

UVB versus UVB plus Calcipotriol (MC 903) Therapy for Psoriasis Vulgaris

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It is well known that UVB therapy of psoriasis vulgaris is potentiated by the association with topical and oral drugs, while till now there have been very few reports on the association between UVB and calcipotriol. In order to evaluate the efficacy and tolerance of this association, we studied 19 patients with psoriasis vulgaris of mild severity (PASI: 5–10). Each patient was treated with UVB and invited to apply calcipotriol 50 µg/g ointment twice a day on one lesion usually on elbows or knees in order to compare it with the opposite side. The evaluation of each lesion was performed before and after 4 weeks of therapy. Our data show that the association between UVB and calcipotriol is significantly more effective than UVB therapy alone: 17 out of 19 patients (89%) showed a greater improvement with UVB plus calcipotriol as compared to UVB alone.

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In the present open right-left comparative study we have evaluated the tolerance and efficacy of the association between UVB and calcipotriol versus UVB radiation only.

MATERIALS AND METHODS

Nineteen patients (9 males and 10 females; age 19–69 years) affected with psoriasis vulgaris of mild severity (PASI from 5 to 10) were admitted to this open right-left study.

The patients had not used systemic or UV radiation therapy for at least 2 months before this study or topical treatment, except for white petrolatum for at least 15 days before.

All the patients received a suberythemogenic regimen UVB treatment three times a week (Cabin Waldmann 8001K with 13 Philips UVB lamps F 85/100 W UV 21 that present a maximal emission spectrum between 300–310 nm).

In each patient we chose two symmetrical lesions similar in size and severity, usually on elbows (17 cases) or knees (2 cases); we invited the patients to apply, on the right side, calcipotriol (MC 903) ointment 50 µg/g twice a day, except in the morning when they received UVB radiation.

Lesions were evaluated at baseline and after 4 weeks by means of a digital score that graded scaling, erythema and thickness (absent = 0, minimal = 1, moderate = 2, severe = 3). We considered two lesions similar when the sum of the scores was the same or the difference did not exceed 1. The baseline scores were the same, in the two lesions, in 18 patients, while 1 patient turned out to have rather more scales on the site treated with UVB plus calcipotriol.

Statistical analysis

Changes of the parameters studied were tested for statistical significance using a non-parametric test (Mann-Whitney rank sum test).

RESULTS

Seventeen out of 19 patients (89%) showed a significantly greater improvement with UVB and calcipotriol in comparison with UVB alone.

In 3 patients there was a complete disappearance of psoriatic lesions treated with combined therapy, while none of them showed improvement on the lesions treated only with UVB.

Infiltration was the parameter that revealed a more significant improvement (15 out of 19 patients), while erythema was less responsive: only 5 patients (26%) showed a better result with the combined therapy in comparison with UVB alone. In 10 patients (53%) there was a more important reduction of scales on the side where calcipotriol had been applied.

No side-effects were observed in the patients treated. Results are summarized in Table I.

DISCUSSION

The combination of calcipotriol and PUVA in the therapy of extended psoriasis vulgaris was evaluated on the basis of 107 patients in a multicenter randomized double-blind study. A reduction of at least 90% on the PASI index was achieved in 72% of the patients also treated with calcipotriol, while a similar improvement was achieved only in 55% of the control group (1).

Kragballe (2) reported the superior efficacy of the combined therapy UVB plus calcipotriol, as compared to calcipotriol monotherapy. This open right-left study of 20 patients showed a higher percentage of complete regression in patients treated with UVB plus calcipotriol (39%) in comparison with those treated only with calcipotriol (17%) (2).

In the present study, the aim was to evaluate if calcipotriol (3) could improve the results of UVB therapy as compared to UVB alone. We decided to treat only one plaque of psoriasis with

Table I. Score average of the three parameters examined before and after four weeks of treatment (Mann Whitney rank sum test)

		Base	After four weeks
Erythema	UVB monotherapy	1.88	1.062
	UVB plus calcipotriol	1.88	0.875
	p		0.173
Infiltration	UVB monotherapy	1.83	1
	UVB plus calcipotriol	1.83	0.375
	p		0.003
Scaling	UVB monotherapy	1.55	0.875
	UVB plus calcipotriol	1.61	0.375
	p		0.025

calcipotriol, because in our opinion it is easier to find two similar and comparable plaques of psoriasis, such as those on elbows and knees, instead of comparing the total body area as is usually done in a right-left study. We would like to emphasize the fact that after 30 days the lesions treated with combined therapy completely disappeared in 3 patients, while in no case was the lesion treated only with UVB healed. Moreover, infiltration disappeared in 12 out of 19 lesions treated with UVB alone. Scaling also disappeared in 12 lesions treated with combined therapy and only in 3 treated with UVB alone.

Since after 30 days the sites treated with calcipotriol showed a visibly greater improvement, we usually decided to extend the combined therapy to the other lesions.

The safety of this therapeutical approach is confirmed by the absence of side-effects, in particular of phototoxic reactions, during the course and at the end of treatment, while we have no data about serum calcium and creatinine levels because, in

consideration of the smallness of the skin area treated with calcipotriol (a single plaque), we decided not to verify them.

Our data show that combined therapy of UVB and calcipotriol is more efficient in the treatment of psoriasis vulgaris than UVB therapy alone and that, consequently, this combination can lead to a reduction of the total dose of UVB radiation administered to each patient.

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