

Case III

A 31-year-old female with rather extensive psoriasis and psoriatic arthritis received PUVA treatment for 1 month before she developed small papules and excoriations in the perioral as well as in the frontal region. There were a few pustules. As her arthritis worsened, the treatment was replaced by Methotrexate. 1½ months later the skin changes had disappeared.

Case IV

This 50-year-old psoriatic was treated with PUVA for 6 months. He then got small papules and pustules localised to the frontal area and to the cheeks and chin. No similar changes were seen elsewhere on the body. The skin changes persisted throughout the period of weekly PUVA treatment. Later on the clinical picture resembled rosacea with the patient complaining about swelling, erythema and burning in the malar and frontal region occurring especially on treatment days.

DISCUSSION

Acne-like eruptions on the face, induced by light, were first described by Frumess & Lewis (1) using the term *Light-Sensitive Seborrhoid*. Hjort et al. (2) used the designation *Acne Aestivalis* or *Mallorca Acne* for a papular eruption localised to the acne area, occurring after intense sun exposure.

Wolf et al. (7) noted an unexplained transient eruption resembling a polymorphous light eruption in 5 out of 91 patients undergoing PUVA treatment. The location of these changes was not indicated. Recently Jones & Bleehen (3) described an acneiform eruption on the chest and back occurring after 6 weeks of PUVA treatment in a 37-year-old male with psoriasis. The skin changes persisted throughout the period of PUVA treatment.

Our 4 patients all reported with acne-like skin changes. The most prominent findings were located periorally, where the lesions resembled perioral dermatitis (5). None of the patients had a previous history of acne. They had never previously experienced adverse reactions to light. Two of the patients had been using lanolin-containing cream (vaselinum aquosum). As mentioned by Kligmann & Mills (4) this cream may be contributory cause of these acneiform eruptions.

In all our patients the skin changes occurred during maximum UVA irradiation. In 2 of these patients the dermatitis disappeared after discontinuation of PUVA treatment and did not recur on repeated treatment with less intensive UVA irradiation.

It seems obvious that acneiform eruptions can be

induced by PUVA treatment. Shielding of the face or temporary discontinuation of PUVA treatment is considered to be an adequate counter-measure in most instances.

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Intermittent Treatment of Psoriasis with Clobetasol Propionate

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Abstract. Clobetasol propionate cream, applied intermittently for 2 weeks, induced a rapid clinical and histological clearing of psoriatic infiltrates. The serum cortisol level was transiently lowered. By maintenance therapy, with the corticosteroid given only one day a week, 8 of 12 patients were kept in remission for an average period of 5 months.

Key words: Psoriasis; Clobetasol propionate; Cortisol

The recently introduced, highly potent corticosteroids will probably increase the risk of local as well as systemic side effects. It was the aim

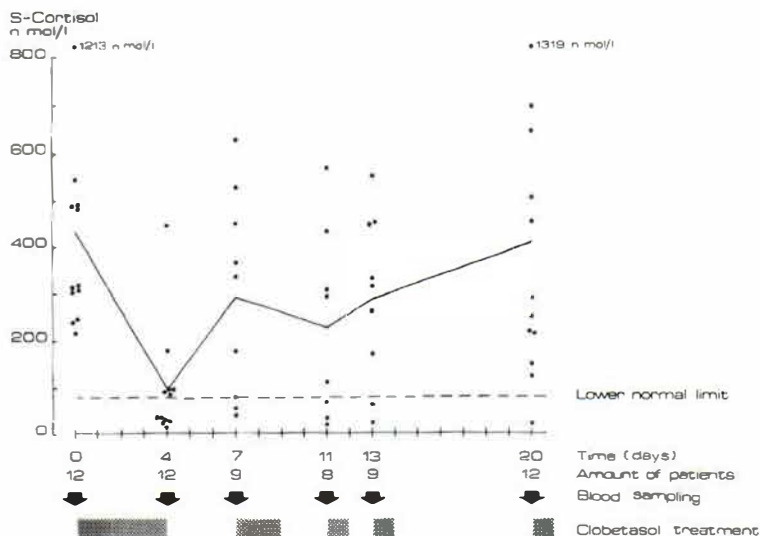


Fig. 1. Free serum cortisol (mean and individual values) during intermittent treatment with clobetasol propionate.

of this preliminary study to keep psoriasis in remission with intermittent steroid therapy in order to reduce these side effects. Clobetasol propionate, which today is considered the most potent preparation (5), was chosen for the study.

MATERIAL AND METHODS

Patients with psoriasis vulgaris of discoid type, with unsatisfactory response to conventional topical therapy including betamethason valerate and weaker corticosteroids, were selected for the study. There were 15 males and 8 females, aged 16–82 (mean 50) years. The 23 patients were admitted to the ward for a 2-week treatment with clobetasol propionate (Dermovat®) cream. The cream was applied three times a day, initially on 4 consecutive days, then on intermittent days as shown in Fig. 1. The quantity of cream used was recorded. On intervening days the patients were treated with an indifferent cream, ung. Merck®. Blood samples for free serum cortisol were taken at 8 a.m. before and during the treatment (Fig. 1).

In some cases microbiopsies according to Radner (3) were taken daily during the first 4 days from one and the same lesion. These biopsies of 0.9 mm diameter could be taken without anesthesia with an electric punch rotating at 100 r/sec. The tissue samples, laid on Millipore filter (2), were fixed in formalin and embedded in paraffin together with the Millipore filter for ideal orientation. Multiple 3–4 µm histological sections were prepared in a step section technique and stained with hematoxylin-eosin and in addition with toluidine blue, PAS-McManus and Weigert's elastic stain.

