

PUVA Treatment of Chronic Eczematous Dermatitis of the Palms and Soles

E. TEGNER and I. THELIN

Department of Dermatology, University of Lund, Lund, Sweden

Tegner E, Thelin I. PUVA treatment of chronic eczematous dermatitis of the palms and soles. *Acta Derm Venereol (Stockh)* 1985; 65: 451-453.

Thirty-eight patients were treated with PUVA for chronic eczematous dermatitis of the palms. Twenty (53%) were completely free from lesions when treatment was stopped, and 11 (29%) were improved. Patients who showed healing remained in remission for an average of ≥ 11 months (range 3 weeks to ≥ 36 months). When the rash recurred it was often milder than before PUVA. Sixteen of the 38 patients also had chronic plantar dermatitis; PUVA treatment resulted in complete clearing in 7 (41%), and remission persisted for an average of ≥ 16 months. *Key words: Photochemotherapy; Pompholyx; Allergic contact dermatitis; Traumiterative contact dermatitis.* (Received March 5, 1985.)

E. Tegner, Department of Dermatology, University Hospital, S-221 85 Lund, Sweden.

Good results have been obtained with PUVA treatment of various chronic hand dermatoses. Most reports concern hand psoriasis and pustulosis palmo-plantaris (1, 2, 3, 4, 5), but treatment of hyperkeratotic dermatitis of the hands (6), dyshidrotic eczema (4, 7), endogenous eczema (2), and allergic contact dermatitis of the hands (8) has also been described. The present study was undertaken to evaluate the efficacy of PUVA therapy in a larger series of patients with chronic eczema of the palms and soles.

MATERIAL AND METHODS

I. Patients

During the period 1979-1984 38 patients, 16 men and 22 women (age 22-75 years, mean 44), were treated with PUVA for chronic dermatitis of the palms, and 16 of them (45%) also received PUVA treatment of the soles. In 33 patients the dermatitis had existed for over 1 year; the average history was 4 years. The diagnosis was pompholyx in 26 patients, allergic contact dermatitis in 10, and chronic contact dermatitis of traumiterative type in 2. More than half of the patients had had periods of remission, the longest remission time before PUVA having been 2 months. All had previously been given topical steroid therapy with little effect. Four patients had received cortisone by mouth during severe periods.

II. Treatment

A high-intensity UVA-system (PUVA 180 and 200, Sylvania) with an emission spectrum of 320-390 nm, a peak emission of 365 nm, and an energy of 5.6-7.5 mW/cm² was used. 20-60 mg of 8-methoxypsoralen (PUVAMET®, Draco, Sweden) in a dose of 0.6 mg/kg body weight was given 2 h before irradiation. The usual initial UVA dose was 2.5 J/cm², and in most cases this was increased by 0.5 J/cm² every second treatment. During the initial course irradiation was given 3 times weekly. 22 patients received no further treatment; maintenance treatment was given once weekly in 12 patients and twice weekly in 1. In a few cases maintenance treatment was given owing to long duration and severity of the disease, but in most for practical reasons such as long travelling distances and calls of work. As a rule no topical medication other than emollients was used, but in 10 patients, owing to slow response, topical steroids were applied once or twice daily.

III. Laboratory investigations

Erythrocyte sedimentation rate, haemoglobin concentration, red blood cell count, thrombocyte count, blood glucose, liver function tests, serum creatinine, urine analysis, and antinuclear antibodies (ANA) were determined before treatment, after 1 and 3 months, and every third month during maintenance treatment.

RESULTS

Initial course of PUVA treatment

22 patients with *palmar dermatitis* were given only the initial course. At the time PUVA was stopped the palmar lesions had healed in 11 and improved in 8, and were unchanged in 3 patients (Table I). The average number of sessions needed to clear the palmar lesions was 19 (range 8–42) and the average total UVA dose was 73 J/cm² (range 30–243 J/cm²). During the initial course PUVA had to be stopped in 3 patients, in 1 because of exacerbation of the lesions, in another because of nausea, and in a third for other reasons. In 11 patients who also had *plantar dermatitis* PUVA treatment of the feet was stopped after the initial course. In 4 of them the lesions had cleared completely, 5 were improved, and 2 were unchanged (Table I). In the 4 patients in whom the plantar lesions healed the hand lesions also cleared up.

