

Comparison of Betamethasone Valerate Solution with Phototherapy (UVB Comb) in Scalp Psoriasis Treatment

Sir,

In this paper the effect of betamethasone valerate solution was compared with that of a UVB comb on scalp psoriasis, both in the healing of lesions and in maintaining the psoriasis in a state of remission.

MATERIAL AND METHODS

Patients and treatment

The study comprised 44 adult patients with scalp psoriasis. Patients using oral as well as topical medications known to affect psoriasis were excluded. Furthermore, patients receiving local treatment known to affect psoriasis within 2 weeks and taking oral medications within 4 weeks of the study commencing were excluded.

Although the patients were randomly allocated a group (A or B), the evaluator knew what treatment had been given. To remove scales the patients were pretreated before entering the study. Salicylic acid in oil was massaged into the scalp and left in place overnight. The next morning the material was removed using a tar shampoo. The 22 patients in group A were treated with a dermalight 80 psoracomb (Dr. R. Hönle, Munich, Germany) equipped with two UVB tubes, and the 22 patients in group B were treated with betamethasone valerate solution.

The maximum emission spectrum for the UVB tubes was 310–315 nm; the irradiance being 2.5 mW/cm² at a distance of 30 cm. The comb, however, was moved through the hair at a distance of 5 cm from the UVB tubes to the scalp. Although the hair was separated, the high concentration of UVB in the emission spectrum was considered necessary to overcome the protective shield of the hair. Treatments were given once a day (5 days/week) to both groups for a total of 3 weeks, i.e. 15 times with either UVB (group A) or betamethasone valerate solution (group B).

The patients in group A were initially irradiated with 0.20 (0.13–0.27) J/cm² UVB in order to assess their skin type. If no discomfort occurred, the dose was gradually increased by 0.23 J/cm² per day to an upper limit of 1.36 (0.72–1.72) J/cm² UVB per treatment, otherwise the initial dose was continued for another 2 days.

Table I. *The effect on patients with scalp psoriasis treated with a UVB comb (group A) and betamethasone solution (group B)*

	Group A	Group B
No. of patients showing improvement at completion of treatment	18	22
Unchanged/worse	4	0
No. of patients still showing improvement 2 weeks after completion of treatment	7	3
Unchanged/worse	15	19

Evaluation

The scalp psoriasis was graded using a score system taking into consideration erythema, infiltration and scaling (PASI score). The response was classified as "improved" when more than 50% of the lesions had disappeared, otherwise the designation "unchanged/worse" was used. Relapses were likewise defined as when more than 50% of the lesions had recurred. The patients were recalled 2 weeks after the end of the treatment for a follow-up evaluation.

Statistical analysis

The absolute changes in PASI score from baseline were compared in both groups using the Wilcoxon one-sample test ($p \leq 0.05$).

RESULTS

As can be seen in Table I, 18 of the 22 patients treated with the UVB comb (group A) and all 22 treated with betamethasone valerate (group B) experienced an improvement in their scalp psoriasis. This difference is not statistically significant. Two weeks after treatment, 11 of the 18 improved patients in group A had relapsed, compared with 19 in group B. This difference, however, is statistically significant ($p < 0.05$). Sixteen patients in group A and 17 in group B showed some further improvement 2 weeks after treatment compared with pretreatment levels. The patients' evaluation 2 weeks after treatment correlated well with the objective evaluation made by a dermatologist. No side effects were observed, except that some patients treated with UVB comb had slight xerosis of the scalp.

DISCUSSION

The promising effect of the UVB comb on scalp psoriasis observed during the last few years was confirmed and correlated well with an Italian study (1), although we did not obtain a complete remission. The relapses occurred more rapidly in patients treated with betamethasone valerate than in those treated with the UVB comb. Thus this UVB irradiation offers a good alternative to topical corticosteroids.

REFERENCES

1. Caccialanza M, Piccinno R, Cappio F, Rozza M, Mainardi L. Phototherapy of psoriasis of the scalp. Results in 21 patients treated with a special portable ultraviolet rays lamp. *G Ital Dermatol Venereol* 1989; 124: 61–65.

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