

Topical Psoralen and Sunlight in Treatment of Palmoplantar Psoriasis in Iraqi Patients

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Abstract

Back ground: Topical psoralens plus sunlight is a common practice among Dermatologists in the world for treatment of various skin diseases like Vitiligo and Psoriasis.

objective: To test the effectiveness and safety profile of topical psoralen plus sunlight for the treatment of palmoplantar psoriasis in Iraqi patients.

Patients and methods: Non-randomized open clinical therapeutic trial. 29 patients with palmoplantar psoriasis were enrolled in this study from outpatient Department of Dermatology and Venereology in Baghdad teaching Hospital during the period of May 2006 to February 2007.

All patients were treated with 0.01% methoxsalen solution plus sunlight three times weekly for 8 weeks.

The response to the therapy was evaluated before and after therapy by modified PASI score for palmoplantar psoriasis. The score for each patient was assessed at onset of therapy and at end of therapy by the same examiner.

Results: After 8 weeks of therapy most patients showed significant reduction in score of severity and this reduction was statistically significant. Side effect was minimum.

Conclusion: In conclusion topical 8-methoxsalen plus sunlight is an effective and safe method to treat patients with palmoplantar psoriasis.

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Introduction

Palmoplantar psoriasis is a chronic, unpredictable disease that has a negative impact on patient's quality of life as it directly affects activities of daily living, and patients with palmoplantar psoriasis reported significantly greater physical disability and physical discomfort than patients with other types of psoriasis. The other problem in palmoplantar psoriasis is that it's clinically may mimic many inflammatory diseases of the palms and soles, like eczema and lichen

planus, this make clinical diagnosis difficult in many patients. [1]

Psoralen compounds are well established therapy for skin diseases like psoriasis and vitiligo since long time ago [2]. Photo chemotherapy is one of common therapeutic modalities in psoriasis. Although topical therapy has a higher incidence of blistering and can lead to perilesional hyperpigmentation, decrease systemic side-effects are evident secondary to decrease systemic absorption of psoralin [3]. There are

few reports about the usage of psoralen plus sunlight or {PUVA-SOL} for the treatment of psoriasis in the present time. However, outdoor treatments may generally be used in warm climates when there is adequate sunlight for sustained treatment course [4]. In Iraq, it is a common practice among dermatologists to use topical and systemic psoralen with sunlight for the treatment of skin diseases, and it seems to be as effective as PUVA with the same adverse effect profile [5, 6].

Patients and Methods

Twenty-nine Patients with palmoplantar psoriasis, were enrolled in this non-randomized open clinical therapeutic trial from the outpatient clinic of Dermatology and Venereology, Baghdad Teaching Hospital, during the period of May 2006 and February 2007. All cases have been diagnosed clinically. Patients were instructed to stop any other medications at least one month before being admitted to the trial. Full clinical history was taken from each patient. All patients were treated with 0.01 methoxsalen solution, this solution manufactured by Delta company in Syria its trade name was DERMADEN MILD. Patients were instructed to apply psoralen solution on an affected area on palms and/or soles for 20 minutes, then exposed the treated area to sunlight for 15 minutes, then completely wash the area with water. Patients were instructed to choose the time of exposure to sunlight at midday. This was done on alternative days {three times weekly} for a complete course

of 8 weeks. The responses to therapy were evaluated before and after therapy by using modified PASI score [7] for palmoplantar psoriasis by using the following equation:

$$\text{PASI \{palms \& soles\}} = 0.04\{E+D+I\} \text{ area of involvement}$$

0.04 represents the percentage of surface of palms and soles in comparison with the total body surface area, E= Erythema, D= Desquamation, I= Infiltration. The above parameter was given a degree range between 0-4 depending on severity. Area of involvement was given numerical values from 0-6 depending on percentage of involvement of palms and soles. All patients were followed up monthly for three months.

Results

Twenty nine patients with palmoplantar psoriasis were included in this study. Those patients are 16 males and 13 females. The age of patients ranged between 8 years and 56 years with mean \pm SD of 32.3 ± 13.86 years. The durations of illness were ranged between 6 months and 9 years with mean's of 3.6 ± 2.1 years

The mean baseline PASI scores {before treatment} were 0.63 ± 0.15 with a range of 0.32-0.84. This score was reduced to 0.23 ± 0.14 with a range of 0.0-0.6 after treatment. This difference was statistically significant { $P < 0.0005$ }. Three patients showed no improvement in their lesion at the end of the course of therapy.

Results of patients with palmoplantar psoriasis

Number of patients	Score at onset of therapy	Score after eight week
1-	0.6	0.16
2-	0.6	0.16
3-	0.6	0.16
4-	0.84	0.24
5-	0.6	0.12
6-	0.6	0.24
7-	0.6	0.16
8-	0.32	0.0
9-	0.6	0.16
10-	0.6	0.24
11-	0.48	0.12
12-	0.6	0.16
13-	0.6	0.6
14-	0.72	0.16
15-	0.72	0.24
16-	0.72	0.24
17-	0.32	0.32
18-	0.72	0.12
19-	0.48	0.12
20-	0.84	0.6
21-	0.32	0.12
22-	0.84	0.12
23-	0.84	0.32
24-	0.84	0.16
25-	0.6	0.6
26-	0.84	0.32
27-	0.6	0.24
28-	0.72	0.24
29-	0.84	0.32
mean	0.63	0.23

Discussion

Palmoplantar psoriasis is usually chronic in nature. In treatment of chronic diseases, the aim is to find treatment modality which is effective, safe, not expensive, and can be used repeatedly with same efficacy.

Photo chemotherapy represents a principle of treatment that may initiate a new era of effective ultraviolet light therapy. It puts into practice the interaction of light and drug known for years in photobiology as systemic treatment of many skin diseases.[2]

In Iraq, and some other sunny countries where sun light is available throughout the year, the use of topical and oral psoralens with sunlight is a common practice. It was claimed to be effective and with a reasonable safety especially when the patients were motivated to follow strictly the instructions of physician. Unfortunately, in Iraq, there are few previous reports about this subject. [5,6].Because palmoplantar psoriasis

involved small surface area of skin, topical psoralen solution was used to avoid systemic side-effects of oral PUVA. The results of this study show clearly that topical 8-methoxsalen plus sunlight is an effective measure to treat Palmoplantar psoriasis.

In this study we used sunlight as natural source of UVA, however; the results of our study were comparable to the results of other studies in the world . [8, 9] So in conclusion, topical 8-methoxsalen plus sunlight is an effective and safe method to treat localized skin diseases involved palms and soles especially in sunny countries where the sun is available for sustained treatment courses and in countries where PUVA machine is not available in each centre. This mode of therapy is non costly and can be applied by the patient at home provided that patient should be supplied by detailed instructions about the procedure.



Before Treatment



After Treatment



Before Treatment



After Treatment

References

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