide of zinc be added to

the carron oil without the lanoline a separation of the lime-water is obtained, which interferes very much with its efficacy. As regards its preparation, the best plan is to mix the olive oil and the lanoline together in a bath, and when it is melted add the lime-water, and then while it is still warm stir in the oxide of zinc. If that is done in rather a large way, and the ingredients are therefore thoroughly mixed, the blandest possible cream will be the result. We know how in the case of burns the carron oil relieves the smarting and the pain, and as we want to do that in this condition it is a particularly useful application for it. To that cream can be added drugs of an antiseptic character, and there is none that I know of that irritates less or answers better in drying up this condition and converting an acute into a subacute stage than ichthyol. A very small quantity should be used. In infants I would begin with half a drachm of ichthyol to three ounces of the cream. Then with regard to the way of applying it. Linen should be torn into narrow strips, and should be soaked in this cream and then applied very accurately. The whole of the affected skin surface should then be covered with a very thin gauze bandage to keep it in place. As soon as it begins to dry these strips should be removed and some more should be dipped into the cream and applied as before. As soon as the condition passes into the dried-up, scaly stage, an ointment is more suitable than the cream, because the cream is exceedingly drying in its effects. Then we come to the use of a simple ointment. I would here say that it is a very common thing to use simple boric acid ointment for it. That is about the most uncertain application I knew of. Sometimes it is of use, but sometimes it irritates badly and does an immense amount of harm. On the whole it is too uncertain to trust to in young children. At the next stage, therefore, I suggest weak ammonia-chloride of mercury ointment.

This form of eczema, like all others, is cyclical in its nature. It starts in the way I have described; it comes to its height and then subsides again; but the whole tendency of the condition is to commence again; and in spite of all our treatment, however well directed it may be so far as internal or local treatment is concerned, there are a certain number of cases that go on relapsing again and again, and I do not know of any method of treatment by which these particular cases can be certainly cured. Fortunately the proportion of these stubborn cases is exceedingly small. We know that some adults who are the victims of constant attacks of eczema will tell you that they have had it since they were infants. The disease may become altered in character to some extent when they get older, but still it is clear that if they have been told that they had it when very young it has persisted

more or less all through their lives. As I say, in spite of all the schemes which have been suggested, I know of nothing that will ensure non-recurrence. But if we are very careful in the matter of treatment we can reduce the number of those incurable cases to a very small percentage. Accuracy of treatment in early life I believe to be the key of a great deal of the success in future. Individuals may be saved from becoming eczematous subjects in later life if sufficient care with regard to the conditions in infancy and in childhood be observed.

In the more chronic forms of eczema in infancy, when it is not expedient to be constantly giving calomel, small doses of grey powder given as an alterative every night for a time seem to modify the process. I do not think that there is any use in giving very young children alkalies, or in attempting to give them so-called specific treatment. Indeed, I know of no drug which can be called specific for the disease, therefore I think I should treat it on general principles, as I have indicated, rather than attempt a course of arsenic.

Eczema in Childhood.

Now we will pass on to a little later in life—that is to say, to a child of four, five, or six years of age. Such a child may not have had eczema as an infant. At such an age the disease is also generally of the seborrheic type. It usually begins with the formation of circular or oval patches of a rough and scaly character upon the cheeks or forehead. These patches are usually passed by as being of no consequence. But here, again, I would urge that they are of great importance, and that they should be treated. They are easier to treat when they are quiescent than when they are acute, and a relapse is much less likely if the original scaly condition be treated at the beginning. At this age the question occurs whether a child who is liable to repeated attacks of eczema of this character should go away to school, or whether such child should go to the seaside for the benefit of the general health. First, with regard to going away to school, I think children who have a tendency to this disease are far better treated at home; they are generally under the care of their mother, and are more likely to get well under these circumstances than if they were under the care of strangers. I have seen disastrous results from children with a distinct tendency to relapses of eczema going to school. With regard to the question of benefitting the general health by going to live at the seaside so as to get rid of the tendency, perhaps the patient has passed through the acute attack, but the parents have had experience of so many attacks in the past that they will ask the medical attendant if the

child should be sent to the seaside. The answer depends entirely upon the character of the eczema. If the eczema of early life has left behind enlarged glands, which it may do from the local irritation, and if there is a distinct tuberculous history in the family it is in some instances a particularly wise thing to send the young child to the seaside. I have seen many children who have lost their glandular enlargement, who have got perfectly strong and well, and who have at the same time lost their tendency to relapses of eczema by residence by the sea. On the other hand, if the attacks are inclined to be extremely acute then certainly it is not wise to send the child to the sea, especially if there is no enlargement of glands and if there is nothing to suggest the possibility of a tuberculous history.

The next point which I want to deal with is the relation of eczema to teething. It has been the custom of the profession to be perfectly certain that teething is answerable for these attacks. It has never been perfectly clear in my mind that this is true. I have seen some of the worst cases before the teething period: I have seen some of these children who have been well during the teething period and have been very bad afterwards, so I am doubtful as to what relation teething has to it. But the feeling is very strong, and I think the bulk of the profession would say that there is a strong influence in teething.

Eczema at Puberty.

There are two chief forms of eczema which may commence at puberty. One is the seborrheic form, which may commence upon the scalp and may also attack the face and other parts of the body, apparently by local infection, and the other is the form which is associated with dry skin—xeroderma. It is, as a rule, about that time of life that the first signs of eczema occur in connection with xeroderma. In early life it is hardly noticeable; the skin is usually soft, but as the child gets older, and especially when it comes towards puberty, the skin becomes dry and harsh and a particular form of eczema is associated with it. It is not necessarily the result of exposure to cold or to cold winds, but it will come notwithstanding every possible care when the child is not exposed to bad weather. It usually attacks the flexor surfaces—the bends of the elbows and knees. This form of eczema requires rather a different kind of treatment from that which occurs in young children. It is essential that the dry condition of the skin should be treated, and this is to be done by emolient baths—that is to say, by soaking the skin in a prolonged bath, and then by softening the dry, hard parts by means of glycerine and water in the proportion of five parts of water to one of

glycerine. This should be well dabbed over the parts which are dry, and it will enable the parts which are inflamed to heal under very simple applications. If the eczematous patches are very acute, the zinc cream already mentioned, with the addition of some antiseptic, will probably be enough to heal them, but no treatment will be effective unless attention is directed to the xerodermic condition of the skin as a whole.

There is another type which at this time of life very often appears for the first time, and that is the form of eczema which alternates with nerve-attacks, more especially with asthma and with the commencement of rheumatoid arthritis. When asthmatic attacks are severe, it is not uncommon for the eczematous condition to disappear, and *vice versa* when the asthma is quieted the eczema if often bad. Again, it is not uncommon for pains in the joints to alternate with acute eczema. This group requires special internal treatment. Certain nerve-tonics, such as valerianate of zinc, small doses of quinine, and if the case is a very bad one perhaps even small doses of opium, should be given to quiet not only the asthma, but also the recurrent attacks of eczema.

Eczema in the Adult.

Now we pass to a consideration of eczema in the adult. First I would call your attention to a severe general attack of eczema in an otherwise perfectly healthy person. You may meet with an individual who has never had eczema before and he is in all respects perfectly well. He is suddenly exposed, we will say, to extreme cold. He may have ridden on the top of an omnibus and have become extremely chilled when returning home in the evening; he may perhaps have had a trifling rigor, and next day he will show signs of eczema on various parts of the body. This eczema will sometimes come out suddenly, so that in a few hours the whole of the body may be attacked by it. Especially does it attack the more sensitive and tender parts of the skin—the flexor surfaces of the arms, the backs of the legs, the chest, and the back. I have seen a person become covered all over with discharging eczema in forty-eight hours after exposure to severe cold. In such a case the patient should be put to bed and be covered over with the lightest possible clothes; his diet should be of a very non-stimulating character, without alcohol or coffee or tea; and the bowels should be opened by a dose of calomel, followed by a saline in the morning. As a remedy I know nothing which is of greater use than small doses of tartarated antimony. This is the particular form in which antimony is of the greatest possible service. It should be given in repeated

doses at first; the second dose should follow an hour after the first, and the third dose three or four hours afterwards, and following that three times a day. A thirty-second of a grain is quite enough to produce a marked effect. Here I should like to relate briefly the actual facts of a case illustrating this type of the disease. The patient was a man about forty-three years of age, in perfect health, who had never had an attack of gout in his life, who had never had rheumatism or any serious disease except the ordinary diseases of childhood, such as measles, and who had never had eczema. One day he went out for a drive in his carriage, apparently in perfect health. When he returned from that drive he told his wife that he felt ill, and thought that he had caught cold. Next day he had an acute general eczema over the whole of his body. I saw him in consultation on the following afternoon, exactly twenty-four hours from the time he went for the drive, and he was discharging practically from every part of his skin. Now, such an acute attack as that could hardly be explained, I think, by the action of microbes on the skin. I think that the only possible explanation is that it was a sudden nerve-storm, a neurosis which took this particular form. Instead of getting a sudden attack of bronchitis or of catarrh, he suddenly got a catarrh of his skin. That night he was given four grains of calomel and a saline on the following morning. At 4 p.m., or 5 p.m., a dose of a thirty-second of a grain of tartarated antimony was given, and that was repeated again in three hours. The only local treatment he had was that he was put to bed and was powdered all over with oxide of zinc and boric acid. I saw him again on the following afternoon, when there was no discharge whatever; the parts were absolutely dry, and he was covered all over with crusts and scabs as a result of the drying up of the discharge. He had had a very free action of the bowels as a result of the calomel and the saline in the morning, and in every way he expressed himself as being very much better. He went on with the antimony for four days afterwards. When I saw him again at the end of that time all signs had gone except that though there was practically nothing to be seen, he was left with the most severe irritation of the whole of the skin. That is, perhaps, one of the most troublesome things which practitioners are called upon to treat—namely, the irritation left behind from a very severe acute attack. The intense dread of another attack coming on produces a state of great nervous excitement. Though there is nothing to be seen these patients will scratch and suffer terribly from the irritation, so much so that in some cases it produces a disturbance of the nervous system almost

amounting to actual insanity. In the particular case which I have mentioned, the man's irritation was fearful, and he said that it was then worse than on the day when the attack was at its height. That was treated for weeks with all kinds of local applications, but nothing whatever did him the slightest good. Applications of weak tar and many other remedies were applied, but he did not get any relief from his itching until he went to Schinznach in Switzerland, where he had a course of baths for three weeks. He returned free from irritation.

Perhaps this is the place to emphasize the importance of the mineral water treatment in certain forms of this disease. It is not appropriate to send persons to a mineral water cure during the acute stage, nor is it appropriate to send them during the subacute stage which may follow; but it is appropriate to send them when they are left with only a neurosis as the result of it. I do not say that that is the only form of eczema which is benefited by mineral water treatment, but I think that is is one of the most important.

