

Successful Treatment of Actinic Reticuloid Induced by Whole-body Topical Application of Mechlorethamine

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Abstract. A man suffering from actinic reticuloid for 2 years showed highly abnormal light sensitivity over a broad action spectrum. He has been successfully treated with daily whole-body topical applications of mechlorethamine, initially for 4 weeks and after a 2-month interruption, for 3 weeks. Gauzes moistened with the same solution were placed over lichenified areas for 10–15 min. His skin became normal pale and the lichenification decreased. After treatment his tolerance for daylight increased.

Key words: Actinic reticuloid; Light sensitivity; Mechlorethamine topically

Actinic reticuloid was first described by Ive et al. (1). It is a severe condition affecting nearly exclusively elderly males. Clinically it simulates a lymphoma, mainly on sun-exposed areas, although even light-shielded skin can be affected. The histopathology of actinic reticuloid may closely resemble that of mycosis fungoides (1, 4). These patients show photobiological abnormalities in the UVB, UVA and occasionally in the visible light spectrum. Some actinic reticuloid patients have also been described in whom real malignant lymphoma evolved (2, 5).

It has been recognized for several years that patients with the cutaneous, low grade malignant, T-cell lymphoma mycosis fungoides may show evidence of associated photosensitivity (9). Abnormal photosensitivity is most pronounced on the border of and on lesional skin in mycosis fungoides patients (6).

The etiology of both actinic reticuloid and mycosis fungoides is unknown. The diseases are by no means identical, though some similarities exist both clinically, photobiologically and especially histopathologically. Since most mycosis fungoides

patients are successfully treated with mechlorethamine topically and since their light reactions become normal after treatment (7), we decided to try the same therapy on an actinic reticuloid patient. The encouraging result has stimulated us to publish this case.

PATIENT

A 69-year-old man had suffered from a chronic dermatitis for 4 years. The patient himself has been aware of the light sensitivity for 3 years. Following light exposure he noted reappearance of his rash, starting in light-exposed areas. The diagnosis actinic reticuloid was made in 1978. Since then he has been protected from light, although not completely. The abnormal skin changes have been more or less continuously present for the last 4 years. Flare-ups were provoked by brief exposure to daylight, even on cloudy days. The morphological changes tended to be a mixture of erythema, edema, scaling and lichenification localized to his face, ears, neck and dorsa of the hands. Frequent attacks of erythroderma were also seen. The main subjective symptom was itch.

Phototesting at the Department of Dermatology, Rikshospitalet, Oslo, November 1979, showed highly abnormal sensitivity to UVB and UVA but also extending into the visible part of the spectrum.

Many skin biopsy specimens during the last 2 years revealed a dense, predominantly perivascular, often band-like infiltrate mainly of lymphocytes but also of histiocytes as well as varying numbers of eosinophils, plasma cells and mast cells in the upper part of the dermis. The infiltrate in some areas extended into the overlying epidermis. This infiltrate consisted mainly of mononuclear cells. Some of the mononuclear cells have hyperchromatic nuclei. No real atypical cells were seen.

Haematology, liver function tests, serum-creatinine, urine and chest X-ray were normal except for increased ESR.

TREATMENT

In the spring of 1980 the patient again came to our clinic. He was protected from light, allowing only a 25 W light bulb covered with yellow plastic. This, in addition to treatment with a corticosteroid cream, improved his skin condition somewhat, which allowed us to start mechlorethamine applications ultimo May 1980. Topical therapy was started with 10 mg of mechlorethamine powder dissolved in 50 ml of water. The patient applied the freshly prepared solution daily over the entire cutaneous surface, although relatively sparsely in the intertriginous areas. Assistance of a nurse, using plastic gloves, was needed to apply the solution over his back. Half-wet gauzes moistened with the same mechlorethamine solution were placed over the lichenified face, ears, neck and dorsa of the hands for 10–15 min. Care was taken for the eyes and mouth. The mechlorethamine concentration was adjusted according to any irritation encountered, being 20 mg in 50 ml during the next 2 weeks and again 10 mg in 50 ml the

4th week. Due to skin irritation we decided to stop the treatment at the end of the 4th week. For further details, see our previous report (8).

FOLLOW-UP

Two weeks after withdrawal of the treatment the patient could tolerate outdoor light exposure for one hour. The rest of the summer he spent mainly indoors, allowing up to one hour in the sun daily. Only occasionally did he develop a faint erythema and itching on sun-exposed areas, proving that he was not fully cured. Therefore the topical mechlorethamine treatment was readministered in September 1980, but was withdrawn after 3 weeks of daily application due to irritation and a general rash the day after each application. No relapse has so far been noted (November 1980) even following outdoor visits. His skin is normal pale and the lichenification has subsided. No other treatment has been given. Only a slight cell infiltrate persisted in the dermis, as compared with the diagnostic histology before treatment. The cell infiltrate consisted mainly of mononuclear cells. There was no epidermal infiltration.

DISCUSSION

Treatment of patients with actinic reticuloid has been unsatisfactory. For patients with more or less normal light reactions, PUVA therapy may be helpful, but this treatment is practically impossible in more light-sensitive patients. Our patient, however, demonstrates that whole-body topical mechlorethamine applications may be the treatment of choice for actinic reticuloid. So far, only one actinic reticuloid patient has received mechlorethamine topically for 6 weeks, but that was 2–3 years before the diagnosis was confirmed, in the belief that he had mycosis fungoides (3). Individual factors may explain why that reported case did not respond to mechlorethamine topically. It is important that the skin is in a good condition before mechlorethamine topically is instituted, so that an adequate concentration can be used. The time before remission is considerably shortened by the soaking modality (8). The patient of Johnson et al. (3) might therefore have been treated insufficiently.

We have as yet no explanation for the beneficial effect of topical mechlorethamine treatment in actinic reticuloid. Both the etiology of the disease

and the working mechanism of mechlorethamine topically are unknown. These observations, however, are not unexpected, since the dense superficial dermal infiltrate with cells which also extends into the overlying epidermis may mimic early mycosis fungoides.

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Inefficacy of Topical Methoxalen plus UVA for Palmoplantar Pustulosis

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Abstract. The effect of local application of 8-methoxypsoralen (8-MOP) and subsequent UVA irradiation on palmoplantar pustulosis (PPP) was studied in 10 patients. In 8 patients 8-MOP baths were used, and in 5 patients an