

aroused late in the patient's life to active growth and giving rise to a basal-cell epithelioma of rodent ulcer type.

The case may be compared with that of Dr. Norman Paul (Syringoma), recently published in the Journal* and which forms perhaps a link between the case now exhibited and the linear nævi of syringoma type recorded by Peterson and Elliott.

Subsequent history.—The larger nodules were scraped and cauterised with chloride of zinc under a local anæsthetic, and the area occupied by the scattered smaller nodules was exposed to X-rays filtered through 3 mm. aluminium. After $2\frac{1}{2}$ pastille dose, measured on the distal side of the aluminium screen, the smaller nodules became dried up and converted into crusts and it appeared as though they would disappear entirely. But they have since begun to grow again and fresh nodules have appeared, and it is now proposed to scrape and cauterise all of the nodules under a general anæsthetic.

SOME RECENT EXPERIENCES WITH PURE COAL TAR (PIX CARBONIS PREPARATA, B.P.) AT A BASE HOSPITAL IN FRANCE.

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THE great value of coal tar in the treatment of diseases of the skin has long been known, and its application as a skin paint in the pure state has received special commendation by French dermatologists, and by Dr. A. Whitfield in England, under whose guidance I first had an opportunity of studying its effects.

For the past three months (December, 1916—March, 1917) a mixture containing pix carbonis B.P., acetone and collodion flexile, equal parts,† has been in constant use, and where applied in the class of case which experience has proved suitable, has been found so successful that I am encouraged to record my results. I venture to hope that they may be found useful by other dermatologists at a time when

* *Brit. Journ. Derm.*, 1916, xxviii, p. 106.

† The combination of coal tar with collodion suggested itself to me as being likely to increase the adhesive character of the former—an anticipation which the facts certainly support.

synthetic drugs and derivatives such as resorcin are at a premium or actually unobtainable.

The above formula, with slight variations in the quantity of acetone, which makes a good diluting medium, was used in every case.

For some time we ran short of B.P. preparation of tar, and while awaiting a fresh consignment, used the ordinary commercial product, after washing it in three changes of water to remove excess of caustic alkali, phenol, cresol and other soluble irritants. Our results did not differ in any material measure from those we obtained before or since, and we have only met with one case in which the application was not tolerated (Case No. 14).

We have applied the paint in various skin conditions, and with very few exceptions the results have been satisfactory, in not a few—brilliant; and when it is remembered that tar is cheap and easily obtainable, that the only apparatus required is an ordinary house-painter's brush, and that dressings are neither necessary nor desirable, it will be conceded that objections on the score of unsightliness and odour are of minor validity. Tar applications are often called dirty, a criticism which the facts do not justify, as the coat, once it has dried on and been dusted with any bland powder, remains fixed and localised for several days. Ether removes all traces both from the skin and clothing in a few minutes.

We are in the habit of applying the remedy ourselves to the lesion, and to that only, and when there is any anticipation of a possible intolerance, the patient is seen daily during the treatment. It is quite remarkable how well the most delicate skin will stand pure tar. Dr. Whitfield has stated* that the acute eczema of infants, so common on the face and head, is markedly relieved and often cured by the undiluted product.

We have found an almost specific tolerance to its effects on the skin of the knee flexures, the elbows, and wrist; and even the scrotum, so notoriously susceptible to local applications of all kinds, is not irritated by an occasional coat of the solution. One of my colleagues, Captain M. Stewart-Smith, R.A.M.C., has been using it recently with success in aural eczema, and I have myself applied it to the neck, forehead, and nasolabial fold without ill result.

* *Syst. of Med.*, Allbutt and Rolleston, vol. ix, p. 326.

In my experience coal tar is the best antipruritic medicament we possess, and in one or two cases under my care it has succeeded in alleviating or curing local itching, which even X rays had failed to relieve. The rapidity with which pruritis is cured is one of the most striking characteristics of the treatment, and where this does not occur within a few hours the case may be regarded as unsuitable, and not likely to benefit from further application.

SOME SKIN AFFECTIONS AMENABLE TO THE TREATMENT.