Eczema and Alcohol.—In connection with general attacks I think a word should be said about eczema and alcohol. I have recently had a case under my care which has brought this prominently before my mind. A man in active business had been in the habit of taking a very fair quantity of alcohol every day for a great number of years, though never in excess. He was suddenly laid up with an acute attack of eczema. He was treating himself for a length of time before he called in his medical attendant, and during that time he was continuing his alcohol. Afterwards the alcohol was stopped, and under simple treatment he got well. When he went back to his work he began to take his alcohol as before, and he had a second attack of eczema. It was then suggested to him that he should leave off taking alcohol altogether. He did so, and has not had a return since. I think the relation of alcohol to these attacks is a very important one.

Intertrigo.—The next form, which is very common, is the form known as intertrigo, the attacks of eczema which occur round the scrotum and on the inner side of the thighs and about the anus. It usually commences with a circular red patch at the upper and inner side of the thigh, and from the pressure of the scrotum against that patch a corresponding patch will come upon the scrotum. After a little time the patches will spread, and will extend backwards, and will very likely come upon the other side, until at last a red irritable patch will be formed more or less corresponding to the bathing drawers area, spreading up over the abdomen as high as the umbilicus, and then up the buttocks

behind. This is an exceedingly painful and irritable form of eczema. It usually occurs in people who take a considerable amount of exercise, and sweat freely in that part. In that case it is necessary to curtail the exercise, and not to let the patient walk too much. If the condition is very acute or very painful and there are cracks between the scrotum and the thigh, the patient should be told to rest for a time in bed. The parts should be bathed freely with an antiseptic lotion and then carefully dried, and an ointment containing a small proportion of sulphur should be applied accurately all over the parts. It is not necessary in this form to give any internal medicine. It is purely local, and requires local treatment for its cure.

Varicose Eczema.—The next form, which is exceedingly common in adults, is the form which is associated with varicose veins, namely, varicose eczema. It commences, as a rule, in a single, circular patch, which spreads at its edge. There is usually some discharge, and the part becomes exceedingly painful, and perhaps it will prevent the patient from walking. In the course of time it may lead to a varicose ulcer. The treatment is rest in bed, with the leg elevated, especially at night, and the application of an exceedingly useful preparation—namely, Unna's zinc glycerine jelly. I do not know of any application of more use for this particular form of eczema. It is made by mixing oxide of zinc, gelatine, glycerine, and water. It can be got from almost any chemist, and the way to apply it is rather important. The little cube should be placed in a galley-pot which is dry; the galley-pot is then placed in a pot of boiling water until the gelatine liquefies. As soon as it liquefies the pot should be taken out of the hot water and allowed to cool a little. As soon as it is sufficiently cool to be put upon the skin, it should be painted on by means of a large brush. It is important not to move the brush up and down and from side to side. The brush should always be laid on in one direction, preferably from above downwards, beginning with firm pressure. One single application is enough for any one area. It is not suitable if there is much discharge. The gelatine should be applied all over the vein as well as over the eczematous patch. As the gelatine is drying, a little cotton-wool should be put upon it so as to make it dry. Then the patient can put on a sock and drawers and he will remain perfectly comfortable. Usually, if the condition of the skin is not too acute, one application will last three days. It should then be taken off, without the application of water, being peeled off like a kid glove. After washing the skin with an antiseptic lotion, such as weak carbolic or tar, the gelatine should be re-applied. It is exceedingly useful, because

it enables a patient with that form of eczema to go about his business. It is also applicable to other forms or other parts of the body. It is particularly useful for the trunk, for the back, and for the chest.

Chronic Eczema of the Leg.—There is another form of the disease which is exceedingly common, which practitioners are constantly called upon to treat—namely, the small circular chronic patches which are usually seen upon the leg. A man may have a little patch which he has had for years. He may have no varicose veins, and perhaps it has been his habit every day after his bath to scratch this patch. But all of a sudden, for some reason, it becomes acute, and may spread rapidly all up the leg, perhaps also over the body. That is the form which authors have called attention to for many years, and it is one that I think is of the greatest possible importance—namely, chronic patch on the leg in middle-aged people. A serious effort should be made to try to get rid of the patch. I saw a practitioner to-day who had got an extremely irritable patch about two inches above the outer side of his ankle. He told me that he had had it for years, and that he was constantly rubbing it with the other leg, or he scratched it after his bath. I put the drugs which are efficacious for it in the following order: salicylic acid, resorcin, pyrogallic acid, and chrysarobin. These are used in the form of an ointment. I should begin with salicylic acid, 10 grains to the ounce. If that failed I would combine resorcin with it, 15 grains to the ounce. If those two drugs failed I would use pyrogallic acid ointment, five or six grains to the ounce. If, after making the pyrogallic acid stronger it still failed, I should try unguentum chrysarobini of the British Pharmacopeia, but of half strength. The ointment requires to be well rubbed in, and a little should be left on the surface, and the parts should be covered with linen and a bandage should be applied. I must leave out many things, because time will not permit me to deal with everything.

Eczema at the Menopause.

Let us now pass to eczema at the change of life. There are two special forms of eczema which occur at the change of life—and I am taking what I consider to be the commonest, those which come most before practitioners. The two forms at this stage are acute eczema of the head and face, which Jameson says are 75 per cent. of them. As regards that particular type, it comes at the change of life—that very variable period which may extend almost to any length of time. We do not know exactly when the nervous influences of change of life begin; they may

begin as early as at the age of forty years or even earlier. In those women who have had their ovaries removed all the phenomena of change of life are produced prematurely. I have recently seen a woman of only twenty-six years of age, who has had both ovaries removed, who has had all the phenomena of change of life just as if she were forty-eight or fifty years of age, and who is suffering from the skin troubles associated with that period. There is usually considerable flushing, sweating, and other nervous phenomena, headaches, and disturbances of the digestive tract—dyspepsia and constipation. A spare woman at that time of life suddenly begins to flush in the face, perhaps after taking a meal; later the disorder becomes a little more acute; she gets an acute eczema of the scalp and it spreads down all over her face. For that condition there is no drug or combination of drugs as far as I know which is of such service to relieve the symptoms, not only the eczema, but all the symptoms mentioned, as ichthyol. If it is used in the right way it is an invaluable drug, and this is one of the diseases in which it is of the greatest possible use. It is a nasty-smelling drug, therefore every attempt should be made to disguise the odor. If it is given in the form of Burroughs & Wellcome's tabloids, which are covered with sugar, there is no difficulty on that score. It can be given in tabloids covered with keratin, which does not dissolve until it gets into the intestine, the result being that the patient does not get eructations of the ichthyol. The doses should be two and a half grains to begin with after each meal. At the end of two or three days it should be increased to five grains, then to seven and a half grains, and then to ten grains. If the patient tastes it much the stomach has got more than it can digest. In that case the dose should be cut down a little. But the effect of the drug in clearing away the symptoms is very extraordinary.

With regard to local treatment, this form of eczema which occurs at the change of life requires rather more active treatment than is needed at any other time. Such cases usually bear fairly strong applications of sulphur and resorcin.

The other form at change of life is the very acute eczema which occurs about the vulva and anus.

Eczema in Old Age.

There is a particular form of eczema in old people which is very serious. First of all, as the result of enfeebled vitality, old people get an atonic condition of the skin, and with this a form of chronic eczema with short acute exacerbations which does not disappear in the way in which it does in earlier life. In the aged

it may worry the patient nearly into madness by the constant irritation, which, in Macbeth's phrase, "murders sleep," prevents the patients from taking their food properly, and so wears them out. Professor Kaposi has called special attention to this matter of interference with the taking of nourishment. He says that the disease produces a vicious circle in this way: As the result of constant irritation and inflammation of the skin there is a reflex irritation of the intestines which prevents the food from being properly digested. The action of the bowels being irregular it reacts upon the condition of the skin; there is thus a reflected condition from one side to the other. Whether it is absorbed from the skin and so into the blood it is impossible to say, but at all events their sufferings reduce these unfortunate people to the most dreadful condition, and it is not at all an uncommon thing for old people to commit suicide on account of their eczema. I have met with several cases of the kind. There is one drug for it, and only one as far as I know, and that is opium. As some philosopher has said, it is the drug of the aged, and we must not be afraid to use it. It is too much the fashion nowadays to be afraid of opium. If it is given at the right time it is one of the most valuable remedies, and the right time is past middle age. If aged persons do acquire the opium habit what harm is this likely to do them? They have not long to live in any case, and the drug may make their few days less evil than they would otherwise be. I have recently had a most striking case of a very old man who was brought up to me from the country by his medical attendant. The man's life is intolerable. What is to be done for him? I have had a letter from the medical man, saying: "The remedy which you have given to my patient is of the greatest possible assistance." It was one-third of a grain of opium three times a day. He has taken it for some weeks; and if he continues to take it to the end of his life what harm can it do him? If it interferes with the action of the bowels that effect can be counteracted by aperients. If we cannot cure the disease it is surely something that by means of opium we are able to give the sufferer relief from a condition which makes his life a burden to him.

—*The Lancet.*

PRACTICAL FOOD PRESCRIBING.

By Floyd M. Crandall, M.D., of New York,

Adjunct Professor of Pediatrics in the New York Polyclinic; Consulting Physician to the Children's and Infants' Hospitals.

In presuming to add to the long list of papers upon infant feeding, I disavow at the outset any claim to a new method. I believe, however, that some phases of the subject can be presented more clearly than they have yet been, and that a method already devised may be made still more simple, so simple in fact, that any practitioner can use it without learning complex methods or consulting text-books and formulas. I have tried to put theory aside and tell *how*, not *why*.

The knowledge required by the practitioner to become a good infant feeder is considerable and may be classified as follows: (1) A knowledge of breast milk; (2) artificial foods, their chemical and physical composition; (3) good cow's milk and how it is to be secured; (4) the differences between cow's milk and breast milk; (5) the modifying or adapting of cow's milk to each individual infant; (6) the character of the food required in health and disease.

Breast Milk.—The proposition that the child's natural food should be the standard by which to judge artificial food is too rational to require discussion. Breast milk, therefore, has been universally adopted as that standard. But it may be said that there is no standard for breast milk, for no two samples are precisely the same and no two chemists give exactly the same analyses—true as regards minute percentages, which means that there is no one strength of food provided by nature for every infant; untrue as regards the fact that all breast milk consists of fat, milk sugar, proteid, salts and water. Although there are some who differ, the majority of authorities still give the following as the composition of average breast milk: fat, 4 per cent.; sugar, 7 per cent.; proteid, 1.5 per cent.

Artificial Food.—Without entering upon prolonged discussion, it is sufficient to say that all so-called infant's foods are deficient in one or all (most of them in all) of the important elements—fat, milk, sugar and proteid. Fat is almost universally lacking, but its importance is evident from its large relative amount in breast milk. Not only are the foods lacking in chemical composition, but they are in large measure derived from vegetable and not from animal sources. The organs of the infant were not designed to digest vegetable substances.

Diluted condensed milk always produces rickets if its use is prolonged, for it is deficient in fat and proteids. A dilution of 1 in 12,

the one most commonly used, contains but one-eighth the amount of fat and one-third the amount of proteid of average breast milk. Double that strength contains but one-fourth the proper amount of fat, but the sugar is so excessive as to soon upset the stomach. A food so wide of the standard is not a proper one for an infant. Notwithstanding certain drawbacks, cow's milk, properly modified, is unqualifiedly the best artificial food for infants.

