LICHEN PLANUS - LIKE ERUPTION FOLLOWING PUVASOL THERAPY

R S Misra, R K Jain, Ashok Mukherjee, Mithilesh Chandra and A K Sharma

A case of lichen planus-like eruption following PUVASOL therapy is presented. The eruption could not be reproduced by patch test, photopatch test and clinical challenge with 8-methoxypsoralen given orally.

Key words : Lichenoid eruption, PUVASOL therapy.

Photochemotherapy using 8-MOP and UV light (PUVA) has been used since its original description in 1941[1] for more than three decades. It is a relatively safe procedure. In addition to minor side effects like nausea, dizziness, depression, headache, pruritus, erythema and blistering of skin,[2] a few reports describing a higher incidence of cutaneous malignancies,[3] SLE-like[4] syndrome following PUVA therapy are available. In India, several dermatologists use psoralen in combination with natural sunlight (PUVASOL) with almost similar therapeutic effect. We are reporting a case of lichen planus-like eruption following PUVASOL therapy.

Case Report

A 17-year-old boy had vitiliginous lesions on his face, neck and upper limbs for the last 5 months. The lesions started on both forearms and spread to the forehead, butterfly area of the face, upper lip and sides of the neck in about 3 months. There was no history of any preceding drug intake or atopy in the patient or in any member of his family. He was put on PUVASOL therapy in a dose of 20 mg 8-MOP followed two hours later, by exposure to noon sun in a graded increasing exposure of 10-15 mintues. After a week, the patient noticed an erythematous hue over the depigmented spots. At the end of the 2nd week, the forehead, bridge of the nose, both the forearms and dorsal aspects of the hands showed slightly erythematous and violaceous papular lesions confined to the depigmented areas. The skin lesions were sharply demarcated on the arms where clothing prevented direct exposure to the sun. PUVASOL therapy was continued for another two weeks and examination at this time revealed that the lesions had become more prominent and were typical of lichen planus. Complete blood counts, liver function tests, urine and stools examination were within normal limits. PUVASOL therapy was discontinued and a skin biopsy taken. The patient was advised to avoid working in the sun and was prescribed 10% PABA cream and corticosteroids locally.

The lesions started regressing and had become flushed with the skin surface with residual hyperpigmentation when seen 3 months after discontinuing PUVASOL therapy.

Skin biopsy taken from one of the violaceous papular lesions showed hyperkeratosis, patchy hypergranulosis, acanthosis of the epidermis, basal cell degeneration and presence of a dense lymphocytic infiltrate in the superficial dermis. The deeper dermis was free of any inflammatory cell collection. Peri-appendageal infiltrates, cosinophils or vasculitis were not seen. The features were in conformity with the clinical diagnosis of lichen planus. Direct immunofluorescence with Anti-IgG and Anti-IgM antisera did not show any deposition of either type of immunoglobulin at the dermo-epidermal junction.

From the Department of Dermatology, Safdarjang Hospital & Associated University College of Medical Sciences, New Delhi-110 029, and the Institute of Pathology, Indian Council of Medical Research, Post Box No. 4909, New Delhi-110 029, India.

Address correspondence to : Dr.R. S. Misra.

A patch test with 1% 8-MOP in 70% alcohol was negative. Similarly, a photopatch test with exposure to sunlight for 30 minutes was also negative.

Provocation test with 40 mg 8-MOP repeated on 2 occasions was also negative.

Comments

PUVA therapy is used extensively for the treatment of vitiligo and several other dermatological disorders. Even lichen planus[5] has been treated with PUVA. In India, PUVASOL therapy is used as an alternative therapeutic procedure due to its easy availability, low cost and convenience. However, in this system the UV light cannot be quantified and it varies with the prevailing environmental conditions of the time of the day, season, etc.

PUVA treatment is generally well tolerated. In a 18-month follow-up evaluation of over 1300 patients,[2] it was observed that while serious acute reactions such as phototoxicity with erythema and blistering, nausea and pruritus requiring discontinuation of therapy were extremely rare, dizziness, depression or headache were occasionally seen. Other workers have reported cases with pustular psoriasis, herpes zoster[6] and bullous pemphigoid[7] following PUVA therapy. There are no published reports about the toxicity of PUVASOL therapy. To the best of our knowledge LP-like eruptions have not been reported with either mode of treatment.

In the present case, the eruption appeared two weeks after starting PUVASOL therapy with 8-MOP. The only other differential diagnosis would be a SLE-like syndrome that has been reported earlier[4] with PUVA therapy. However, the histological features and the absence of any immunoglobulin deposits at the dermo-epidermal junction ruled out this possibility. The failure to produce lesions by the patch and photopatch tests and clinical challenge also ruled out the possibility of drug-induced photosensitisation. We suspect a photobiotropic mechanism as has been theorised by Jausion et al.[8] The photosensitive lichenoid eruption associated with demeclocycline has also been explained on the same basis by Jones et al.[9] Thus, a combination of drug therapy, actinic rays and latent infective agents could have triggered off a cutaneous lichen planus-like eruption.

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