(1) *Scabies.*

The range of military dermatoses is not a large one, and by far the greater number of our cases are the direct or indirect result of infection with the *Acarus scabiei*. An uncomplicated case of itch is not commonly seen at the base, and the sequelæ which we are called on to treat are (a) sulphur dermatitis, (b) impetigo, (c) furunculosis, (d) lichenisation (Besnier) and (e) vesicular eczema of a relapsing character. (a) The acute stage of sulphur dermatitis is dealt with on general lines of which the outstanding features are emollient baths, calamine lotion, and Lassar's paste. It is as an "end treatment" in these cases that tar has been found invaluable. When the dry stage which tends to remain chronic on the wrists, knee flexures, and elbows has been reached, one or two coats at two or three days' interval have generally sufficed to allay the itching at once, and to restore the normal smoothness to a rough or fissured epidermis in a very short time.

It is also applied in post-scabietic cases for pruritis without objective manifestations—of the wrists, ankles, thighs, penis, and anterior axillary folds—as soon as it is relatively certain that acari no longer exist.

(b) For impetigo tar is absolutely useless.

In two cases in which it was tentatively tried, the black and very adherent crusts which rapidly formed were soon surrounded by a wide inflammatory zone, very sensitive to palpation and obviously secluding pus. When these were fomented or peeled off, the underlying epidermis was found to be superficially ulcerated, and took an excessive time to recover.

It may be stated with emphasis, as has previously been done by

Dr. Whitfield, that tar should never be applied in cases in which even traces of pus are clinically evident. Purulent or semi-purulent discharge is the chief contra-indication to its use, and serious harm in the nature of gland abscess, ecthymatous ulceration, and chronic lymphangitis may be directly caused by an injudicious or careless selection of such cases.

From the foregoing it will be realised that—

(c) Furunculosis is not likely to respond favourably, and, although it has been applied successfully to patches of eczema or dermatitis on areas intervening between crops of boils, its use in this type of case is not advocated.

(d) The lichenification which commonly follows incessant scratching and rubbing of accessible skin areas—such as the popliteal space, the internal and anterior aspects of the thighs, the buttocks, elbows, and wrists—yields at once to its therapeutic action, and any early case (up to six weeks) generally responds favourably in from three to seven days.

(e) With vesicular or papulo-vesicular dermatitis, which is unfortunately an occasional concomitant or sequel to scabies, some surprising results have been obtained (Cases 2, 5, and 9).

In this way local eruptions can be controlled, but it often happens that fresh groups of lesions meanwhile appear elsewhere—on the arms, legs, or buttocks—and much patience, both on the part of the physician and patient, is necessary before the cure is complete.

In these cases, experience has taught us to persist with the applications, and the great majority have ultimately ceased to relapse, and have returned to duty.

It would seem that the longer any single patch remains uncured, the more prolonged the convalescence from what may be regarded as having become a constitutional dyscrasia—the eczema habit.

(2) *Seborrhœa*.

An unusual type of this condition—chronic, intractable, and relapsing—with which we are dealing daily, forms a considerable bulk of our total clinical material.

Whatever its causes—and there are reasons for suspecting that in predisposed individuals, the continuous use of steel helmets, and the impermeable mackintosh linings of the cloth Service caps are in

some degree responsible—the manifestations are, in nearly all cases, the same.

In the acute variety, there is a moist or weeping condition of the scalp, often extremely offensive, with marked impetiginous crust formation, and a tendency to the production of these on the eyebrows, moustache, and beard, and behind the ears. When this has subsided, which it does fairly rapidly under frequent applications of calamine liniment, we usually resort to Lassar's paste, later in combination with ichthyol or salicylic acid (gr. x, ad ʒi), zinc and mercury, or weak sulphur ointments. In spite of these, some cases remain uncured, and may be accompanied by an eruption of chronic irritating papules on the central areas of the back and chest, and on the joint flexures.

These latter yield at once to one or two applications of the paint (Cases 11, 12, 15, and 16), and if the scalp condition has been cured, show no tendency to relapse. In many cases, persisting post-aural fissures are troublesome, and Captain Stewart-Smith reports that the application is well tolerated both here and in the concha auris. I have confirmed this observation myself, but would recommend Dr. Whitfield's practice of a preliminary 1–2 per cent. silver nitrate application, in this class of case.

The lichenification of Besnier is an occasional feature in seborrhœa, and here also tar applications have a decided utility.

(3) *Psoriasis*.

The undoubted relationship of psoriasis to seborrhœa (so strongly emphasised by Unna and Norman Walker), and its well-known tolerance of ointments containing tar, led to an *à priori* assumption of the utility of our pigment, and in practice we were not disappointed.

In those chronic types in which thick, silvery scales and apparent infiltration of the skin over the elbows and knees are the chief or only manifestations, a daily coat may be safely applied, and is rapidly effectual.