Good Cow's Milk and How it is Secured.—Notwithstanding all that has been written upon the subject, the profession is not sufficiently awake to the importance of clean milk, nor has the average practitioner studied sufficiently the methods necessary to obtain it. It is the growth of bacteria that renders cow's milk unfit for food. But it is impractical for practitioners to count the bacteria or to judge of the number present by appearances. It has been observed, however, that there is a close relation between the acidity of the milk and the deleterious bacteria. "Milk with the least acid," says H. L. Russell, "as a rule is the freest from spore-bearing bacteria." Taking advantage of this fact, a method has been devised by Farrington by which the acidity of milk may be easily determined by means of alkaline tablets. They are largely used in the dairy industry. A special form of these tablets is now made for the use of physicians and are known as Ideal Milk Testers. By their use the acidity of milk may be quickly tested, and its safety as a food may be quite accurately judged.

One of the most important details in the handling of milk is rapid cooling immediately after milking. It is the belief of many competent observers that Pasteurizing is not necessary when adequate precautions are taken against the entrance of bacteria, and the milk is immediately cooled below 60° F., and not allowed to rise above that temperature. In milk that is immediately bottled and cooled the cream will rise almost completely in four hours. The milk of several cows is better for an infant than that of a single cow, for it will vary less in its composition from day to day.

Milk should be sterilized only in rare instances. It is not necessary to here discuss the objections to sterilization. Milk should be Pasteurized when there is the slightest doubt as to its cleanliness, and when it cannot be kept below 60° F. Pasteurizing is designed to accomplish one result and one alone—the destruction of bacteria. It does not render the milk more digestible, nor diminish in the slightest degree the necessity for modifying it. Neither will Pasteurizing destroy poisonous products which have already been formed. It is infinitely better to prevent contamination by proper methods of production and handling than to try to prevent the results. Under present conditions, however, Pasteurizing is often a necessity and has saved thousands of infant lives.

Breast Milk and Cow's Milk.—The proteid of cow's milk is from

two to three times greater than that of breast milk. In modifying cow's milk, therefore, the proteid must be reduced by diluting the milk. This reduces the fat and sugar also. Hence fat and sugar must be added. The theoretical problem is simple: Reduce the proteid by diluting the milk; increase the fat and sugar by adding those elements. This process is known as modifying, and is nothing but changing the constituents of cow's milk to make them available for the use of the human infant. Modified milk is not of any particular composition, nor is there any particular modification that suits every infant. It is simply milk adapted to each case. Misunderstanding of this point has been perpetuated by the persistance with which most writers upon feeding have used formulas supposed to be proper for different ages. Such a course has practically made modified milk nothing more than a series of mixtures. It has prevented the more general acceptance of the method, because no practitioner could remember the formulas and would not carry the books and magazines with him, to be opened and copied every time he wished to prescribe food for an infant. In the quiet of the office such formulas may be useful, but most food prescribing is done in the home of the patient.

What is needed by the general practitioner is a method by which he can successfully prescribe food without the use of books and mathematical calculations. Such a method is at hand and is almost as simple as diluting condensed milk.

Modifying Milk.—It is useless to think of milk as being of a definite composition. It is not. Some is rich and some is poor, but the top nine or ten ounces of cream and skim milk from a quart of any milk contain fat three times the proteids. The top fifteen or sixteen ounces contain fat two times the proteids. Hence between these nine and fifteen ounces, we can get fat anywhere from two to three times the proteids, which is the range in woman's milk. By using a one-ounce dipper, devised by Dr. Chapin, for removing the top milk, twenty-five different ratios between fat and proteids can be obtained from one quart of milk.

The one object in modifying milk is to obtain a mixture upon which the infant will thrive. A pediatric specialist of large experience will find such a mixture more quickly than will a general practitioner with small experience. Specialists have no secret process, however. They try combinations, just as other doctors must. If they have any secret, it is a very open one and may be thus expressed: *Begin on a weak mixture and work up to the point of tolerance.* The average practitioner does precisely the opposite. He begins on a mixture too strong, and after weeks of indigestion gradually works *down* to the point of tolerance. He is afraid to dilute the milk sufficiently at the outset.

In the modifying of all ordinary milk, it does not matter whether it is rich or poor, for cow's milk from the same source does not

often vary more than does breast milk. The ordinary infant readily tolerates some variation in both breast milk and cow's milk. If we begin with a weak preparation we find what the child can take—and that is successful feeding. We reach that practical result whether the milk be high or low in fat proteid. We give the child what it can digest and thrive on. We may do this without regard to percentages, though it is better to know as nearly as possible what the strength of each mixture is.

The following table will explain more clearly the statements regarding the proportion of fat and proteids in the upper nine or fifteen ounces of milk and cream. I am well aware that some recent experiments have shown a lower percentage in the seven-ounce cream. Below that, however, all chemists give virtually the same results. It is rare in actual practice that cream stronger than 14 per cent. is required.

The table is based upon milk containing 4 per cent. each of fat and proteid.

TABLE I.

7	ounces	top	milk	contain	16	per	cent.	fat,	4	per cent. proteid.
8	"	"	"	"	14	"	"	4	"	"
9	"	"	"	"	12	"	"	4	"	"
11	"	"	"	"	10	"	"	4	"	"
15	"	"	"	"	8	"	"	4	"	"
20	"	"	"	"	6	"	"	4	"	"

These top milks simply require diluting three to ten times. When the milk is to be well diluted, the top nine ounces are commonly required; as the dilution is reduced, twelve to fifteen ounces.

For example, dilute nine-ounce top milk to one-fourth and we have 3 per cent. fat and 1 per cent. proteid. Dilute fifteen-ounce milk to one-half and we have 4 per cent. fat and 2 per cent. proteid. For a young infant, dilute nine-ounce top milk eight times and we have 1.5 per cent. fat and 5 per cent. proteid. With the same dilution, if we take off two ounces less (seven-ounce top milk), we have 2 per cent. fat and the same proteid. Take two ounces more (eleven-ounce top milk) and we have 1.25 per cent. fat and the same proteid. We thus regulate the proteid by diluting; the fat, by the amount taken from the top.

Simply divide the figures of this table by the number of times the milk is diluted and the percentages of fat and proteid in the mixture are known. The claim is not made that this will result in the same absolute percentages with every milk. No modification can possibly do that, unless the quality of the milk is known. It will, however, be as accurate as any other method of home modification and will be sufficiently close for ordinary cases. Systems of formulas based upon average milk are certain to fail in many cases because all milk is not average. While it is desirable that

the practitioner should know just what percentage the infant is getting, he can prescribe satisfactorily if he will but begin low and work up slowly by taking gradually less from the top of the milk or diluting it less, thus changing the fat or proteid as he desires.

If the whole amount of top milk is not required, it should still be dipped off. The portion not required may be returned to the bottle. For example, if the child is to have twenty-four ounces of food, of which one-fourth is to be nine-ounce top milk, we use six ounces of the latter and return three to the bottle. This point must be carefully explained to the mother, or she may take off but the six ounces required, thus increasing the amount of fat by 50 per cent.

The Sugar.—Having obtained the requisite percentage of fat and proteid, we must add sugar. The accuracy of the following figures is evident at a glance:

TABLE II.

1	part	sugar	to	20	parts	food	adds	5	per cent.
1	"	"	"	25	"	"	"	4	"
1	"	"	"	33	"	"	"	3	"
1	"	"	"	50	"	"	"	2	"

This renders the problem very easy, but still easier is the fact recently pointed out by Holt, that for mixtures below 2 per cent of proteids (those less than half milk) one ounce of sugar to twenty ounces of mixture, with the sugar already in the milk, will give a total of from 6 to 7 per cent. of sugar. These are the percentages required in almost every formula for the first ten months.

An ounce measure will hold two-thirds of one ounce of milk sugar by weight. If measured by a tablespoon, two level tablespoonfuls of granulated sugar or almost three tablespoonfuls of milk sugar equal one ounce. Milk sugar should be used when possible. When cane sugar is used, the percentage should not be as great as for milk sugar, for the child does not usually digest it as well.

Diluent.—Three forms of diluent are in common use, boiled water, plain gruel, and digested gruel. There has been more discussion on the subject of diluents during the past two years than upon any other question in infant feeding. Some strongly oppose the use of anything but water, using chiefly the argument that in employing a gruel, we are introducing an element into the food not found in breast milk. This argument loses its force when we remember that in the nitrogenous elements of cow's milk we have substances not found in breast milk. The decision should be based upon experience rather than upon theory. If gruels aid in digesting the proteids of cow's milk, no theory should be allowed to prevent their use. My personal experience is that many chil-

dren do perfectly well with water as a diluent, while others digest better when a predigested cereal is added. Digested gruels are certainly more effective than plain gruels. They are certainly now used much more largely than they were a few years ago by nearly all leading pediatric practitioners. These gruels are made from oatmeal, rice, barley, or wheat flour. A heaping tablespoonful is made into a gruel with a pint of water by boiling for fifteen minutes. The gruel is allowed to cool to about 130° F., when a teaspoonful of Cereo is added, which converts the starch into absorbable dextrin and maltose. Sometimes one cereal agrees with an infant better than another. The object of the digested gruels is not so much to add nutriment to the food as to render the caseine more digestible.

Percentage Feeding.—By this term we mean nothing more in ordinary food prescribing than a method of measuring the strength of our mixtures. In laboratory feeding alone, do we write our prescription in percentages. In home modifying we write our prescription as a formula, but we do not know what we are giving unless we know its percentage strength. It is the only means of accuracy. Still percentage feeding has been made an unnecessary bugbear to most physicians, who regard it as an intricate and cumbersome contrivance.

By the method of modifying just described, we can readily obtain any percentages, if we wish to begin with a percentage prescription. As the ordinary range of top milk required is between 8 per cent. and 12 per cent., we can take three items from the table already given as a working table, as follows :

TABLE III.

9	ounces	top	milk,	12	per	cent.	fat,	4	per cent. proteid.
11	"	"	"	10	"	"	4	"	"
15	"	"	"	8	"	"	4	"	"

These few numbers are all that are necessary to enable one to obtain a given strength of milk. The one source of error is the varying strength of different milks and that applies to every method of home modification when we try to make a mixture that will contain definite percentages.

Suppose we wish to make a mixture containing fat, sugar and proteids in the proportion of 4, 7, 2. To get 2 per cent. of proteid, we must divide the 4 per cent. proteid of top-milk by two. We then require a top milk containing twice the amount of fat desired, or 8 per cent. This we obtain by taking fifteen-ounce top milk and diluting it to one-half. That is, we divide the proteid by two and multiply the fat by the same number. Suppose we wish a mixture of 2, 6, 0.8. To obtain 0.8 per cent. of proteid from 4.0 per cent., we divide by five and must, therefore, take a top milk con-

taining the fat five times as strong, or 10 per cent. Take, therefore, eleven-ounce top milk and dilute it to one-fifth. The sugar in each case should be one ounce to twenty ounces of the mixture.

I have purposely refrained from giving formulas. They are a detriment and a drawback to the practitioner and serve no useful purpose in ordinary home prescribing. They are useful for reference in cases of difficult feeding and may be found in abundance in the text-books of Rotch and Holt. For ordinary practice a less cumbersome method is necessary.

