After two treatment cycles with lymecycline 300 mg twice daily for 7 days with an interval of 10 days, all cultures proved negative in the present study. After this regimen, 88 % of the patients were free from symptoms and only 9 of the 96 men complained of urethral irritation 4 weeks after the treatment. These 9 patients all had more than 20 polymorphonuclear leukocytes/HPF in the prostatic fluid at all examinations, but the last chlamydial cultures were negative in all subjects. The regimen used can therefore be recommended.

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The Treatment of Active Chronic Psoriasis: A Comparison of the Effectiveness of a Preparation Containing 0.1 % Dithranol and 17 % Urea in a Cream Base and 0.1 % Dithranol in Lassar's Past B.P.C.

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Abstract. A randomized, controlled study of 35 patients with active chronic psoriasis has demonstrated that 0.1 % dithranol in a 17 % urea cream base (Psoradrate 0.1 % cream, Eaton Laboratories, U.K.) shows reduction of side effects when compared with 0.1 % dithranol in Lassar's paste B.P.C., and is equally effective.

Key words: Dithranol; Dermatological agents; Psoriasis; Urea

The three commonly used topical preparations in the treatment of active chronic psoriasis are corticosteroids, tars and dithranol. They vary in effectiveness from patient to patient and all suffer from disadvantages. Hydrocortisone is ineffective, but the fluorinated steroids act quickly and cleanly in most cases, though they tend to fail in widespread cases (4). The well documented local and systemic side effects of these powerful steroids, including skin atrophy, striae, telangiectasia (10), systemic absorption (10), generalized pustular psoriasis (10), and the tendency to a rebound phenomenon after sudden cessation of therapy (3), militate against long-term use.

A comparison of combined dithranol and 0.1 % betamethasone 17-valerate (Betnovate, Glaxo Laboratories Ltd., UK), applied under occlusion, and dithranol alone, showed comparable efficiency, but the relapse rate was strikingly different, being on average 5 weeks for the combination and 28 weeks for dithranol alone (9). Other workers (8) have in a small series of patients found the relapse rate to be slower when using 0.05 % clobetasol propionate (Dermovate, Glaxo Laboratories Ltd., UK) compared with dithranol.

Tars have been used for many years with varying success. They are messy, odorous and stain clothing. Failure of therapy is often attributable to insufficient application because of their cosmetic non-acceptability. Topical dithranol is probably the most effective non-steroid preparation (3), but it stains skin and clothing and produces irritation in many patients. It is usually incorporated in Lassar's paste and needs to be applied accurately to the lesions.

It has been shown that the inclusion of urea into topical steroid preparations enhanced the effectiveness by increased absorption (1, 5) and it was logical to test whether this concept could be applied to dithranol. Accordingly, dithranol was made up in a 17% urea-containing (carbamide) cream base (Psoradrate 0.1% cream, Eaton Laboratories, UK) and at 0.1% strength was shown to be twice as effective in psoriasis as the base alone (2). A later study showed that 0.1% dithranol in its carbamide base (D.C.) produced 80% of the clinical effect of 0.05% clobetasol propionate after 3 weeks' treatment (7). Similarly, comparison with 0.1% betamethasone 17-valerate showed both preparations to be equally effective (11). When tritium-labelled dithranol in four different bases (including two carbamide creams) was used, no significant systemic distribution was observed in young white pigs (6).

PATIENTS AND METHODS

A single-blind study compared the results of treatment with topically applied 0.1% dithranol in Lassar's paste B.P.C. (D.L.) with 0.1% dithranol in its carbamide base (D.C.). A total of 35 out-patients with bilaterally symmetrical chronic plaque psoriasis were admitted to the trial. They were aged between 17 and 75 (mean 43) years and consisted of 16 males and 17 females. Some 70% had suffered from psoriasis for more than 2 years and all had received a variety of treatments.

Patients with acute, sore, erythrodermic or pustular psoriasis were excluded. No patient had received local steroid therapy during 4 weeks before the trial and none received ultraviolet light therapy during the trial.

The two products were applied once daily, at night, on a randomized basis, either to the left or right side of the body. The side treated with the paste (D.L.) (which was removed each morning with mineral oil) was covered with tube gauze bandages. The assessing physicians were unaware which preparation was applied to which side of the body, as the patients were requested not to reveal this information.

The two investigators independently assessed patients at 0, 2 and 4 week intervals under the following parameters of the psoriasis:

1. Overall severity: a 10 cm line, one end marked 'clear', the other 'severe', was marked appropriately.
2. Inflammation:
3. Scaling:
4. Extent:
5. Thickness of lesion:

All were graded according to a severity scale of 0 to 3.

Side effects were also recorded on a 0 to 3 basis as:

1. Inflammation of surrounding skin.
2. Stinging or burning.
3. Itching.
4. Discoloration of skin.
5. Discoloration of bedding and clothing.

Table I. *Summary of side effects*

DC=0.1% dithranol in a carbamide cream base. DL=0.1% dithranol in Lassar's paste

Side effect	Two weeks	Four weeks
Inflammation of surrounding skin	No statistical significance	DC<DL*
Stinging/burning	No statistical significance	DC<DL*
Itching	No statistical significance	DC<DL*
Discoloration of skin	DC<DL*	DC<DL*
Discoloration of clothing or bedding	No statistical significance	No statistical significance

* $P<0.05$ (McNemar's test).

RESULTS

There was no statistically significant difference between the two treatments in terms of overall severity, inflammation, scaling, extent or thickness of the psoriatic lesions at 0, 2 and 4 weeks. Side effects, however, did show significant differences (Table I). The statistical analysis was applicable to both investigators' results. Two patients—one male and one female— failed to apply the preparations correctly and have been omitted from the analysis.

CONCLUSION

It will thus be seen that in this study, whilst there was no difference in clinical findings resulting from the two treatments over the 2 and 4 week periods, the incidence of skin staining and irritant side effects was significantly less with the 0.1% dithranol plus 17% urea cream than with an equivalent con-

centration of dithranol in the traditional base of Lassar's paste B.P.C.

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