In one case (No. 21) after four days' painting, although no preliminary scrubbing or removal of scales had been ordered, the whole plaque came away piecemeal, apparently attached to the overlying

tarry coat. The skin beneath showed pink discoloration, but no induration to any marked extent. By no other treatment that I am aware of, could a satisfactory result have been obtained so easily, and in so short a space of time.

Of course the method is not applicable to wide areas covered by large numbers of small hyperæmic lesions. For these, soap, alkaline baths, and chrysarobin ointment remain the most reliable treatment.

(4) *Vesicular Eczema.*

A further discussion under this heading is unnecessary. Our experience tallies exactly with the facts so admirably summarised in Dr. Whitfield's article.

(5) *Lichenification.*

In only one case (with concomitant cutaneous atrophy which had persisted for more than two years, on the anterior aspect of the left thigh, and which was spreading slowly downwards towards the knee), have tar applications failed to relieve the condition.

In this case we have to record failure also with X-rays, ointments of all kinds, scarification, and occlusion under plaster of Paris for a fortnight, and the patient was ultimately sent home to England, uncured.

(6) *Eczema marginatum.*

We have tried the pigment in only one case of this sometimes intractable parasitic infection. It was a case of *Tinea cruris* due to the *Epidermophyton inguinale* of Sabouraud, in which the mycelium was clearly demonstrated microscopically, and which involved the internal aspects of both thighs and the scrotum. Tincture of iodine, applied three times in two days, did not relieve the itching, and, therefore, a tentative coat of the paint was applied to the whole area. The itching ceased within an hour, and the next day we were interested to observe a black ring which exactly corresponded to the original growing edge of the fungus. Two more applications entirely removed the growth, but at the time of writing (ten days later) a recurrence has taken place, and the efficacy of the method is still *sub judice*.

BRIEF NOTES ON ACTUAL CASES.

Scabies.

(1) H. L—. Right elbow itching. A plaque of dermatitis composed of confluent irritable papules the cause. March 6th, 1917, painted; March, 9th, 1917, itching subsided and eruption cured.

(2) D. B—. Deep-seated vesicles on wrists with marked itching, persistent after sulphur treatment, and resisting B. naphthol, Lassar, and other applications. February 24th, 1917, tarred; March 8th, 1917, cured.

(3) W. S—. Irritable papules on legs and buttocks. March 2nd, 1917, tarred; March 6th, 1917, cured.

(4) A. J—. Sulphur dermatitis on thighs. Internal and external surfaces present bright red groups of follicular papules. March 3rd, 1917, tarred; March 7th, 1917, much improved.

(5) J. S—. Vesicular eczema on both wrists after scabies. February 20th, 1917, tarred; February 22nd, 1917, retarred; February 27th, 1917, cured.

(6) Itching papules on arms, and in knee flexures after scabies. March 1st, 1917.; March 4th, 1917, tar applied, and March 8th, 1917, cured.

(7) G. V. M—. Chronic itching back of knees tending towards lichenisation after scabies. March 3rd, 1917, painted; March 6th, 1917, much improved.

(8) F. G. C—. Similar case—on calves of legs.

(9) C. S—. Papules on wrist cured by one application.

(10) W—. Itching scrotal papules after scabies. 'This intractable condition had failed to respond to Lassar's paste, sulphur ointment, calamine lotion, and weak mercury ointment. It yielded to the first application of tar collodion.

These cases might be multiplied into several hundreds as the preparation is being used every day by at least four medical officers at this hospital.

Seborrhœa.

(11) E. B—. A psoriasiform seborrhœa on legs; scalp affected. February 27th, 1917, legs tarred; March 3rd, 1917, no itching; retarred, March 5th, 1917, well.

(12) J. H—. Seborrhœa capitis with erythematous irritable eruption on forehead. March 1st, 1917, tarred forehead; March 4th, 1917, no pruritus—no erythema.

(13) J. B—. (Captain Stewart-Smith's case). Ears tarred for Eczema seborrhœica of a dry type. Practically cured by two applications.

(14) J. L—. Intensely irritable papular seborrhœa on abdomen and flanks. Tar applied freely, March 3rd, 1917; itching not much improved but eruption clearing, March 6th, 1917; retarred, March 8th, 1917. Marked increase of both eruption and pruritis, with a zone of erythema beyond tar margin. In this case I suspected the tar as causal, and abandoned its use for calamine lotion, under which patient rapidly improved.