Character of the Food Required.—The policy of beginning feeding with a weak mixture should not be misinterpreted. The infant should not be kept on such a diet. The strength should always be slowly but steadily increased. On the second day of life an infant can usually take nine-ounce top milk diluted eight times, to be increased after the fourth day. For an older child nine-ounce top milk may be diluted from five to seven times at the outset. One important fact has been demonstrated by experience—few children under six months can take cow's milk in the strength of average breast milk.

Having found a satisfactory food, it is not advisable to change upon slight provocation or try to meet every little symptom by changing the formula. If the child becomes acutely ill it is best to dilute, so as to reduce all the elements. If the illness is indigestion or diarrhea, stop milk at once and completely. Roast beef is an excellent article of diet for healthy adults, but very inappropriate when they are suffering from vomiting or diarrhea.

Summer diarrhea should not be considered a simple indigestion, but a poisoning by bacteria which thrive particularly well in milk. Even in simple indigestion, it usually saves time and trouble to stop the milk for a few feedings and give broth or digested gruel, just as one would stop the ordinary diet of an adult. Restlessness at night is commonly due to indigestion, and may frequently be cured by making the last feeding of digested gruel.

Chronic indigestion, with beaded ribs and sweating of the head in sleep, suggests rickets and indicates more fat and perhaps proteid.

Painful joints and purple gums suggest scurvy and indicate a diet of fresh, unheated milk with, perhaps, beef-juice and orange-juice. Eczema in young babies is sometimes relieved by reducing the fat. Constipation with hard, dry stools may sometimes be relieved by increasing the fat, but cautior should be used against increasing it excessively. Colic, flatulence, and restlessness are an indication for the reduction of the percentage of proteids.

Regurgitation of the food, with perhaps small frequent passages, suggests excessive fat and indicate its reduction. Green, acid stools, with perhaps gas and colic, suggest an excess of sugar.

Curdy stools call for more dilution of the top milk. Foul stools call for bowel washing and reduction or stopping of the milk.

It is rare that symptoms of indigestion can be completely relieved by reducing any single element. It is usually best to reduce all for a time and slowly work up, using particular care with reference to the element that is apparently the offender.—*Medical News.*

REMOVAL OF THE CANCEROUS UTERUS.

A. Funke (*Munch. med. Woch.*) discusses fully the methods of removing the uterus and adjacent parts for carcinoma and sarcoma, and shows that he has better results with a combined abdominal and vaginal operation, both as regards immediate results and the risks of recurrence. He publishes nineteen cases (his second series) in which he employed this procedure. In 1899 he operated on the first nine, losing two directly, and two from recurrence later; while of the remaining ten operated on up to March, 1900, he lost one directly, but has not discovered recurrence in any. The technic of the operation is as follows: He first opens the abdomen, ligatures the ligamentum infund. pelv., divides it, thus laying the broad ligament open. The two portions he then pulls as far apart as possible, and divides the posterior one. He then frees the ureters and vessels, and removes as much of the cellular tissue as can be seen, together with the lymphatic glands. He next ties the uterine arteries at the level of the internal os, and dissects downward until he comes to the horizontal portion. This he ties again, either high up or low down according to circumstances. He removes all glands that are still attached to the uterus, and then proceeds to reunite his peritoneum, and closes his abdominal wound. The patient is now placed in the lithotomy position, and he incises the vaginal vault, and opens the vesico-uterine fold, a proceeding which, he claims, is extremely easy, as the bladder is absolutely freed by the abdominal proceeding. After applying sponges on holders, he thoroughly examines the condition of the tissues, now exposed. According to the condition, he cuts away more or less of the peritoneum and other tissue at the floor of the pelvis. The vaginal wound is now completed, and the uterus and adherent tissues delivered through the vaginal wound. He claims that by this operation the risk of septic infection is not greater than by a single abdominal or vaginal operation, and that it allows a very thorough clearing out of the infiltrated portions of the pelvic tissues.—*British Medical Journal.*

DOMINION MEDICAL MONTHLY

AND ONTARIO MEDICAL JOURNAL

EDITORS:
GRAHAM CHAMBERS, B.A., M.B. WALTER McKEOWN, B.A., M.B.

ASSOCIATE EDITOR:
GEORGE ELLIOTT, M.D.

Address all communications to the Publishers, THE NESBITT PUBLISHING COMPANY, Limited, 44 Adelaide Street West, Toronto, Canada.

VOL. XVI. TORONTO, JUNE, 1901. NO. 6.

A STARTLING INNOVATION.

A recent issue of the *Ontario Gazette* contains a notice of incorporation of a company with a very large authorized capital for the purpose of manufacturing and pushing the sale of a compound which has already been for some time on the market, and is designed, we believe, to compete with or displace some or all of the numerous preparations of cod-liver oil with which we have become familiar through the medium of large lettered pictorial advertisements. The formation of such a company is not extraordinary. Every issue of the *Gazette* contains some such notice. Nothing, in fact, is commoner in the *Gazette* notices, except, of course, the appointment of coroners; but interest attaches specially to this particular company by reason of the personnel of its directorate. Several of the directors are well-known medical men practising in Toronto, and all hold official positions on the medical teaching bodies of the city. Their professional standing is, therefore, high—necessarily so, because in their official capacities as teachers they must inculcate ethics as well as science, and therefore their action in anything professional may be safely taken as a guide and standard of action by the general medical body of the Province. We have been informed that the use of their names has not been authorized by the gentlemen named on the directorate

and we can readily believe it. If this be so, in view of the wide publicity given to the company through the drug journals and daily press, we think that the promoters should be brought to task. If, on the other hand, these gentlemen are regularly elected directors of the company, it is to be hoped that when more is known of the proposed company it will be found that there is something more than mere commercialism which has induced men of such standing to ally themselves publicly with a proprietary remedy.

Leaving aside the case in point, we believe that under no circumstances whatever should a physician be financially interested in any remedy he may be called upon to prescribe. There can be no question that, even should his financial interest not influence his decision and action, it will, at least, tend to destroy the confidence which should always exist between the physician and patient. In this materialistic and sceptical age it would be impossible, once patients conceived the idea that physicians were interested in the sale of the ingredients of their prescriptions, to convince them otherwise than that the profit to be realized was of as much importance, if not more, as the interest of the patient.

RACE REGENERATION.

A French count, recently deceased at Rouen, has left a fund of ten million francs for the purpose of each year bonusing to the extent of $20,000 the couple of the greatest stature, married in that district. His idea was to increase the average height of the inhabitants and probably to ultimately breed a race of giants. What object is to be served by the fulfilment of this ambition does not appear. We do not think that as a class giants are held in very high regard, most of whom we have read in our story books were bad giants—in fact, we do not remember ever hearing one of the genus spoken kindly of, with the exception of one whose name is never mentioned, but who was young, who took a sleep and awoke refreshed. This young gentleman seems to have been in high fettle at that particular moment, but what kind of man he was before and after, we know not.

The count thought the best way of encouraging what has been quite properly spoken of as an "infant industry," was by the granting of a large marriage gift to couples of extraordinary stature, believing that giants, like poets, are born and not made, but had the count been familiar with the results obtained from the administration of cardeine, cerebrine, and various other extracts ending in -ine, he might have seen fit to expend some of his wealth upon the elaboration of an extract of the pituitary body for the purpose of feeding it to infants or young adults likely disposed to enter upon a giant career. Twenty thousand dollars would buy a lot of extract. Subjects for experimentation could be got cheap and even if no results were obtained, he would be no worse off than will his fund be should the first recipients of his bounty fail to produce any issue, giant or otherwise.

FACTORY INSPECTION.

A constantly increasing proportion of the population spend one-third to one-half of their daily lives within the walls of a factory. Every year a larger number of girls are so employed, many of whom commence work at a very early age. Under the most favorable circumstances, the confinement, hurry, excitement and noise incidental to most factory occupations must have a depressing effect upon their general health. This, in a vague way, is understood and realized by both employers and employees, but unfortunately nothing more is insisted upon by them than that the factory be kept warm and comfortable.

In order to secure proper lighting, ventilation, and plumbing, factory inspectors have been appointed under the control of the local government and the municipalities. We do not know whether the number of inspectors appointed is insufficient to permit of regular and efficient inspection of the great number of places coming under the Act, but if so we cannot congratulate them upon the manner in which their duties are performed. Many employees are forced to work entirely by artificial lights at trades which require the constant use of the eyes. Over-crowding is the rule rather than the exception, especially in the clothing trade, and the

only ventilation obtainable in most cases is from windows which even when open produce drafts, but in cold weather are generally kept closed with the idea of reducing the coal bill. The lavatory arrangements are in many cases disgraceful. Places now used as factories were never built for such purposes, and when the closets were put in they were shut off from the rest of the room by a simple board partition, which likely as not does not even run to the ceiling.

The large proportion of the population now employed in workshops of various kinds makes it absolutely necessary in the interests of the public health that the conditions under which they work should be as favorable as possible. We regret that such is not now the case.

TORONTO UNIVERSITY ALUMNI.

The second annual dinner of the Alumni Association of Toronto University was held in the gymnasium on June 7th. The attendance was not nearly so large as at the first dinner, nor was there anything like the enthusiasm which characterized that function. The only event noteworthy was the speech of the Chancellor of the University, Sir W. R. Meredith, which was certainly vigorous and to the point. The Chancellor has apparently not a very high opinion of the Government's conception of its duties towards the Provincial University, and does not hesitate to say so. The whole speech had a marked fighting note, and it is evident that the results obtained by the very large deputation of graduates which waited upon the Premier last winter have been distinctly disappointing. Considering the circumstances under which the speech was delivered it seems to be a call to arms in defence of the State University of the whole graduate body. This latter has become as a result of the formation of the General Alumni Association and of local associations, a very powerful and influential organization. The very existence of Toronto University, according to the Chancellor, as a State institution is dependent upon increased financial aid. The Government says increased aid is dependent upon public opinion, which has not been sufficiently educated to appreciate the

necessity of more liberal appropriations. The Chancellor, on the other hand, backed by the graduates, says the people of the Province are perfectly willing to pay whatever is necessary to keep the University in the front rank, and that the difficulty is not with public opinion, but a lack of courage upon the part of the Government. The result of this well-defined issue will be interesting.

CANADIAN MEDICAL ASSOCIATION.

From what one can learn the Winnipeg meeting of this Association promises to be one of the best ever held. The railways have granted a single fare for the return trip, with the additional privilege of a single-fare rate from Winnipeg to any point in Manitoba, the North-West, British Columbia or North Dakota after the meeting. This, of course, will make a large attendance certain.

The address in Medicine, by Dr. J. R. Jones, Winnipeg; in Surgery, by Dr. O. M. Jones, F.R.C.S., Victoria, and in Gynecology, by Dr. Thomas S. Cullen, of Johns Hopkins, make a nucleus for the programme that will indeed be hard to beat.

In addition to these the following have promised to contribute to the programme: Drs. Gilbert, Gordon, John Hunter, B. E. McKenzie, D. J. Gibb Wishart, G. Silverthorne and G. H. Burnham, of Toronto; W. S. Muir, Truro, N.S.; Lapthorn Smith, Montreal; A. Armstrong, Arnprior; I. C. Mitchell, Enniskillen; Prof. Russell, of the University of Wisconsin; H. M. Bracken, the Health Officer of Minnesota; F. J. Shepherd and Richer, Montreal, and L. H. Warner, of New York.

