Clinical and other Notes.

AN EXPERIMENT IN THE TREATMENT OF SCABIES WITH DERRIS ROOT POWDER.

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The following experiments were carried out while the writer was serving with an A.A. Division. He had a Medical Post with thirteen beds reserved for scabies cases.

During August, 1941, the attention of the writer was drawn to a number of articles on the treatment of scabies by means of a suspension of derris root powder in water. These writers had recorded a high percentage of cures and the treatment of a series of scabies cases with derris powder was begun. The following is a short account of the results obtained and conclusions drawn. In all 270 cases were treated.

In order to give the method a good trial, care was taken to have the general conditions under which the experiment was carried out as favourable as possible. Thus, to ensure that such disinfection as was carried out was properly done, a small generator for superheated steam and a Serbian Barrel were constructed. Next, the R.A.M.C. orderlies, who were actually to carry out the treatment, were thoroughly trained by the writer in the technique of application and general routine. The closest co-operation with the various units concerned was also secured. The derris powder used was a standardized one containing 8 per cent. Rotenone.

First Method. Series I.—The first series of cases consisted of 20 mildly infested cases showing scantly physical signs and the method employed was that first used by some previous workers. The infested patient was given a hot bath and scrubbed with soap flakes and water. He was then dabbed all over, by an orderly wearing rubber gloves, with a gauze pad soaked in the derris root suspension (2 ounces derris root to a quart of water containing 1 ounce of soap flakes, the suspension necessarily freshly made up daily). The application was then allowed to dry leaving a fine deposit of the derris powder on the skin. The suspension was applied all over the body from neck to toes. The time taken for each application was six or seven minutes. The patient was then clothed in clean pyjamas and his old battle dress and was allowed up and about the Medical Post. Six applications of the derris suspension were made in forty-eight hours at intervals of about four hours.

At the end of forty-eight hours the patient was given a bath and a clean set of underclothes. He was also given about 4 ounces of lotion calamine B.P. with
instructions to apply this daily to the sites of any visible lesions or any residual irritation.

On being discharged to his unit the patient was given a note to his Medical Officer requesting that he be sent back to the Medical Post for medical inspection in seven days time.

Such re-examination was carried out every seven days for twenty-eight days, at the end of which time, if all lesions and symptoms of irritation had disappeared, the case was regarded as cured.

Results. First Series. Analysis.—Out of the first series of twenty cases treated, twelve relapsed, i.e. 60 per cent, within ten days of treatment. Ten of these cases were mild infestations, six were moderately infested and four were severely affected, the lesions covering trunk and limbs. The relapses were subjected to a second altered course of treatment, and after twenty-eight days' surveillance, were found to be cured.

Such a result was very disappointing and it was decided to modify the treatment and start again. It was at first thought that an increase in the strength of the derris suspension was necessary but on further consideration it was decided to modify the technique for the following reason. It occurred to the writer that perhaps the failure encountered in the first series of cases might be due to the fact that the parasiticide was not coming in contact with the Sarcoptes or their ova or nymphs. This failure of contact was thought to result from the sealing up of the burrows in the skin by dry serous exudate produced by too vigorous scrubbing. This exudation was observed through a high magnification lens. With this fact in mind, the technique of application was modified in the following manner:

After the initial hot bath and scrubbing, the patient was not dried and the derris suspension (warmed to 100° F.) was lightly scrubbed into the skin with a special soft brush. After this, he was allowed to dry off in a comfortably warm room (to facilitate quick drying) before putting on his pyjamas and battle dress. Each five subsequent applications were made in the same manner at intervals of four hours during the day.

Disinfestation.—The only disinfestation carried out was that of underclothes, shirt, pyjamas and blankets. No disinfestation of battle dress, greatcoat or bedding was done.

Second Series. Analysis.—

Number of mild cases ....... 150
Number of moderately severe cases ....... 72
Number of severe cases ....... 28

Eight out of the mildly infected cases relapsed within seven to ten days; three of the moderately severe cases relapsed within ten days; four of the twenty-eight severe cases within seven days. Thus out of a total of 250 cases of the second series fifteen relapsed, i.e. 6 per cent. All relapsed cases were again subjected to a further course of treatment and subsequently cleared up.
When questioned as to how they felt during the treatment, the vast majority of the patients stated that irritation ceased after the second application of the derris solution. Some complained of a slight burning sensation which immediately preceded the disappearance of irritation.

Complications.—The complications encountered in this series of 250 cases were four cases of mild chemical dermatitis of the scrotum, arms, trunk or thighs, the patients suffering from this complication being all red-headed men. The cases affected by a scrotal dermatitis yielded to treatment within a few days with lotio calamine frequently applied. The cases of more widespread dermatitis were treated with a zinc and ichthyo1 cream and cleared up in about sixteen days.

Conclusions Drawn from the Experiment.

(1) Effective cure could be obtained within forty-eight hours in 94 per cent of cases when using the second technique.

(2) The complications were on the whole slight and yielded easily to treatment.

(3) Red-haired people should not be treated with derris root.

(4) The treatment is cheap, approximately 1½d. per case.

(5) It is necessary to have a standardized technique and to have orderlies trained therein.

(6) In the opinion of the writer this method compares favourably with other more popular methods of treatment, especially when the time factor is an important consideration.

The writer, who has had some experience with other methods of treatment, is of the opinion that, no matter what substance is used in the treatment of scabies, the success of such treatment depends primarily on two important facts, viz.:

(1) That every effort is made to ensure that the parasiticide used comes in contact with the Sarcoptes and their ova.

(2) That the technique is carried out by orderlies who are thoroughly versed in the routine.

It is unfortunate that, owing to the great demand for derris root for agricultural purposes, it has not been possible to conduct further experiments with this promising treatment.

Finally, it appears that it would be possible, with further modification of technique, for this method to be carried out under average unit conditions without the absence of the patient from duty except for a few hours.