

## Remarkable Success of Chinese Herbs in Combination with a Short Course of Low-Dose Narrow-Band UVB Phototherapy in Severe Recalcitrant Plaque Psoriasis

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Sir,

Chinese herbal therapy is part of traditional Chinese medicine (TCM) and has been reported in TCM literature to be effective in the treatment of psoriasis (1). In the past few decades, several non-controlled studies have been reported in Chinese language literature showing efficacy of several single herb preparations in the treatment of psoriasis (2–6).

Recent investigations in chemical constituents of herbs have shown that *Radix Angelica Dahuricae* (RAD) contains angelicin, which is a psoralen-like molecule. It has been reported that angelicin and its derivatives have photochemical properties comparable to 8-methoxy-psoralen (3, 7, 8). It is attractive to hypothesize that Chinese herbal mixtures, containing RAD in combination with phototherapy, might be more effective compared to Chinese herbs without this addition or without phototherapy. We report a patient successfully treated with this combination.

### CASE REPORT

A 45-year-old woman with a 19-year history of severe recalcitrant plaque psoriasis presented at our department. Previous treatments consisted of topical corticosteroids, calcipotriol, dithranol, photo(chemo)therapy, including narrow-band UVB, retinoids, methotrexate, fumaric acid derivatives and several combinations of these treatments, which usually improved the conditions initially but failed to induce a long-term satisfactory response. Both methotrexate and fumaric acid derivatives resulted in a rise of liver enzymes.

Between November 1999 and February 2000, the patient was treated with a combination of narrow-band UVB ( $3 \times$ /week) and acitretin (20 mg/day). In this period, she was also treated with a combination of calcipotriol ointment twice a day, and clobetasol propionate ointment twice a day. Again, this combination resulted in some improvement; however, no satisfactory response occurred. Phototherapy was discontinued on 24 February 2000 after 16 weeks' treatment and acitretin was continued at an alternating dose of 10–20 mg/day, as well as topical therapy. Within one week, an unstable relapsing psoriasis was observed of multiple pinpoint papules rapidly coalescing to expanding plaques, although acitretin and topical clobetasol and calcipotriol were continued. As almost all established antipsoriatic treatments proved to be insufficient to control her relaps-

ing condition, we decided to treat this patient by an alternative approach. Acitretin was discontinued on 9 March 2000, and 2 weeks later treatment with Chinese herbs was initiated whilst continuing topical therapy.

Chinese herbal therapy consisted of a herbal mixture containing 15 herbs, including RAD. The crude herbs were cooked for 20 min and the resulting decoction was taken twice a day. Crude herbs instead of a patent medicine were chosen to prevent contamination with possible chemicals, such as corticoids or other immunomodulatory agents, as has been reported previously (9, 10). During therapy, several herbs were changed according to TCM practice to follow the patient's condition. Liver enzymes and creatinine levels were monitored.

As her condition continued to relapse, narrow-band UVB was reinstalled at a continuous low dose of  $0.10 \text{ J/cm}^2$  on 17 April 2000 (week 4). The relapse continued to aggravate up to week 5 (Fig. 1a). At week 6, a remarkable amelioration of the lesions was observed for the first time. Topical therapy and phototherapy were discontinued in week 7, and therapy was continued with Chinese herbs as monotherapy.

Psoriasis Area and Severity Index (PASI) was recorded at several visits. Two weeks' combination therapy of Chinese herbs and low-dose narrow-band UVB without dose increments induced a 75% improvement of PASI. Maximal improvement (95% reduction of PASI) was reached after 14 weeks' treatment (Fig. 1b).

### DISCUSSION

The present case report illustrates a remarkable improvement of psoriasis after treatment with Chinese herbs. Although several reports on successful therapeutic effects in psoriasis have been reported in the scientific and Chinese language literature (2–6, 11), evidence from placebo-controlled trials is not yet available for Chinese herbs in the treatment of psoriasis.

The innovation of using the herb RAD, which has photochemical properties, in combination with low-dose narrow-band UVB is intriguing (12). Reports in the Chinese literature on the combination of this single herb with UVA phototherapy conclude that this therapy was as effective in psoriasis as 8-MOP UVA phototherapy but had fewer side effects (3, 4, 13). Western scientific research mainly focused on the photochemical properties of the constituent angelicin and its derivatives in



Fig. 1. Maximum relapse at week 5 (a) and after 14 weeks of treatment with Chinese herbal medicine (b).

*E. coli* and mice. It was found that angelicin and its derivatives had similar photochemical properties to 8-methoxypsoralen (3, 7, 8).

In our patient, these established photochemical effects might have enhanced the effect of the narrow-band UVB phototherapy. The combination of UVB phototherapy and 8-methoxypsoralen has been shown to be more effective compared to UVB therapy alone (14). However, it is important to realize that the dose of UVB was at a very low suberythemogenic level and was kept constant during treatment. Such a low constant dose cannot be responsible in itself for the remarkable improvement, as skin adaptation, epidermal thickening and pigmentation, occurs.

Calcipotriol twice daily is effective in up to 88% of patients (15). It is not feasible that this treatment was crucial in the remarkable improvement in the present case. The combination narrow-band UVB phototherapy and calcipotriol had been given previously in the same patient with virtually no effect. Furthermore, her scalp psoriasis almost completely cleared within 8 weeks without additional treatment. As UVB itself does not reach the scalp, we could assume a systemic effect. Concerning the low UVB dose, this, however, is highly unlikely. Obviously, we cannot rule out a placebo effect in this patient. It is known from placebo-controlled clinical trials that a placebo effect of up to 30% can be seen (16).

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