Judging from the foregoing list, which has been supplied to us by the secretary, the scientific part of the programme will be almost equal to the social part, and from what little birds tells us, visiting members may look forward to a rich treat.

The Secretary, Dr. F. N. G. Starr, Biological Building, Toronto, will be glad to furnish particulars to any intending to be present.

News Items.

SMALLPOX has reappeared in Winnipeg, Hamilton, and Toronto.

DR. BRUCE L. RIORDAN attended a meeting of the Railway Surgeons of Milwaukee.

THE Montreal General Hospital had nineteen cases of typhoid during the month of May.

DR. A. DE MARTIGNY has returned to Montreal from Atlantic City, fully recovered from his recent illness.

THERE were 2,427 deaths recorded in Ontario for the month of April, 236 being set down to consumption.

DR. JOHN MCCRAE has been appointed assistant resident pathologist to the Montreal General Hospital.

THE British Columbia Legislature has passed an Act to regulate maternity boarding houses and infant children.

DR. GORDON BELL, Winnipeg, has been appointed pathologist and bacteriologist to the Winnipeg General Hospital.

DR. ALLEN BAINES attended at the meeting of the American Pediatric Society at Niagara Falls, N.Y., on the 28th ult.

TWO graduates in Arts of Toronto University were prize winners in the final McGill medical examinations this year.

DR. J. E. TREMBLAY, coroner, magistrate and medical officer for the Canadian Labrador, is spending a holiday in Montreal.

DR. ALLEN BAINES attended the annual meeting of the American Pediatric Society at Niagara Falls, New York, on May 27th-29th.

NINETY-ONE graduates in medicine received their diplomas at McGill this year, one of the largest classes in the history of the institution.

DR. F. J. SHEPHERD, Montreal, attended the annual meeting of the American Dermatological Association at Chicago, acting in the capacity of president.

DR. T. G. RODDICK, M.P., attended the meeting of the Medical Council and addressed that body on the subject of Dominion Registration.

THE Convent of the Precious Blood, at Notre Dame de Grace, behind Mount Royal, Montreal, will be converted into a hospital for incurables.

CONVOCATION was held at Trinity University on the afternoon of the 31st of May, and at Trinity Medical College on the following afternoon.

THE United States authorities are excluding consumptive immigrants, and similar representations have been made to the Dominion Government.

DR. GRAHAM CHAMBERS has been appointed Professor of Dermatology and Assistant Professor of Clinical Medicine at the Women's Medical College.

A NEW society has been formed in New York City to be called The New York Society of Graduates and Alumni of Queen's University, Kingston, Ontario.

OTTAWA wants a new contagious diseases hospital badly, but apparently a spot cannot be found for its location. How would a house-boat on the river do?

DR. F. FLEURY, Montreal, has been appointed Superintendent of the Notre Dame Hospital in place of Dr. A. Ethier, who has resigned after a service of five years.

MR. CHARLES F. LINDSAY, of McGill University has been awarded a $500 fellowship at Johns Hopkins University. He is a demonstrator at the former in chemistry.

DR. JASPER HALPENNY has received the appointment of medical superintendent of the Winnipeg General Hospital, succeeding Dr. Chestnut, who has resigned.

DR. JAMES LITTLE, B.A., who has been a member of the hospital staff of the Winnipeg General Hospital for the past year, has commenced practice in Brandon, Man.

THE new asylum at Longue Point, Quebec, has been completed after four years' work. It has accommodation for two thousand patients. Two hundred nurses are on the staff.

THE bill to incorporate the Canadian Nurses' Association was given the six months' hoist at the close of the last session of the Dominion Parliament.

THE medical men of Three Rivers, Que., and vicinity, have organized a medical society. Dr. L. P. Normand is the first president, and Dr C. E. Darche, secretary.

DR. DONALD HINGSTON, son of Sir William Hingston, has been appointed medical superintendent of the Hotel Dieu Hospital, Montreal, in succession to Dr. St. Jacques, who has resigned.

THE Montreal Foundling Hospital looked after 173 babies last official year. Nearly one-half of the babies admitted during the year were under one week old. One hundred and six died during the year.

DR. LAPTHORN-SMITH has returned to Montreal after attending the annual meeting of the American Gynecological Association at Chicago. Next year this society will meet in Atlantic City, and the following year it is expected that it will be in Montreal.

THE Ontario Medical Council held its annual session in Toronto during the week of Monday, the 10th of June. The annual by-law for the two-dollar assessment passed by a very large majority, all but three voting against it; therefore it will stand for the present.

THE *Journal of the American Medical Association*, editorially, on the 25th of May, comments on the statement of His Excellency, Lord Minto, that Canada showed a death-rate of one-fifth of all deaths for tuberculosis. It would be interesting to know the authority for such a statement.

LAST year was the most successful one in the history of the Montreal Western Hospital. The debt was reduced from $10,000 to $8,000, and many new improvements made. At the out-door department, 3,500 patients received treatment, as compared with 2,457 for the previous year; in the in-door department 396 were treated, as compared with 380 the preceding year, and 133 private patients against 162 for the former year. The receipts amounted to $9,381.91, and the expenditure, $8,944.79.

THE Montreal General Hospital will in the future charge ten cents per bottle for medicine in the out-patient departments for the first week, and five cents for each week thereafter. This hospital is in arrears to the extent of $25,000, and the Committee of Management have determined to put a stop to the annual deficits.

THE following graduates of the Manitoba Medical College have been been appointed house surgeons at the Winnipeg General Hospital, term of service commencing June the 1st, and extending for one year: Drs. C. H. Vrooman, R. H. Richards, C. Woollam, C. McLellan, J. R. Thompson.

DURING the last official year of the Montreal General Hospital 2,823 cases were treated to a conclusion in the wards, 154 remaining in the hospital at the end of the year. There were 250 deaths. In the out-door departments 41,606 were cared for, an increase of 4,233 over the previous year.

THE newly incorporated Rockfeller Institute of Medical Research is said to have chosen McGill as one of the universities for carrying on this work. $500,000 will immediately be placed at the disposal of the Institute, which may eventually be increased to $1,000,000. McGill will have the proceeds of $50,000 to begin with. Lucky McGill!

THE Dominion Government has organized health boards in connection with public works going on throughout the country. An inspector has been appointed who will report all cases of contagious diseases to the Minister of Agriculture, or to the secretaries of the boards of health in the provinces wherein these works are being constructed.

MEDICAL COUNCIL EXAMINERS FOR 1901-2: Dr. H. B. Anderson, Toronto, Anatomy, descriptive; Dr. W. G. Anglin, Kingston, Theory and Practice of Medicine; Dr. R. N. Horton, Brockville, Midwifery, Operative and other than Operative, and Puerperal Diseases; Dr. A. Primrose, Toronto, Physiology and Histology; Dr. J. W. Edgar, Hamilton, Surgery, Operative and other than Operative; Dr. W. Gunn, Clinton, Medical and Surgical Anatomy; Dr. Graham Chambers, Toronto, Chemistry, Theoretical and Practical, and Toxicology; Dr. J. W. Schooley, Welland, Materia Medica and Pharmacy; Dr. J. H. McLellan, London, Assistant Examiner to the Examiner on Surgery, Diseases of Women; Dr. A. Haig, Kingston, Assistant Examiner to the Examiner on

Medicine, Diseases of Children; Dr. G. H. Field, Coburg, Second Assistant to the Examiner on Medicine, Pathology, Therapeutics and Bacteriology; Dr. E. T. Adams, Toronto, Homeopathic Examiner.

Abstracts

DUODENAL ULCER.

Duodenal ulcer is not as yet sufficiently recognized, nor is it easy to state exactly what its frequency may be, for in very many cases it is entirely latent or else is confounded with gastric ulcer. It is, however, interesting and important to diagnose its existence, for then rational treatment, both medical and surgical, is much more possible, and offers the chance of saving many patients who are otherwise certain to succumb. Ladeveze has recently considered this subject (*Journ. de Med. et de Chir. Pratiques*), from several points of view, and records seven cases of simple ulcer treated by medical and surgical methods, and in which a cure was obtained. It is hard to say what may be the cause of duodenal ulcer, and it appears in many instances to bear some relation to some infective disease. There are usually three main symptoms—intestinal hemorrhage, pain, and digestive disorder. The hemorrhage occurs in three varieties: First, a fulminating or fatal form; there are all the symptoms and signs of severe internal hemorrhage, and on *post-mortem* examination the intestine is found filled with blood. Secondly, an acute form, in which the hemorrhage, though not so extremely intense, keeps on recurring and exhausts the patient. Thirdly, a chronic form in which the hemorrhage is more or less continuous, and in which the author says it may not be noticed. Pain is remarkable by its regularity, both in situation and intensity. The writer quotes Bucquoy as stating that it appears most usually two or three hours after a meal, and its situation is within a space bounded by a line from the umbilicus to the margin of the false ribs and along the internal border of the rectus muscle and below the anterior border of the liver. But its radiations are so variable that it is difficult to be precise as to its situation. Disorders of digestion are also variable, both in their nature, their intensity, and their evolution. They resemble rather the hyperacid form met with in active ulceration, though the dyspeptic symptoms may also be similar to those met with in chronic gastric catarrh. Ladeveze considers that dyspeptic troubles are less marked than in gastric ulcer. Paroxysmal dyspnea is also stated to occur. Jaundice

not infrequently occurs as a complication. Abscess of the liver, and perforation, are complications also likely to be met with. The cases frequently terminated fatally either by hemorrhage, perforated peritonitis, or by anemia, dilatation of the stomach, and exhaustion. Cases may recur after long intervals of good health, but apparently such are more likely to be instances of a latent ulcer become active. The diagnostic signs are therefore sudden, intestinal hemorrhage appearing in the midst of health apparently perfect, recurring with more or less intensity, causing profound anemia, hematemesis either preceding or accompanying melena, pain to the right of the median line appearing three or four hours after digestion, and thr. ughout a good appetite. The best methods of treatment are to give absolutely nothing by the mouth for about a fortnight. The following nutrient is suggested: Beef broth, 140 grains; 6 eggs; wine, 20 grams; sodium chloride, 2 small teaspoonfuls. This should be beaten up for some time and injected lukewarm. The amount ought not to exceed 250 c.cm. The nutrient ought to be varied with ordinary evacuants. After a fortnight's time a gradual return to ordinary alimentation is recommended. Surgical intervention has, as already stated, been followed by good results. The writer quotes sixteen cases where gastro-enterostomy has been performed, with fourteen recoveries.—*British Medical Journal.*

THE EVOLUTION OF THE NEPHRITIS OF PREGNANCY.

In previous publications (Gaucher and Sergent *Revue de Medecine*, 1901) one of the writers has described the course of nephritis due to various poisons, and shown that these pass into a chronic state with secondary interstitial changes in the kidney, in addition to the original lesions in the secreting epithelium of the organ. In the present paper it is shown that the so-called nephritis of pregnancy passes through stages similar to those observed in other nephrites of toxic origin.