Skin lesions were considered healed when scaling and infiltration had disappeared in spite of remaining erythema. Patients healed as above were given clobetasol propionate cream three times a day on such remaining erythema only once a week on an out-patient basis.

RESULT

After the 2-week treatment with clobetasol propionate cream 16 of the 23 patients were healed. Twelve of these 16 patients continued with intermittent therapy once a week for a mean observation time of 21 weeks (range 14–31 weeks). At the end of the observation period, 8 of the 12 patients were still healed while 2 had a temporary recurrence and another 2 a permanent relapse. The mean daily amount of corticosteroid applied was 49 g (range 30–70 g) on day 1, and 23 g (range 8–49 g) on day 8.

Serum cortisol levels decreased markedly during the first 4 days of treatment but returned to original levels by later sampling days (Fig. 1). The very high values were recorded in a patient taking contraceptive pills.

In the 3 cases examined by microbiopsy during the first 4 days of treatment with clobetasol propionate, a rapid and marked improvement could be visualized histologically. The acanthosis and also the dermal inflammation diminished markedly and the parakeratosis as well as the Munro abscesses disappeared. As a further sign of improvement the stratum granulosum reappeared (Figs. 2 and 3).

DISCUSSION

The present study, although on a limited material, has shown that in some cases of psoriasis it is possible to keep the disease in remission for several months with a potent corticosteroid applied once a week only. This should reduce the frequency of

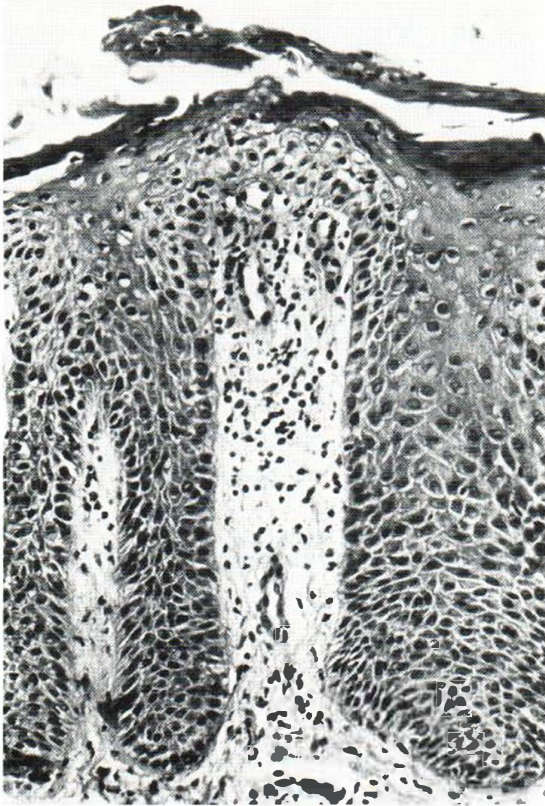


Fig. 2. Microbiopsy of untreated psoriasis. Marked acanthosis, hyper- and parakeratosis with Munro abscesses and inflammatory reaction in the dermis. There is no stratum granulosum. Htx-eos, $\times 205$.

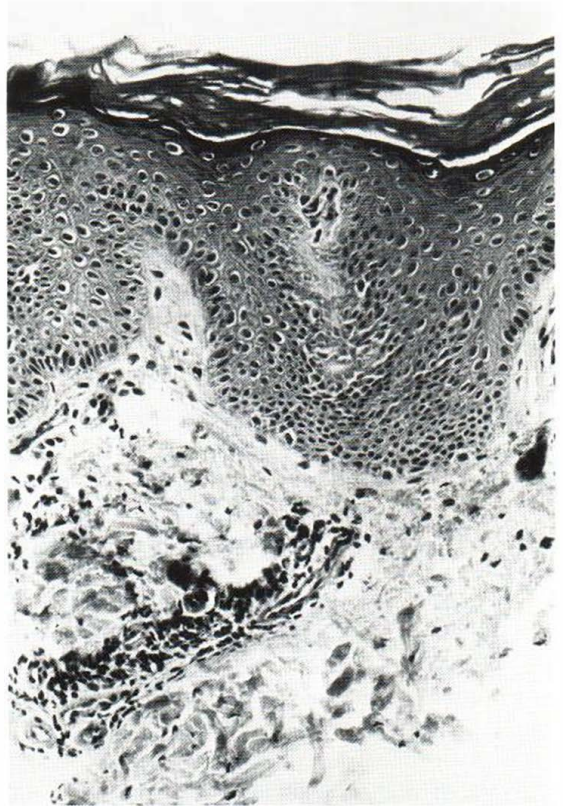


Fig. 3. Microbiopsy of psoriatic lesion after the 4th day of treatment with clobetasol propionate. Reduced acanthosis, no parakeratosis, nor Munro abscesses. Markedly reduced dermal inflammation. The stratum granulosum has reappeared. Htx-eos, $\times 205$.

side effects in comparison with the regular, daily treatment.

The potency of clobetasol propionate is evidenced by its marked influence on serum cortisol (1). The initial, intense corticosteroid treatment resulted in a rapid clearance of the psoriatic infiltration but also, as expected, in a depression of serum cortisol. Since it was possible to reduce the application frequency already after a few days the cortisol values soon returned to original levels. Some individual values were below the lower normal limit, though the mean value was not (Fig. 1). It should be pointed out that with the same treatment schedule, another potent corticosteroid, betamethason dipropionate, also influences serum cortisol to a similar degree (unpublished observation).

The rapid clinical effect was achieved by three daily applications; it is questionable, however, if a more increased frequency can result in a further

enhanced effect (4). The Radner microbiopsy technique (3) was found suitable for following the histologic healing of individual lesions.

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