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A double-blind trial of 0·05% clobetasol proprionate in the treatment of vitiligo

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SUMMARY

0·05% clobetasol proprionate (CP) in its proprietary cream base was significantly superior to the cream base alone in the treatment of vitiligo. Twelve of twenty-three patients partially repigmented during 4 months' treatment with CP. All patients showed dermal atrophy with the CP.

Topical betamethasone 17-valerate in various bases—DMSO (Koopmans-van Dorp *et al.*, 1973), collodion (Kandil, 1970b), 50% isopropyl alcohol (Kandil, 1974)—and triamcinolone acetonide by intradermal injection (Kandil, 1970a), have been shown partially to repigment areas of vitiligo. Clobetasol proprionate (CP) shows five times the vasoconstrictor activity of betamethasone 17-valerate (Sparkes & Wilson, 1974) and this is considered to be a reasonable prediction of therapeutic activity (McKenzie & Stoughton, 1962). A trial of the efficacy of CP in vitiligo was therefore undertaken.

MATERIALS AND METHODS

Bilaterally symmetrical areas of comparable size and duration in each of 25 patients were chosen. Patients were supplied with two tubes labelled for use on left and right sides only. One contained 0·05% CP in its proprietary cream base (Dermovate cream, Glaxo), the other, the cream base only. Patients were directed to apply the creams thinly night and morning and to wash the applying finger between applying each cream. Neither the clinician nor the patient knew which each tube contained. The patients were assessed monthly for 4 months by the same person and the areas treated were photographed under ultraviolet light at the beginning and end of the trial.

RESULTS

Two patients failed to complete the trial. Of the remaining twenty-three, twelve (52%, s.e. 10%) showed repigmentation with CP and four of these also apparently showed repigmentation with the base. At the end of the trial, two of the four admitted to applying the effective cream bilaterally. Thus ten responded to CP but not to the placebo and two responded to CP and placebo. This is a significant difference in response at 0·2% (sign test). In ten of the twelve patients there was 15–25%

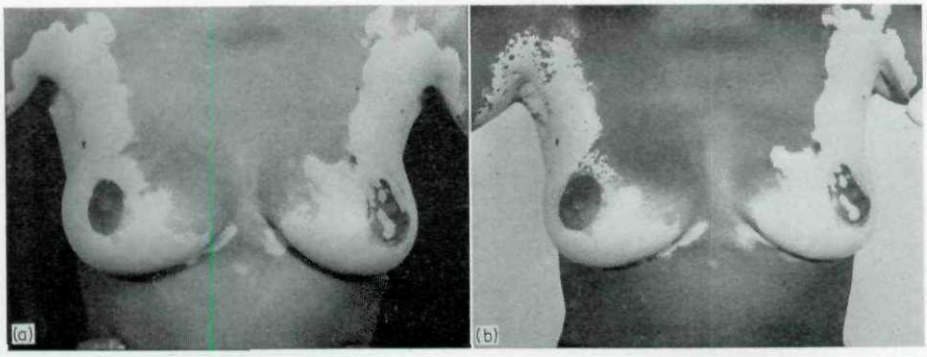

FIGURE 1 (a & b). Before and after treatment, showing 15% repigmentation on the right side treated with CP.

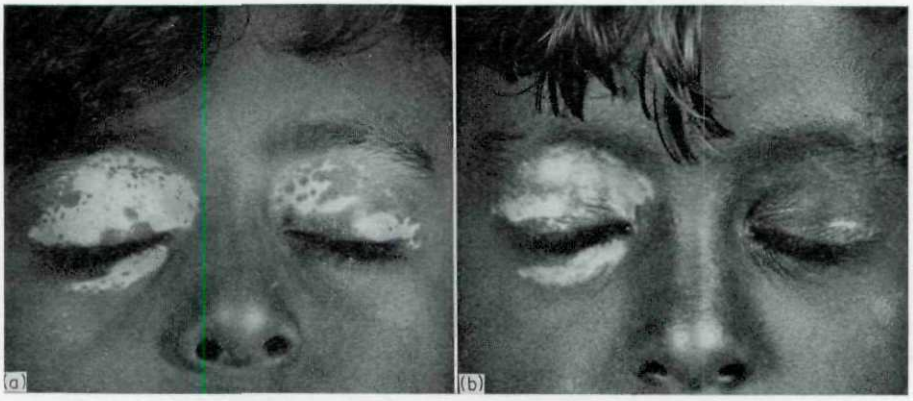

FIGURE 2 (a & b). Before and after treatment, showing 80% repigmentation on the left side treated with CP and 20% on the right treated with the cream base. Some spontaneous repigmentation probably occurred in this patient.

repigmentation. The other two showed over 75% repigmentation and were the only patients who repigmented with the base. At the end of the trial all patients showed evidence of dermal atrophy with CP.

DISCUSSION

These results show that CP produces significant repigmentation in vitiligo in about 50% of patients. Some of the return of pigment in the two patients who responded to both CP and the cream base may have been spontaneous. Only if topical corticosteroids which do not produce significant dermal atrophy produce similar degrees of repigmentation as CP will they play a useful part in this prolonged treatment of vitiligo.

The considerable repigmentation reported with betamethasone 17-valerate in 50% isopropyl alcohol (Kandil, 1974) was in dark-skinned Asian patients. It would appear that this result with topical corticosteroid therapy cannot be reproduced in Caucasians, the majority of patients in the present study.

It has been postulated that in vitiligo the depigmentation results from the self-destruction of melanocytes (Lerner, 1971). But the finding of an increased incidence of auto-antibodies in patients with vitiligo (Brostoff *et al.*, 1969) suggests a possible auto-immune basis for the disease. Topical corticosteroids may either potentiate a melanocyte auto-destruction protective mechanism or locally suppress the immunological changes allowing inactive melanocytes to effect repigmentation.

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