1. The nephritis of pregnancy tends to become chronic, and then presents the symptoms of interstitial nephritis. The writers assume that the albuminuria so frequent during pregnancy is the result of an auto-intoxication of pregnancy, in whose production the liver and not the kidney is primarily concerned as a rule. Though not always severe enough to produce a nephritis, the auto-intoxications of pregnancy frequently injure the kidney. Indeed on account of its toxic origin, every albuminuria of pregnancy must be held likely to produce renal lesions. Clinically there are cases of transient albuminuria, of acute nephritis, of sub-acute nephritis and of chronic interstitial nephritis. The chronic condition may

follow a single pregnancy or may result from repeated periods of auto-intoxication during recurrent gestations. "Pregnancy," says Brault, ' is, owing to a process which is not understood, one of the conditions which favors the appearance of nephritis and its advance into a chronic state. In general a first pregnancy is accompanied by albuminuria which disappears. A second follows, with albuminuria of longer duration. During the third or forth gestation the nephritis becomes permanent, though often, in spite of repetitions, complete recovery occurs."

Often albuminuria is the only clinical sign. In other cases a slightly febrile commencement may be followed by general transient edema; the urine is reduced in quantity and increased in specific gravity, albumin is present, and casts may be found. Repeated pregnancies accompanied with nephritis of this kind have the same effect on the kidney as slow and prolonged intoxications by substances other than those concerned in the hepatic toxemia of pregnancy. The transition into the chronic state is marked by the appearance of the symptoms always associated with interstitial nephritis. The transition is sometimes abrupt, but generally occupies a period of some months, during which the disease is subacute. The appearance of the *bruit de galop*, of high arterial tension, and of cardiac hypertrophy mark the onset of the chronic interstitial disease.

2. The nephritis of pregnancy, when chronic, presents the same anatomical lesions as do other chronic nephritis of toxic origin. Interstitial nephritis implies merely the predominance of interstitial changes. The condition is a mixed nephritis, in which, in spite of its epithelial origin, the sclerotic changes predominate whatever may be the appearance of the kidney to the naked eye. The organs may be deformed and atrophied like the small granular kidney, or may be white and large, without cysts or granulations; but in either case the consistence is firm and the capsule is adherent. The heart is large, sometimes enormous, the left ventricle being most hypertrophied. Microscopic examination of the kidneys shows a multitude of areas of sclerosis. These are irregularly placed round centres formed by groups of glomeruli which are profoundly altered, some being transformed into fibrous masses, while in others Bowman's capsule is thickened and compresses the vessels within. The tubules are in parts invisible, while elsewhere they appear compressed and moniliform. In the parts less affected by cirrhosis some of the glomeruli are hypertrophied, while others are atrophied; the walls of the tubules are thickened, and their epithelium is irregular, abraided, swelled or fatty. The vascular lesions are altogether minor and secondary, and it is only in the sclerosed patches that slight periarteritis can be observed.

3. The nephritis of pregnancy is therefore, in origin, in symp-

toms, and in pathology, similar to nephritis produced by slow and prolonged intoxications, amongst which it should therefore be classed. Whatever may be the cause and the nature of the auto-intoxications of pregnancy their result upon the kidney is clear, and is similar to that seen in other intoxications. According to the severity and the duration of the poisoning the injuries to the kidney may be trivial or severe, passing or permanent. In the first case the epithelium and the glomeruli are alone affected, and they recover when the eliminations of toxins ceases. In the second case the nephritis becomes interstitial, a barrier is placed by it in the circulation, and the kidney itself becomes a cause of intoxication through failure in function.

The writers add details of several cases which they have observed clinically and pathologically.—*Medical Chronicle.*

TWO CANCEROUS GOITRES.

Maurice Petel (*Gazette des Hopitaux Civils et Militaires*) reports these cases. The first was that of a woman aged fifty-four years. Five months before presenting herself at the hospital she began to suffer extreme pain in the left side of her head and face. A short time later a swelling appeared in the left cervical region, which grew very rapidly. As long as she could remember she had had a swelling in the right cervical region, which had never caused her any trouble. The menopause made no change in the size of the tumor. At the time of her appearance at the hospital she had an enormous tumor of the neck, the circumference of which was 54 cm. The head was inclined slightly to the left. The movements of rotation were very limited. The skin was darker than normal, and there were some large veins in the lower part of the tumor. The local temperature was high on simple palpation. The consistence of the tumor was firm in general. It was irregularly tessellated. The normal parts of the neck were distinguished with difficulty. Dysphagia was pronounced. Semi-solid food could scarcely pass. There was a dry cough without expectoration. The face was congested, the eyes were brilliant, with a slight degree of exophthalmus. The pulse was 96, and intermittent. There were no cardiac murmur and no tremor. The urine was normal. The general condition was bad. Finally, in a state of advanced cachexia, the patient died. Post-mortem examination showed an epithelial cancer of the thyroid which had taken rise in an old cyst. There were secondary involvement of the trachea, esophagus, and ganglia of that region, and metastasis to the lung. The

second case was that of a woman who for a long time had had a goitre the size of a fist, which had never caused her the least inconvenience. Suddenly it began to grow, and although causing no pain the dyspnea and dysphagia were intense. Finally, the neck measured 81 cm. in circumference. The patient was not very thin, but death occurred after the cancer had been growing seven months. Autop y was not allowed. In cancer of the thyroid the general condition remains good for some time. The grave anemia of other cancers is not met with here.—*Medical Record.*

OCULAR COMPLICATIONS OF INFLUENZA.

Pechin (*Recueil d'Ophthalmologie*) records the varied and complex eye symptoms which have been described as being directly or indirectly associated with influenza, most of the lesions he ascribes to the toxins produced by the bacillus of Pfeiffer, but some symptoms, such as muscular asthenopia, are attributed to muscular fatigue.

The lids are sometimes the seat of inflammatory edema, which may be due to conjunctival or ciliary abscesses, or it may be a manifestation of inflammatory action in one of the neighboring frontal and nasal sinuses. Conjunctivitis may appear as a reflex symptom in rhinitis or ethmoido-frontal and maxillary sinusitis, and may be associated with small hemorrhages into the bulbar and palpebral conjunctiva. Numerous corneal lesions have been noted in the course of influenza, and include surpiginous keratitis with hypopyon, dendritic keratitis, keratitis punctata superficialis, parenchymatous keratitis and phlyctenular keratitis, whilst corneal ulceration may complicate the conjunctivitis of influenza during convalescence. Tenonitis and recurrent episcleritis are among diseases attributed to influenza. But of all the ocular structures the uveal tract is the most vulnerable to the influenzal poison. Iritis has not often been observed, but cyclitis, often of a curious type and sometimes associated with hypopyon, has been recorded by several observers. In the latter case the iris remains absolutely unaffected, notwithstanding the fact that the pus in the anterior chamber has been found to contain bacilli identical with those found in the bronchitic sputum of influenza. As a rule the process is persistent and painful, and is followed by loss of vision or even phthisis bulbi.

Even the lens and vitreous are not spared; cataracts have been known to develop suddenly after influenza, and acute inflammation of the vitreous and suppurative hyalitis have been reported.

There are numerous records of glaucoma having developed during or after influenza, and also of hemorrhages into the retina,

and neuroretinitis, with or without choked disc. Retrobulbar neuritis, possibly secondary to sphenoidal sinusitis, or purely a form of toxic peripheral neuritis, and sometimes followed by optic atrophy, is one of the graver complications to be on the look out for. Apart from peripheral anatomical lesions, we may find giddiness or colored vision, probably as the result of nervous exhaustion or the contamination of nervous centres by toxins. Muscular asthenopia may appear early or late in the disease, and in certain cases distinct paresis or paralysis of certain of the ocular muscles or neuralgia of the fifth nerve, have been recorded. Among rarer complications are dacryadenitis and orbital abscesses, complicated by secondary infection of air sinuses or brain.—*Birmingham Medical Record.*

THE LOCALIZATION OF BRAIN TUMORS, ESPECIALLY WITH REFERENCE TO THE PARIETAL AND PREFRONTAL REGIONS.

Charles K. Mills (*Philadelphia Medical Journal*) concludes that the diagnosis of the existence of a brain tumor can sometimes be made even in the absence of most of the general symptoms, such as optic neuritis, headache, vertigo, and vomiting, chiefly by the close study of localizing and invasion symptoms. Emotional states, even hysterical stigmata, are sometimes present in cases of brain tumor, and must not be given too much weight in differential diagnosis. Tumors of the postero-parietal region, and especially of the superior parietal lobule (parietal of Wilder), give as their most important localizing symptoms disorders of cutaneous and muscular sensibility, and especially astereognosis; other symptoms often present in such cases are the result of compression or invasion of adjoining regions. Tumors and other lesions implicating the angular gyre and the regions adjoining (the subparietal, first temporal, and medio-occipital convolutions) give as their main localizing symptoms word deafness and word blindness, with the usually accompanying speech disturbances, lateral homonymous hemianopsias, and disorders of cutaneous and muscular sensibility, including astereognosis. Just as the centres for hearing, vision, and speech are more highly differentiated in the left hemisphere, so it is probable that the stereognostic sense is more highly evolved in this hemisphere. A tumor strictly confined to the motor regions does not give objective sensory phenomena of a persisting character; the localizing symptoms of a growth so situated are motor, chiefly paralysis and monospasm, with also exaggerated deep and superficial reflexes. In tumors of the motor sub-cortex, tonic spasticity is usually a marked symptom. Paresis or paralysis and

exaggerated reflexes, with monospasm or unilateral convulsions, may also be present. Tumors of the prefrontal region, by which is meant the region entirely cephalad of the motor zone, chiefly give psychical symptoms of an especial character; when the tumor is situated on the left side, motor agraphia (or orthographia) and motor aphasia are usually present because of the compression or invasion of the posterior portions of the second frontal and of the third frontal convolutions; paralysis and other motor symptoms are often present late because of encroachments upon the motor region.—*Medical Record.*

SUPPURATIVE PERICARDITIS.

C. B. Porter (*Annals of Surgery*, 1900) has brought together fifty-one cases of suppurative pericarditis treated by operation, of which a *résumé* is given. He first considers the surgical anatomy of the pericardium, and quotes several observers to show that there are great variations in the line of reflection of the left pleura from the pericardium. In many cases the line of reflection is at or within the left border of the sternum and it would be almost impossible to tap the pericardium without wounding the pleura.

In a former paper, Porter (*Trans. Amer. Surg. Asso.*, 1897) recommended the following as the ideal method of operation. An incision is made from the middle of the sternum outwards over the fifth costal cartilage. This is followed by removal of the costal cartilage, division of the internal mammary artery between two ligatures, and pushing inwards of the triangularis sterni muscle. The pericardium is exposed, and if pus be found, is opened freely, the edges of the opening being stitched to the soft parts. Irrigation is advised as a routine procedure, and drainage is provided by two rubber tubes, one of which is passed to the bottom of the cavity.

An analysis of the fifty-one cases collected shows that twenty recovered and thirty-one died—a mortality of 60.5 per cent.

The condition was most frequently secondary to pneumonia, osteomyelitis, penetrating wounds, empyema.

