EVALUATION OF PUVASOL, AND PUVASOL COMBINED WITH TOPICAL MEDICATION FOR THE TREATMENT OF PSORIASIS

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Fifty patients having psoriasis were studied with a view to assess and compare the efficacy of PUVASOL (oral psoralin with ultraviolet/sun-ray exposure) therapy with that of the combined regime of PUVASOL and a topical cream containing urea, coal-tar, dithranol, salicylic acid and phenol. The two forms of therapy were instituted in 25 patients each, and observations were made over a period of 90 days. PUVASOL combined with topical medication was found to be more effective than PUVASOL alone. The side effects were also more marked in the combined therapy group, but were manageable by regulating the doses.

Key words : Psoriasis, Treatment, PUVASOL, Combined.

Many forms of therapy have been tried for psoriasis from time to time. Oral methoxsalen with a high intensity long-wave (320-390 nm) ultraviolet/sun exposure is considered the treatment of choice.[1,2] Morison et al[3] tried PUVA in combination with topical applications of tar, dithranol and corticosteroids and reported that the therapeutic results were encouraging. However, little work has been undertaken further on this aspect of therapy. This study was therefore planned to evaluate the relative effectivity of PUVASOL alone, and in combination with conventional topical medications. The drugs selected for topical application in this study included the popular anti-psoriatic agents, such as urea, coal-tar, salicylic acid, dithranol and phenol, made into an ointment in petrolatum.

Materials and Methods

This study was conducted on 50 selected patients having psoriasis. Children below the age of 12 years, cases having psoriasis arthropathy, pregnant patients, or those having any other abnormality of haemogram, urine, blood sugar or liver functions, were excluded from the study.

There were 40 males and 10 females, between the ages of 12 to 60 years (mean age 29.25 years) Duration of the disease varied from 3 months to 17 years (mean duration 0.25 years). Severity of the disease was classified into mild (upto five lesions), moderate (upto twenty lesions) and severe (more than twenty lesions).

Twenty-five patients (group I) were kept on oral 8-methoxypsoralen (Melanocyl) in a dose of 0.6 mg/kg body weight on alternate days followed by sunlight exposure two hours after ingestion of the drug. No topical medication except coconut oil was allowed in these cases. Another 25 patients (group II) received PUVASOL therapy on alternate days along with topical application once daily, of an ointment containing urea 10 gm, coal-tar solution 10 ml, salicylic acid 3 gm, dithranol 250 gm and phenol 1 ml made to 100 gm with petrolatum.

The sun exposure in both the groups was carefully regulated to have comparable exposure in every patient. The patient was required to expose bare-bodied except the under-garments for 15 minutes on the first day between 10.30 a.m. and 1.30 p.m. The exposure was gradually

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Table I. Comparison of the response of patients to PUVASOL therapy alone and in combination with topical ointment.

Treatment regime	Number (%) of patients showing the grade of response					
	IV	III	II	I	0	-I
PUVASOL alone	7 (28%)	8 (32%)	8 (32%)	1 (4%)	1 (4%)	—
PUVASOL with topical treatment	21 (84%)	3 (12%)	—	—	—	1 (4%)

increased by 5 minutes to a maximum of 60 minutes per therapeutic day.

Every patient was required to attend every seventh day, for clinical evaluation. The therapy was temporarily stopped if any side effects appeared, but it was reinstituted after symptomatic relief. In case of severe reactions, PUVASOL was permanently stopped and only topical therapy was continued. The abatement in the severity of the disease was made as described by Gadgil and Talwalkar.[5]

Active therapy was continued till maximum remission. The response was presumed to be maximum if the lesions did not improve on thirty consecutive exposures. Thereafter, PUVASOL was gradually withdrawn over a period of two months.

Table II. Side effects in the two groups of patients treated with PUVASOL alone and PUVASOL with topical therapy.

No.	Side effects	Number of patients having side effects with	
		PUVASOL alone	PUVASOL with topical medication
1.	Nausea	5 (20%)	4 (16%)
2.	Itching	5 (20%)	7 (28%)
3.	Headache	1 (4%)	0
4.	Dizziness	3 (12%)	3 (12%)
5.	Localized erythema and tenderness	3 (12%)	5 (20%)
6.	Worsening of psoriasis	0	1 (4 %)
7.	Perifolliculitis of legs	0	1 (4%)
8.	Local hyperpigmentation	4 (16%)	12 (48%)

Results

The results of the therapy in 25 patients, treated by PUVASOL alone, are shown in the table I. In this group, the maximum therapeutic response of grade IV was achieved in 42-78 (mean 60) days. The mean duration of therapy in cases showing grade III response was 90 days. One patient with moderate psoriasis could get only grade I improvement on therapy for 90 days. Another patient did not show any response to the therapy.

In the patients on PUVASOL combined with topical therapy (Table I), grade IV improvement could be achieved in 36-64 (mean-47.9) days. The cases showing grade III response required therapy for 90 days. One patient, in this group, had complained of severe itching, aggravation of the initial lesions and a new crop of patches, after 10 days only. It was thought to be Koebner phenomenon, and the therapy was stopped.

The side effects were observed in both the groups, but were slightly more frequent in the combined therapy group (Table II). All these cases, except one patient with severe Koebner phenomenon, could be managed effectively and the active therapy could be reinstituted with no further untoward effects.

Comments

In the patients given PUVASOL alone, complete clearing of the skin lesions was observed in 28% cases, and on an average duration of 60 days. The grade III response was seen in

32% cases and on 90 days therapy. Similar results have been reported by some earlier workers,[4,6] though not all.[2]

The patients on combined therapy showed a better response. Eighty four percent patients had cleared on an average of 47.9 days, which was appreciably shorter.

This study indicates that combined therapy of PUVASOL and topical applications is more effective than PUVASOL alone.

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