N.B.—It would almost appear as if failure to relieve itching in a very short space of time by the use of tar is a direct contra-indication to persistence in its use, and I am now in the habit of inquiring closely as to the subjective sensations at the earliest possible opportunity.

(15) R. B—. A follicular erythematous type on the extensor aspect of arms and forearms, associated with marked seborrhœa of the scalp, and a crusty impetiginised eruption on the face.

The former was painted with the solution on March 2nd, 1917, and when seen again on March 4th, 1917, both papules and itching had subsided, although the condition on the scalp and face persisted for some considerable period. This ultimately yielded to the continuous application of calamine liniment and ung. hydrarg. nit. dil.

(16) F. G. C—. Presented dry seborrhœic patches on his back and face, and fissures behind both ears. He was cured by two applications only.

Seborrhœoids of the geographical psoriasiform, and tinea types are particularly amenable to tar treatment, and, provided that the scalp condition is dealt with at the same time very rapid and permanent disappearance is the rule.

Vesicular Eczema of the Primary and Secondary (e. g. Post-scabetic) Types.

We find ourselves in complete agreement with the statements made by Dr. A. Whitfield in his article on "Eczema" in Allbutt and

Rolleston's *System of Medicine* (pp. 323 *et seq*). Excellent results were obtained in an astonishingly short time in the following cases:

(17) A chronic vesicular recurrent eruption tending to lichenisation in the knee flexures. March 3rd, 1917, tarred; March 6th, 1917, very much better, retarred; March 10th, 1917, cured.

(18) W. R—. Moist eczema of both legs tarred four times with coal tar during a period of ten days, the cure being finally completed by one application of wood tar (*gaudron vegetale*).

(19) Very striking was the case of Private J. S—, who developed a vesicular eczema of the wrists during an attack of scabies, which persisted after this was cured.

On February 20th, 1917, the weeping areas were painted with the solution.

On March 3rd, 1917, after four applications at three and four days' interval, the recovery was perfect.

Eczema marginatum.

(20) J. A—. First treated by the method on February 28th, 1917. As the scrotum was involved, the solution was applied to it also, and, after drying and powdering, contact with the thighs was prevented by a suspensory bandage. The itching subsided at once, and two days later the sole remnant was a complete black circle about two inches in diameter on the internal aspect of the right thigh. It would appear that the vigorously growing edge of the fungus had in some way absorbed or fixed the tar. The application was repeated on March 5th, 1917, and by March 10th, after only two coats, the condition was no longer apparent, and all subjective sensations had disappeared.

The eruption and pruritus reappeared March 20th, 1917, and patient has been on Whitfield's ointment (benzoic acid, gr. xv; salicylic acid, gr. xx; vaseline ʒi), for five days without improvement. It is proposed to try the tar collodion a second time.

Psoriasis.

A good many cases of the chronic *en plaque* type have been treated in this manner. The most striking result was obtained in the case of—

(21) H—, a private in the A.S.C. He had noticed the eruption of

typical circular scaly plaques on his arms only, for about six weeks. It was his first attack.

On January 14th, 1917, he was first painted. On January 16th, 1917, improvement was marked, and a second coat applied. On January 18th, 1917, all areas had vanished completely, and wood tar was applied as a prophylactic against a too rapid occurrence.

(22) Pte. B— presented chronic, thickened, and scaly plaques on both elbows, and a coat of tar was thickly spread on them on January 15th, 1917.

By January 18th an extraordinary change had taken place. There was no further tendency to the formation of scales, and nothing but a slightly indurated pinkish-violet discoloration remained.

(23) Psoriasis of the face. Pte. H. H— was painted by one of us (S. S—) on March 5th, 1917. After one application, which was tolerated extremely well, the patches all involuted in a satisfactory manner.

CONCLUSIONS.

(1) In tar—pure, or combined with flexile collodion, and with or without acetone—we have at hand a very simple, safe, cheap, and rapid remedy for various dermatoses of a chronic and pruritic type.

(2) No dressings are required—a fact which conduces to the comfort of the patient, and to the saving of labour and expense.

(3) The solution must never be applied to a purulent surface.

(4) The method is very exact, and there is no tendency as with the case of ointments and lotions for tracts of skin surrounding the affected parts to be impregnated with drugs.

I hereby desire to express my thanks to Major H. MacCormac, R.A.M.C., for permission to publish these results from the Division of which he has control, and to Captain M. Stewart-Smith, R.A.M.C., for showing me the results he has obtained by great care and caution in the selection of his cases.

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