The writer comes to the following conclusions: (1) Pericardotomy is indicated in all cases of suppurative pericarditis. (2) Because of the uncertain and varying relations of the pleura, and because of the anterior position of the heart whenever the pericardial sac is distended by fluid, aspiration of the pericardium is a more dangerous procedure than open incision when done by skilled hands. (3) Incision of the pericardium can be done quickly and safely by resection of the fifth costal cartilage, and in many cases under local anesthesia. (4) In many cases of serous effusion, open

incision will offer less risk and speedier cure than aspiration. (5) The method and detailed technique of the writer proposed in 1897 have been followed by the majority of recent operators.—*Med. Chronicle.*

ACUTE YELLOW ATROPHY OF THE LIVER, TERMINATING IN RECOVERY.

Albu *(Deutsche med. Wochenschrift)* reports this case which makes the eighteenth that has been published. The patient was a man of thirty-six years, with a negative past history, who, three weeks before coming under observation had become jaundiced after an emotional shock. This condition continued for some time until mental hebetude and great prostration developed, when the author was called to the case. There were then noted profound muscular weakness without any emaciation, slight impairment of the mental faculties, a temperature of 103 degrees, and slow pulse. The liver dulness was greatly decreased, extending from the sixth rib only two inches downward, there being tympany under the free costal arch. The spleen was palpable, the urine bile-stained and containing no albumin, but large amounts of indican, leucin and tyrosin. The stools were acholic. At the end of the sixth week from the first access of the jaundice the temperature stayed down permanently, the liver dulness began to increase, and the enlarged spleen receded. The patient soon regained his former strength and vigor, though the jaundice did not wholly disappear until about three months later.—*Medical Record.*

CLINICAL STUDY OF DECIDUOMA MALIGNUM.

G. Metoz (*Gaz. Heb. de Med. et de Chirur.*) (Paris Thesis.) A noticeable feature in the etiology of deciduoma malignum is that the tumor always follows pregnancy, either after normal labor or after abortion. The tumor may develop, as a rule, from four to eight months after delivery. Women attacked with the disease are usually young, the usual age being between twenty-six and forty years. Hydatidiform mole seems to be an etiological factor in the production of the tumor, forty-eight cases out of ninety-eight show this condition preceding the development of the tumor. In the case of deciduoma malignum, as in epithelioma of the uterus the tumor often reaches its full development before giving rise to symptoms. When the growth has reached a certain size so that fungous masses without consistency are developed, intense hemorrhages appear. This form of development belongs particularly to that form of deciduoma which follows abortion, or normal labor, and does not apply to those cases of deciduoma that follow extra-

uterine pregnancy. Uterine hemorrhage is the first symptom of the disease and is due to the involvement and the destruction of the vessels by the vegetating masses. The most important characteristic of the hemorrhages is their extraordinary resistance to all kinds of treatment. When the tumor follows the molar pregnancy the uterus is markedly increased in volume; when it follows abortion or normal labor, the uterus hardly exceeds in size that of three months' pregnancy. The tumor is usually smooth and regular. On vaginal examination the os is sometimes partly open and sometimes normal. The uterine cavity presents a tumor that projects but little beyond the surface and that is sometimes pedunculated. A little later in the disease metastases appear, which may involve all the organs. Among the seats of these metastases, the vagina seems to be one of the most common. Pulmonary metastases are common and are usually found at the base or at the apex of the lung. Patients thus attacked present symptoms similar to those of patients suffering from chronic bronchitis. Examination of the sputum reveals nothing characteristic. Cachexia appears early. When hemorrhages appear after a patient has expelled an hydatidiform mole the clinician ought to think of deciduoma at once. Hemorrhagic metritis and fibroma produce menorrhagia and menstrual disorders accompanied by leucorrhea but never such a profuse flow of blood as accompanies deciduoma malignum. Vaginal hysterectomy is the proper treatment of the condition.—*Philadelphia Medical Journal.*

FACTITIOUS URTICARIA AND SCLERODERMIA.

Factitious urticaria accompanies diffuse more than other forms of sclerodermia, and, like other vasomotor phenomena, has been regarded as a sign preceding actual sclerodermatous changes. Bettmann (*Berl. klin. Woch.*), gives the cases of an officer, aged 39, and a machinist, aged 26, with commencing generalization of sclerodermia. In both cases the factitious urticaria could be produced over the chest back, which are the most usual sites for the phenomena, and in these two patients were not yet affected by any obvious sclerodermia. In the officer's case, when the skin of the chest or back was lightly scratched, the lines of factitious urticaria took several minutes to come, but lasted an extraordinarily long time; on several occasions they persisted unaltered for five or six days. No factitious urticaria could be obtained on the abdomen or extremities. When treated by electricity the spot where the cathode had been placed often became red, and remained so for twenty-four hours or more; at times a localized patch of "cutis anserina" was produced instead of the redness. Other vasomotor phenomena observed in the same patient were occasional attacks

of local cyanosis and local syncope; hard swellings of a few hours' duration, which appeared without obvious cause on the feet, and did not pit on pressure; temporary, irregular, painful red patches on the soles of the feet. In the machinist the lines of factitious urticaria did not last so long as in the officer, but sometimes persisted as long as twenty hours. Féré and Lamy have already shown that the application of the cathode in electrical treatment may produce vasomotor phenomena resembling the dermographism produced by mechanical irritation. Barthélemy considers factitious urticaria to be exceptional if the stripes remain as long as eight to twenty-four hours, and he quotes Cornu's case, where they lasted two days; but a duration of six days, as in Bettmann's present case, has previously never been recorded.—*British Medical Journal.*

POST-PARTUM HEMORRHAGE.

E. S. Bishop (*The Lancet*) gives a vivid picture of this terrible accident, and lays down some very definite rules for treatment. This consists of two main procedures. First, the foot of the bed should be elevated to an angle of from 45 to 50 degrees with the floor, or we should immediately place the patient in the Trendelenburg position. Mere simple elevation of the foot of the bed is useless. By means of the manœuvre described, the venous bleeding is greatly checked. Second, external compression of the aorta should be made by applying the closed fist with its ulnar surface resting upon the aorta as it lies over the left side of the vertebral column, and just sufficient pressure should be exerted obliquely backward and toward the right as to compress the vessel against the unyielding surface beneath, *i.e.*, the spine. In this way five-sixths of the blood supply to the uterus is shut off; the remaining sixth, that which comes through the ovarian arteries, is sufficient to maintain the integrity of the uterine fibres. Enough blood will be sent to the organ to preserve its vitality, assist in the formation of small plugs in the open arterial mouths, vivify and strengthen the muscular tone, which temporarily is at too low an ebb, so that when once more the full force of the blood-current is allowed to bear upon them, the vessels shall be found closed by clot and constricted by the now firmly contracting fibres around. Pressure, as advised, should be kept up till the pulsation under the fist (at first very weak) is felt to be full and strong, and then the pressure should be very gradually lessened. During the existence of compression we can clean out the uterus, transfuse, sew up a split perineum, etc. The hemostatic measures just named are useless

so long as bleeding is going on. When once it is checked, they immediately demonstrate their value. Bishop claims that the rules he lays down are nothing but the application of common-sense surgical procedures to what is perhaps one of the most trying clinical emergencies falling to the lot of the practitioner. —*Medical Record.*

ACTION OF ARSENIC ON THE SKIN.

H. G. Brooke and Leslie Roberts (*Brit. Journ. of Dermat.*), give an account of the effects of arsenic on the skin, based on the recent epidemic of beer poisoning in the north of England. The following lesions were found: Erythemas of various kinds, mostly diffuse, and situated on the trunk and limbs. Some resembled chilblains, others erythema multiforme. The color was at first red, but afterwards changed to copper. Herpes was common and always unilateral. Pemphigoid eruptions occurred some time after beer drinking had ceased, and affected chiefly the hands and feet. Hyperidrosis was frequent. Pigmentation occurred both with other skin lesions and independently of them. The color varied from dirty-brown almost to black. The chief parts affected were the axilla, groins, and neck; the palms, soles, and face being less colored. The characteristic feature of arsenical pigmentation is the variation in tint of contiguous areas. The mucous membranes showed no coloration except a blue line on the gums. Hyperkeratosis is characteristic of arsenical poisoning, and was generally found on the palms and soles. In many cases these were covered with arsenical warts. The nails were unaffected in most cases, but in some there was increased rate of growth. The hair was unchanged. Desquamation is the rule in arsenical poisoning. Fatty degeneration affects the walls of the small blood vessels, leading to ecchymosis. With regard to the mode of action of arsenic the authors conclude that arsenic and the other members of the nitrogen group differ from all other medicaments by the fact that their action is dynamic and due to the development of active oxygen in the tissues.—*British Medical Journal.*

TUBERCULOUS PERITONITIS.

Baccarani (*Gazz. degli Osped.*) describes a case of tuberculous peritonitis in which laparotomy seemed to cure, but really left behind a stenosis of the intestine. Whether laparotomy cures by relieving pressure on the blood vessels—by evacuation of fluid—and so allowing greater absorption, or by the germi-

cidal action of the admitted light, or in some of the other ways which have been suggested, still remains uncertain. However, the view that laparotomy is a cure for cases of medium gravity is not so strongly held now as it was, and according to Boschgrevink's researches most of the cases in which laparotomy expedites the cure—and on this greater rapidity of cure most of the claims for operation now rest—are already on the way to cure, as shown by examination of the tubercle masses. According to Frank, 40 to 50 per cent. of the exudative cases are cured by operation (three years' limit), 25 per cent. of the adhesive type, and practically none of the ulcero-purulent types. On the whole, the author concludes that most of the cases with little or no fever get well without operation, and that those where fever is high and constant are in no way benefited by operation. There is a condition, however, in which operation may be useful —namely, where a stricture of the intestine due to tuberculous infiltration is present. Such narrowing is most commonly found in the ileocecal region, rectum, or last portion of the small intestine. The common symptoms are pain, severe colic, meteorism, peristalsis, prominence of right lower quadrant, and constipation alternating with diarrhea. In the ordinary cases of tuberculous peritonitis the author's treatment is of the simplest, and consists chiefly of rest in bed with tepid sponging; no external application except for special pain, when he uses a bladder of ice or opium and belladonna fomentations; no internal medicine.—*British Medical Journal.*

FATALITIES OF SPINAL COCAINIZATION.

P. Reclus *(Journal of the American Medical Association)* states that spinal cocainization now has a record of six deaths in Europe. Goilav and Jonnesco, of Bucharest, have each reported a fatality. In the former's case 1.5 centigrammes of cocaine was injected and a leg amputated. Two hours later the temperature rose to 38 degrees and 40 degrees C., pulse 125, and death occurred in twenty hours. Juilliard has also reported a death the second day after an operation for hydrocele and inguinal hernia. The autopsy showed a ruptured aneurism of the Sylvian artery. The vaso-constriction induced by the cocaine may have been a factor in the premature rupture of the aneurism. Even in Tuffier's case, in which a mitral lesion and acute edema of the lung have been assigned as the cause of death, Reclus queries whether the action of the cocaine may not have been a factor in the evolution of the edema. Heumberg has also reported the death of a man of thirty in coma fifteen days after an operation under spinal cocainization. The autopsy disclosed hemorrhage in

the cauda equina. In Dumont's case a febrile, tuberculous lad in bad general condition died two days after spinal cocainization, and no direct cause for the death could be discovered at the autopsy unless it were the cocaine. This total of six deaths to less than 2,000 applications of spinal cocainization is not an encouraging record, he remarked in the conclusion of his address to the Paris Académie de Médecine, on March 19th.—*Medical Age.*

PATHOLOGY OF HERPES ZOSTER.

