

LETTERS TO THE EDITOR

PUVASOL Therapy in Palmoplantar Psoriasis

Sir,

Palmoplantar psoriasis is a disabling condition, which is frequently resistant to conventional therapies. Oral PUVA, though effective, leads to systemic side-effects and the efficacy of various formulations of topical psoralens with UVA has been demonstrated by several studies (1–3). However, in all these studies, an artificial source of UVA was used, which may not be affordable in developing countries. Moreover, in tropical countries like India, there is abundant sunshine which is an excellent source of UV light.

The objective of this study was to determine the efficacy and safety of topical psoralens and sun exposure in palmoplantar psoriasis.

MATERIAL AND METHOD

Seventeen adult patients diagnosed clinically as palmar and/or plantar psoriasis of plaque type participated in the study. The patients were free of any photosensitive disorders and had stable plaque type of psoriatic lesions covering more than 30% of the surface area of palms and soles and not involving more than 5% of the remaining body surface area. The patients had not used any topical or systemic antipsoriatic therapy for 1 month preceding the study and were using only emollients. They were recruited irrespective of sex, duration of disease and response to previous therapies. 8-methoxy psoralen (8-MOP) soak solution was prepared by adding 0.5 ml of Macsoralen 1% lotion (Methoxsalen, USP-Mac Lab, Bombay) to 1 litre of water to achieve a final concentration of 5 mg/l. The patients were instructed to submerge palms and/or soles just short of covering the dorsal aspect in the 8-MOP soak solution for 15 min. At the end of the soak period, the affected parts were towel-dried and immediately exposed to sunlight. Treatments were given thrice weekly. The first 2 treatments were given under supervision in the hospital and subsequently the treatments were home-based. The sun exposure was initially for 15 min and then gradually increased over 7 days to a maximum of 30 min depending on the tolerance of patients. The patients were advised to apply sufficient amounts of emollients as a routine, and to wear gloves and socks at night during the study period. Total duration of the therapy for this study was 8 weeks. Patients were examined weekly during the first 4 weeks and subsequently every 2 weeks.

The lesions were assessed for degree of erythema, scaling, induration and fissuring (ESIF) and were scored on a severity scale of 0 to 3, as described elsewhere (1). The most severe condition was given 12 points, whereas absence of lesions received "0". Percentage improvement was calculated on the basis of pre- and post-treatment scores and was categorised as minimal improvement (up to 25%), moderate improvement (26 to 50%), marked improvement (51 to 75%) and near total/total clearing (76 to 100%). The patients were considered to have good improvement when the relief was more than 50%. Complete haemogram, liver and renal function tests and urine examination were performed before and at the end of therapy in all the patients and were repeated as and when necessary.

Unpaired Students *t*-test was used for statistical analysis.

RESULTS

Fifteen of the 17 patients completed the study. One patient was lost to follow-up, another patient developed phototoxic reaction of hands and had to be withdrawn from the study.

The mean clinical scores (ESIF) before therapy and at the completion of study were 5.7 ± 0.3 and 2.4 ± 0.4 for palms and 7.4 ± 0.3 and 4.2 ± 0.4 for soles, respectively. The average response rate was $58.5 \pm 5.9\%$ for palms and $43.5 \pm 4.6\%$ for soles. The difference in clinical improvement between palms and soles was statistically significant ($p < 0.05$).

DISCUSSION

The poor response on soles when compared to palmar lesions may be attributed to unintentional under-exposure of soles to sunlight due to positional inconvenience. It may also be due to the constant pressure effect of walking (Koebner's phenomenon), or the tendency of the patient to take better care of the hands in the form of repeated application of moisturisers/emollients. The patients in our study exposed the palms and soles to UV radiation (sunlight) immediately after soaking. This so called "non-interval therapy" has been reported to be effective (1,4,5).

Therefore, we conclude that topical PUVASOL therapy is effective, safe, clean and suitable as domiciliary treatment for palmar psoriasis but not as effective in plantar psoriasis.

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