A Clinical Lecture

ON

ECZEMA IN RELATION TO AGE.

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

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GENTLEMEN,—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 connexion 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 a patient and that we are confronted with problems which we have got to try to solve; the various difficulties that meet us we will discuss in detail according to the different forms. The first thing which has to be recognised 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 of about the size of half-a-crown, or a little bigger, of a dirty-brown colour, 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 seborrhœa; 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 recognise 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 round 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 actual 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 their 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 endeavour 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 seborrhœic 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 seborrhœic 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 recognised 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 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 to 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 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 know 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 ammonio-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 alternative 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 seborrhœic 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 benefiting the general health by going to live at the seaside so as to get rid of this 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 seborrhœic 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 connexion 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 emollient 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 is 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 48 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 43 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 24 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 emphasise 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 it is one of the most important.

Eczema and alcohol.—In connexion 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 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, gelatin, 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 gelatin 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 gelatin should be applied all over the vein as well as over the eczematous patch. As the gelatin 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 gelatin 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 on 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, pyrogalllic 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 pyrogalllic acid ointment, five or six grains to the ounce. If, after making the pyrogalllic acid stronger it still failed, I should try unguentum chrysarobini of the British Pharmacopoeia, 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 40 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 26 years of age, who has had both ovaries removed, who has had all the phenomena of change of life just as if she were 48 or 50 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 odour. If it is given in the form of Burroughs and 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 10 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 ACTION OF ARSENIC AS OBSERVED DURING THE RECENT EPIDEMIC OF ARSENIC POISONING.¹

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IF I may be permitted to give a short account of the general action of arsenic upon the body I think I may be able to classify the symptoms observed in the present epidemic of arsenical poisoning so as to render it easier both to remember them and to understand the varieties which have been described. Arsenic belongs to the same chemical group as nitrogen, which not only constitutes nearly four-fifths by volume of the atmosphere, but is an essential ingredient of all living tissues, and may be called the pivot on which all life turns. Other members of the group are phosphorus and antimony, both of which have an action very much like arsenic in many respects, and phosphorus, like nitrogen, is an important constituent of the healthy body. It is not certain whether arsenic acts by replacing nitrogen

or phosphorus in the living tissues, and especially in protoplasm, which is one of the most important constituents of nerves, but it appears to have the power of altering the chemical changes or metabolism which occur in them during life and on which their functions depend. In minute doses it appears to be beneficial, but in large doses it is poisonous and will destroy both animal and plant life, so that in large quantities it will produce in man or animals irritation and inflammation of any part of the body on which it may be applied. This application may be made directly to a part or the arsenic may reach it through the circulation. Thus arsenic, when it is swallowed, reaches the stomach and intestines by direct application, and by irritating them produces vomiting and purging. In the form of dust, as from wall-paper or in making artificial flowers, it may enter the eyes, nose, and air-passages, and thus it may produce conjunctivitis, nasal and respiratory catarrh, and cough; or it may be applied directly to the skin and cause irritation and eruptions upon it. If much diluted it may produce little or no local irritation of the stomach, intestines, or respiratory passages, but from these it may be absorbed by the blood and carried by the blood to every part of the body. When absorbed from the stomach and intestines it is obliged to pass through the liver before it can enter the general circulation, and consequently the largest amount of arsenic is usually found in this organ after death from arsenical poisoning. Whilst circulating in the blood it may act on the heart, muscles, and nerves. But it is not carried by the blood only to these organs, for through the circulation it goes a second time to the stomach, intestines, respiratory passages, and mucous membranes of the eyes and skin. By these organs it is eliminated, and during the process of elimination it may again give rise to irritation in them just as it would do if directly applied. Moreover, John Hunter, Sir Everard Home, and Sir Benjamin Brodie have shown that when arsenic is applied to a wound it produces more violent and more immediate inflammation of the stomach than when the poison is administered internally and that this inflammation of the stomach precedes any appearance of inflammation in the wound.² Brodie concludes that "it may be inferred that arsenic, in whatever way it is administered, does not produce its effect even on the stomach until it is carried into the blood." This conclusion is perhaps too sweeping and not strictly true for arsenic in large doses and in a concentrated form, but it is probably quite correct when the poison is taken in moderate or small doses and in a diluted form, as in the beer at Manchester. Whilst circulating in the blood arsenic is carried to every organ and tissue of the body, and affects markedly the nervous system and muscles, the mucous membranes, and skin. It begins to be eliminated by the kidneys within a few minutes of its absorption and is also eliminated by the mucous membranes and skin. If only small doses are taken daily the whole of the poison may probably be daily eliminated, and it may be taken for months without any harm. But if the doses are larger less is eliminated daily than is absorbed, and it becomes stored in the body and produces symptoms of poisoning. During the process of elimination it irritates all the mucous membranes and the skin and produces corresponding symptoms. By irritating the mucous membrane of the stomach it causes loss of appetite, nausea, vomiting, and epigastric pain. In the intestine it produces colicky pains and diarrhoea. By irritating the respiratory tract it gives rise to coryza, cough, hoarseness, huskiness of the voice, oppression of the chest, retro-sternal pain and bronchitis, with occasional hæmoptysis. In the eyes it causes irritation, conjunctivitis, and œdema of the eyelids. In the skin it produces all sorts of eruptions, nettlerash, redness, papules, pustules, vesicles, and boils. Three of the most marked are pigmentation, herpes, and a condition to which the name of "keratosis" has been given, in which the epidermis peels off the palms of the hands and soles of the feet in large flakes. Keratosis is probably due to the local action of arsenic upon the skin, for Ringer and Murrell found that in frogs poisoned by it the cuticle could be readily stripped from the body, and Nunn showed that this is due to softening of the protoplasm in the epidermis, so that it becomes almost completely detached from the dermis. The herpetic eruptions, as well as loss of hair, brittleness or shedding of the nails, excessive sweating and subcutaneous

¹ A statement made by Sir T. Lauder Brunton to the Royal Commission now sitting upon arsenical poisoning (see p. 1310).

² Philosophical Transactions, 1812, Part 1, pp. 209, 210.