Head and Campbell (*Brain*, 1900), state a typical attack of zoster arises without any obvious peripheral or central cause. It starts with a variable prodromal period, during which the temperture is raised, the patient feels ill and has more or less pain. The eruption appears suddenly, generally on the third or fourth day. It may, however, appear within a few hours of the onset, or not until the temperature falls. Second attacks are uncommon; the disease occurs more at certain periods than others, and may even occur in actual epidemics. It thus presents the main features of an acute specific disease. The pathological changes which underlie the disease have been investigated by the writers in twenty-one cases at all stages after the eruption. In cases in which the eruption was still present on the skin the affected posterior root ganglion presented inflammatory changes of varying intensity characterized by an interstitial exudation of small round cells, and hemorrhages of microscopic or macroscopic extent, the ganglion cells in the inflammatory foci showed necrotic and degenerative changes, but not chromatolysis. The changes were most marked in the dorsal part of the ganglion, and the sheath over that portion was similarly affected. If not severe, the inflammation might subside and leave no recognizable change in the ganglion, but where the eruption was of greater severity and followed by marked scarring, permanent changes occurred in the posterior root ganglion in the form of fibrous cicatrices and fibrous thickening of the superjacent capsule. In the posterior root changes take place corresponding to the lesion of the ganglion and consisting of acute degeneration followed by a greater or less degree of secondary sclerosis. Similar changes were also found in fibres of the peripheral nerves, and could be traced back to the fine twigs which

pass into the skin to supply the area over which the herpetic eruption was distributed. In two of the writers' cases hemorrhage and inflammation occurred not only in the ganglion but in the peripheral nerve in connection with it. Acute degeneration of the root fibres in the posterior columns of the cord also occurred, appearing probably about the ninth or tenth day after the eruption. The products of degeneration in the cord are cleared away more slowly than in the ganglion and nerve trunks, leaving no perceptible sclerosis, probably owing to the small number of fibres destroyed.

When the eruption extended on the arm the degenerated fibre could be traced from the root zone to the postero-external column, and along this to the nucleus cuneatus; when on the leg the field of degeneration passed into the postero-internal column, and one-half the field finally lay against the posterior median septum. When, on the other hand, the lesion involved a ganglion of the dorsal region, between the third and the eleventh dorsal, this secondary degeneration in the cord ascended a much shorter distance, the degenerated fibres occupying the root zone adjacent to the posterior horn, and diminishing in number and coming more towards the periphery of the cord before they entirely disappeared. In zoster of the trigeminal similar lesions were found in the gasserian ganglion, and secondarily in its sensory root, both in its extra and intramedullary course.

Zoster may also be due to the implication of the ganglia in inflammatory processes secondary to malignant disease, tubercle, or trauma. In locomotor ataxia outbreaks of zoster form a classical symptom, but more uncommon than is usually supposed. In such cases it is probable that the zoster is not the direct outcome of the disease of the nervous system, but that endarteritis obliterans and the changes it produces in the whole nervous system predisposes the ganglion to attack by the same unknown agent that produces zoster in otherwise healthy persons. In three cases the eruption occurred in general paralysis.

Bacteriological examination of the contents of the vesicles and of the correlated inflamed lymphatic glands proved them to be sterile.

In discussing herpes zoster as an acute specific disease of the nervous system, the writers indicate the similarity in the patho-

logical changes in acute anterior poliomyelitis and herpes zoster and conclude that zoster might justly be spoken of as acute posterior poliomyelitis. The unknown toxic agent that is responsible for this affection shows an affinity for the posterior root ganglia, and more particularly for those which contain a preponderance of the smaller type of ganglion cells that give rise to the shorter fibres of the posterior columns. These small cells, amongst other functions, probably subserve that of pain; hence the intense pain of zoster. The skin eruption they believe to be the result of intense irritation of these cells, which normally subserve the function of pain, and more especially that form of pain produced by afferent visceral impulses.—*Medical Chronicle.*

CHOREA DURING PREGNANCY.

E. S. Newell *(Boston Medical and Surgical Journal)* thinks that chorea deserves a special place in the pathology of pregnancy. It is not an accidental complication due to the recurrence of a previous infantile chorea, but in the majority of cases appears for the first time during pregnancy, and is to a great extent produced by this condition, although pregnancy alone cannot be regarded as the direct cause. Various conditions such as heredity, previous infective diseases, etc., act as predisposing causes, and some nervous shock is usually the starting-point of the trouble. The prognosis is more grave than in early life. The principal drugs used in treatment are sedatives and alteratives. In grave cases ether and chloroform may be given, as in eclampsia. Pinard gives chloral to produce almost continuous sleep, waking the patient only to administer food. When improvement in the choreic movements appears, the doses are diminished, but are continued until the movements entirely disappear.—*Medical Record.*

TOTAL EXTIRPATION OF THE STOMACH (ESOPHAGO-ENTEROSTOMY).

A. Bardeleben (*Deutsche medicinische Wochenschrift*) reports another case of complete gastrectomy with apparently curative result. The patient, a woman aged fifty-two years, had for a year before the operation been suffering from the usual symp-

tom complex of gastric carcinoma, and on exploratory incision it was found that the cardia, entire anterior wall, and the pylorus, as well as a portion of the omentum, were involved. The entire stomach and some of the omentum were resected, the duodenum was closed, and a lateral anastomosis made between the esophagus and jejunum. The patient made an uninterrupted recovery, taking small amounts of fluid by mouth on the evening of the operation, while all rectal feeding was discontinued on the third day. Since then (a period of six months) she has had no pain, feels perfectly well, has normal movements, and has gained seventeen pounds.—*Medical Record.*

ENUCLEATION OF LARGE MYOMA IN PREGNANCY.

Schulein (*Monats f. Geb. u. Gynak.*) demonstrated at a recent meeting of the Obstetrical Society of Berlin a cystic myoma which he had enucleated from the uterus of a woman in the third month of pregnancy. The bed of the tumor was sewn up with catgut. The operation had been performed fourteen days before the specimen was exhibited, and pregnancy had not been so far interrupted.—*Brit. Med. Jour.*

NICOL (*Lancet.* "The Existence of Immunity after Enteric Fever") reports several cases that have come under his personal observation and that tend to show that immunity is more a fancy than a fact. The doubtful occurrence of a natural immunity after an attack of the fever acquires also some importance in view of the suggested conferring of artificial immunity by the injection of antityphoid serums. As he had observed the occurrence of a second and even third attack of typhoid fever in the same patient; as under ordinary circumstances the cause of the disease is only occasionally present, and when it is present the predisposing circumstances favoring its development may be absent; and as a large number of persons though exposed to infection still escape the disease, Nicol believes that there is no proof of the presence of immunity after an attack of typhoid fever.—*American Medical.*

DOUGLAS-CRAWFORD (*Lancet*) reports a case of coma from the application of carbolic acid to the unbroken skin, occurring in a girl of four. It having been proposed to perform Macewen's osteotomy on both legs, lotions of carbolic acid (1 to 40) were applied. At the end of four hours, the child being as well as usual, the limbs were scrubbed with turpentine, and the compresses reapplied. At the end of forty minutes the child was found in an unnatural deep sleep ; at the end of two hours she was in a marked collapse and coma. Upon removal of the compresses and active stimulation continued for a number of hours, the child recovered, and by the following day she was well, excepting for some pallor and rapidity of the pulse.—*American Medical.*

EXPERIMENTAL PRODUCTION OF CIRRHOSIS OF THE LIVER.

Marckwald *(Münch. Med. Woch.)* made daily injections of small doses of antipyrin in frogs and rabbits, and caused a destruction of the liver cells which induced a cirrhosis of the liver itself. If we compare the action of the antipyrin with the action of other agents which have been shown to produce cirrhosis of the liver and the condition of the human cirrhotic liver, we may assume that every agent which has the power to destroy liver cells must in continued (chronic) action produce a cirrhosis of the liver, unless some condition outside the liver hinders its action.—*Medical Age.*

Physicians' Library.

The International Medical Annual. A Year-Book of Treatment and Practitioner's Index. By thirty-four British and American contributors. 1901. Nineteenth year. New York and Chicago: E. B. Treat & Co. Price, $2.00.

Treat's "Annual" is so well and favorably known that it seems almost unnecessary to write a review of this year-book. As usual, the first part of the book is devoted to New Remedies, and the second to New Treatment. Wm. Murrel, London, is the contributor to the former, although Professor McFarland, of Philadelphia, is associated with him in the article on "Toxins and Antitoxins." Dr. Murrel also contributes a special article on the "'Light' Treatment." The second part of the work, or Dictionary of New Treatment, covers the whole range of medicine and surgery. The articles are contributed by writers, the great majority of whom are well-known to the medical profession. Professor Charles Ruata, of Perugia, Italy, ably edits the article on "Tuberculosis." T. Colcott Fox contributes the sections on Diseases of the Skin. He gives a very interesting and well-illustrated article on "Ringworm." Dr. Macintyre, of Glasgow, has charge of the articles on "X-ray Work in Medicine and Surgery." The work, taken as a whole, is an excellent manual. We think that both the printing and illustrations are better than last year. There can be no doubt but that this book will prove of great service to practitioners.

A Text-Book of the Practice of Medicine. By DR. HERMAN EICHHORST, Professor of Special Pathology and Therapeutics in the University of Zurich. Translated and edited by AUGUSTUS A. ESHNER, M.D., Professor of Clinical Medicine in the Philadelphia Polyclinic. Two octavo volumes of over 600 pages each, with over 150 illustrations. Price, per set, cloth, $6.00 net; sheep or half morocco, $7.50 net. Philadelphia and London: W. B. Saunders & Co. Toronto: J. A. Carveth & Co.

We gladly welcome this translation, as it makes it possible for every practitioner to become acquainted with the views of one of the greatest living German clinicians. Dr. Eichhorst is the author

of a large treatise on Special Pathology and Therapeutics and his text-book of the practice of medicine may be said to be a condensed edition of the author's great work. This work was written as a text-book for students, but we have no doubt that it will prove of the greatest service to practitioners as well. It differs from most other works of the kind in containing sections devoted to the Diseases of the Skin, Genito-Urinary Diseases, Impotence and Spermatorrhea. The English translation is presented in two volumes.

Volume I. is devoted to the consideration of diseases of the circulatory organs, respiratory organs, digestive organs, genito-urinary organs and nervous system, while Volume II. has the following contents: Diseases of the nervous system (continued), muscles, skin, spleen and blood, disorders of metabolism and infectious diseases. A perusal of the work has convinced us that it is an excellent text-book for students. The illustrations are good, and the insertion of prescriptions in the parts of the articles devoted to treatment will be appreciated by both practitioners and students.