



Fig. 1. The presence of carcinoembryonic antigen is reflected by dark staining in the cells composing the acrosyringial unit (3-amino-9-ethylcarbazole and hematoxylin, $\times 250$).

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Oral Methoxsalen Photochemotherapy (PUVA) of Dyshidrotic Eczema

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Abstract. Seven patients with chronic severe intractable dyshidrotic eczema of the palms were treated with oral methoxsalen photochemotherapy. The right palm was

treated, while the left palm was not treated until the right palm was cleared of lesions. All 7 patients responded to treatment and remained disease-free on a maintenance schedule for 2 to 6 months.

Dyshidrotic eczema is an acute recurrent or chronic vesicular eruption of the palms and soles. Characteristically, it occurs as crops of deep-seated clear vesicles involving the lateral surfaces of the digits, with symmetrical involvement of the palms and/or soles. Mild cases may temporarily respond to the topical application of corticosteroids, though chronic severely afflicted patients are notoriously resistant to any type of therapy except oral corticosteroids.

Oral methoxsalen photochemotherapy (PUVA) has been demonstrated to be effective in a variety of dermatoses. One study (1) found that PUVA was useful in recalcitrant dermatoses of the palms and soles, including eczema and psoriasis. The present study was designed to check for spontaneous improvement or remission and to evaluate the effect of PUVA on chronic severe dyshidrotic eczema.

PATIENTS AND METHODS

Seven patients (2 men, 5 women) were referred to the Massachusetts General Hospital Phototherapy Center. The patients, ages 39 to 57 years, had been diagnosed as having dyshidrotic eczema and had tried other available

Table 1

Pat.	Age	No. of treatments to clear	J/cm ² at clear	Maintenance schedule
1	40	42	30	Weekly Six mo. w/ no recurrence and no therapy
2	51	18	18	Fortnightly
3	57	17	13	Weekly
4	54	21	20	Fortnightly
5	45	58	40	Four mo. w/ no recurrence and no therapy
6	39	31	20	Weekly
7	46	33	20	Weekly

therapies (one female patient was on 30 mg prednisone daily at the time of referral). The diagnosis was confirmed by the independent evaluation of two dermatologists. No topical applications were used throughout the course of the study.

PUVA therapy

Three times weekly each patient ingested 8-methoxypsoralen (0.6 mg/kg body weight) 2 hours before exposure to UVA radiation. Only the right hand of each person was exposed. The initial UVA dose, 2.5 J/cm², was increased by 0.5 J/cm² for the next six treatments and then increased by 1.0 J/cm² each treatment until the right palm was clear. The frequency of treatments was then decreased to once weekly and, after 6 additional weeks of therapy, to once every 2 weeks (fortnightly). When treatment of the right palm entered the maintenance phase, both palms were photographed and clearance therapy for the left palm was begun. After the maintenance phase of both palms was attained, the UVA dose was slowly decreased to 80% of the clearance dose or held at 20 J/cm².

All UVA exposures were given in a portable irradiation chamber (60 cm × 60 cm) lined by high intensity fluorescent lamps (PUVA, Sylvania). In patient no. 1, who was taking prednisone at the onset of therapy, the prednisone was tapered (5 mg every third day) and completely stopped while the UVA dose was being increased.

RESULTS

All of the 7 patients were cleared in all treated sites. As the right hand responded, the severity of the vesicles in the initially untreated left hand varied, but the untreated sites were never completely disease-free until treatment was started. Although all patients reported a history of hyperhidrosis, this was usually not clinically apparent at the start of therapy. In each patient when the palmar lesions were clear, the symptoms of hyperhidrosis con-

tinued unabated. No patient had any side effect severe enough to warrant discontinuation of therapy, but 2 noticed that at clearance their palms were more edematous than at any previous time. The edema regressed during the maintenance phase. The number of treatments needed for clearance was similar to that required for the whole-body therapy of atopic dermatosis (1, see Table 1). However, both the UVA dose at clearance and the number of treatments until clear were greater than that required to treat pustulosis palmaris et plantaris (Morison et al., 1978b).

DISCUSSION

This study demonstrated the beneficial effect of PUVA therapy for chronic dyshidrotic eczema. The use of the bilateral comparison technique and omission of all topically efficacious medications demonstrates the effectiveness of PUVA in a relatively small patient population. The mechanism of therapeutic benefit is not known. The known lymphocytotoxic effects of PUVA may selectively affect cells involved in the pathophysiology of dyshidrotic eczema.

None of the 7 patients demonstrated the palmar erythema and variable pigmentary response described previously (2). This difference may be due to smaller UVA increments in the early clearance phase in this study. The relatively small portable UVA radiation source facilitates intensive local therapy while eliminating all exposure to uninvolved areas, and thus limits the cutaneous areas that are at risk.

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