Initial and maintenance courses of PUVA treatment

After the initial PUVA course 13 patients received maintenance treatment for 1–22 weeks, with an average of 12 sessions. Each UVA dose ranged between 4 and 8 J/cm². When the maintenance course was discontinued the *palmar dermatitis* had healed in 9 patients and improved in 3, and was unchanged in 1 patient. The average number of sessions and the average dose-to-healing are shown in Table I. Five patients who also had plantar lesions received maintenance treatment, after which the *plantar dermatitis* had healed in 3 patients and improved in 2. In those in whom the plantar lesions had cleared up at the end of the PUVA course the hands had also healed.

Remission time

After discontinuation of PUVA with or without maintenance treatment the patients were followed for up to 5 years. The mean remission time for the 11 patients with palmar dermatitis in whom healing took place during the initial course and who received no maintenance treatment was ≥ 8 months, and for the 9 patients who healed during the initial course followed by maintenance treatment ≥ 14 months. The mean remission time for the whole series was ≥ 11 months (range 3 weeks– ≥ 36 months). Of 23 patients in whom the palmar dermatitis recurred 18 reported that the rash was less severe after PUVA than it had been before. In the 7 patients whose plantar dermatitis healed during PUVA treatment the foot lesions remained healed for an average of ≥ 16 months.

Table I. Result of treatment in 35 patients with eczematous dermatitis of the palms, 16 of whom also had plantar lesions

	No. of patients	Healed	Improved	Not improved	Average no. of sessions-to-healing	Average dose-to-healing (J/cm ²)
Hands						
Initial course	22	11	8	3	19	73
Initial + maintenance course	13	9	3	1	22+11	110+77
Feet						
Initial course	11	4	5	2	14	50
Initial + maintenance course	5	3	2	0	27+8	154+68

Adverse side effects

Adverse side effects of the treatment were few, but 8 patients developed nausea on taking 8-methoxypsoralen, and in 1 PUVA had to be stopped for this reason. Two patients developed verrucae vulgaris on the hands during therapy; another complained of diffuse pruritus but continued with PUVA until healing occurred.

The laboratory findings were essentially normal in all patients.

DISCUSSION

The present investigation in a series of 38 patients shows that PUVA gives good results in chronic, therapy-resistant eczematous dermatitis of the palms. 20 patients (53%) were completely free from lesions at the time when PUVA was discontinued, and 11 (29%) were improved. Patients given maintenance treatment after the initial course were partly selected, but with maintenance treatment the clearing rate was slightly higher than in the group given only initial PUVA. With both initial and maintenance courses the average total UVA dose was more than twice as high as with the initial course alone (187 and 73 J/cm²). The remission time was longer for the patients given both initial and maintenance PUVA (≥14 months) than for those given only initial PUVA (≥8 months).

The patients treated with PUVA for plantar lesions were fewer, but 7 (41%) of the 16 thus treated showed healing and 7 improved. The plantar dermatitis remained healed for an average ≥16 months in the 7 patients in whom healing was complete.

The present study thus shows that PUVA therapy may be effective in chronic eczematous dermatitis of palms and soles when other treatment has failed. Furthermore, PUVA apparently tends to mitigate subsequent relapses.

REFERENCES

1. Menné T. Treatment of psoriasis of the palms and soles and pustulosis palmaris et plantaris with 8-methoxypsoralen and long-wave ultra-violet light. *Ugeskr Laeg* 1976; 138: 3119–3122.
2. Morison WL, Parrish JA, Fitzpatrick TB. Oral methoxsalen photochemotherapy of recalcitrant dermatoses of the palms and soles. *Br J Dermatol* 1978; 99: 297–302.
3. Murray D, Corbett MF, Warin AP. A controlled trial of photochemotherapy for persistent palmoplantar pustulosis. *Br J Dermatol* 1980; 102: 659–663.
4. Bruynzeel DP, Boonk WJ. Zur PUVA-Therapie von chronischen Dermatosen der Handflächen und Fusssohlen. *Z Hautkr* 1980; 55: 523–529.
5. Tegner E, Ågren-Jonsson S. PUVA treatment of 40 patients with pustulosis palmo-plantaris. In manuscript.
6. Mobacken H, Rosén K, Swanbeck G. Oral psoralen photochemotherapy (PUVA) of hyperkeratotic dermatitis of the palms. *Br J Dermatol* 1983; 109: 205–208.
7. LeVine MJ, Parrish JA, Fitzpatrick TB. Oral methoxsalen photochemotherapy (PUVA) of dysidrotic eczema. *Acta Derm Venereol (Stockh)* 1981; 61: 570–571.
8. Bruynzeel DP, Boonk WJ, van Ketel WG. Oral psoralen photochemotherapy of allergic contact dermatitis of the hands. *Dermatosen* 1982; 30: 16–20.