



TARGETED PUVA IN PSORIASIS: EXPERIENCE WITH A NEW LIGHT SOURCE



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INTRODUCTION

Psoriasis is a chronic relapsing, remitting disease that varies in severity from relatively mild localized disease to cases involving all the skin. PUVA has been one of the most effective therapeutic interventions for moderate to severe psoriasis over the past thirty years. Features of PUVA that have maintained it as one of the standard treatments for psoriasis are as follows: it is effective and long term remissions can be obtained as compared with UVB. Because of such benefits, PUVA has been used as one of the most efficient phototherapy treatments for psoriasis. However, there are special concerns when using PUVA. These concerns can be divided into acute side effects such as nausea, the need of eye protection, dry skin, and long term side effects including photoaging and photocarcinogenesis. The occurrence of cutaneous malignancies is the most important long term side effects and it has greatly limited PUVA use. Since the increase in the onset of PUVA related skin cancers is dose- dependent, the aim of our study was to compare the therapeutic effectiveness of systemic PUVA administered with a lower cumulative dose in association with targeted UVA light delivered by means of a new high potency plasma light source (targeted PUVA) versus a traditional PUVA protocol alone.

METHODS

Patients: Fifteen patients with severe psoriasis were enrolled in this study. For each patient a target lesion not responsive to previous treatments was selected. Lesions were located on the elbows, knees, trunk and dorsal region of hands which traditionally are considered as resistant areas to treatment.

Light source: the light source used for systemic PUVA was the following: PUVA 8001 K phototherapy booth; The light source that was used for targeted PUVA was a high potency tunable plasma lamp in which UVA band was selected (360-370 nm, emission: 0,5-100J/cm²) (Multiclear, Cure Light); light is delivered to the skin by means of a liquid light guide (23mm x 23mm spot).

Protocol: All patients have been treated with classic photochemotherapy for 2 weeks; at the end of the second week, patients were divided according to randomization into two groups: 8 patients have been treated with a low dose systemic PUVA protocol (maximum dose: 5J/cm²) associated with high dose UVA on the target lesion; 7 patients have followed an aggressive PUVA protocol (maximum dose: 15J/cm²). Both groups were treated 3 times per week on non-consecutive days for 6 weeks (Figure 1)

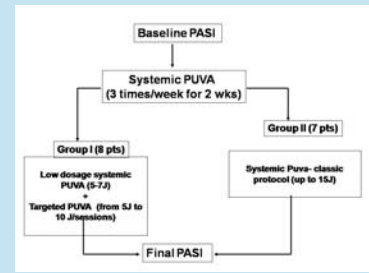


FIGURE 1: Study design

	Group I (n=8)			Group II (n=10)			Comparison of treatment groups by delta values
	Median ± SD Scores		Delta (%)	Median ± SD Scores		Delta (%)	
	Base line	End of the study		Base line	End of the study		
PASI	17.4 ± 10.6	7.2 ± 8.1	-10.2 (-60.2%)	17.3 ± 10.3	10.2 ± 7.7	-7.1 (-40.2%)	p=0.001

TABLE 1: comparison of mean baseline and end of the study PASI score



FIGURE 2A: baseline; left lesion was treated with targeted PUVA in combination with low dose systemic PUVA



FIGURE 2B: end of the study

RESULTS

Our results showed a greater PASI reduction in the group of patients treated with targeted PUVA (Figure 2). This difference between the two groups became significant at the fourth week of treatment (Table 1). This was due to the fact that lesions irradiated also with targeted UVA showed more rapid clearing and a greater PASI reduction.

CONCLUSIONS

- Our results suggest that the use of targeted PUVA in combination with low dose systemic PUVA can be a valid and well-tolerated therapeutic option
- Targeted PUVA can significantly reduce UVA cumulative dose administered to normal healthy skin decreasing the potential risk of photoaging and photocarcinogenesis as well.