Co-Occurrence of Lichen Planus and Alopecia Areata: A Possible Role of Plasmacytoid Dendritic Cells

By Dr. Harshita Sharma, Dr. Madan Mohan, Dr. Shilpashree P. & Dr. Divya Gupta

Introduction- A 14-year-old female presented with multiple dark coloured, itchy lesions on legs since 5 months. On examination, multiple violaceous papules to plaques of varying sizes (1cm - 5cm) were present on the extensor aspects of legs, forearm and dorsum of feet bilaterally. (Figs 1-3). Skin biopsy from the lesion showed hyperkeratosis, hypergranulosis, vacuolar degeneration of basal layer, band of dense lymphocytic inflammatory infiltrate in the papillary dermis, with perivascular histiocytic infiltrate confirming the diagnosis of lichen planus (LP) (Fig 4,5). She was started on topical corticosteroids, antihistamines and emollients. After 3 months patient had aggravation of LP with patchy hair loss over the scalp. On examination multiple, smooth alopecic patches of varying sizes, the largest being 4 x 3 cm, were noticed on the scalp. She was diagnosed clinically as alopecia areata (AA) (Fig 6). Investigations like complete blood count, liver function test, thyroid profile, anti-nuclear antibody, rheumatoid arthritis factor, C-reactive protein, ESR, VDRL, HBV, HCV, urine microscopy were normal. In view of progressing lesions of LP and AA, she was started on oral mini pulse therapy-betamethasone 5 mg twice weekly and was advised for follow-up. Good response was noticed by four weeks with resolution of LP and regrowth of hair over few patches.

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Introduction

A 14-year-old female presented with multiple dark coloured, itchy lesions on legs since 5 months. On examination, multiple violaceous papules to plaques of varying sizes (1cm - 5cm) were present on the extensor aspects of legs, forearm and dorsum of feet bilaterally. (Figs 1-3). Skin biopsy from the lesion showed hyperkeratosis, hypergranulosis, vacuolar degeneration of basal layer, band of dense lymphocytic inflammatory infiltrate in the papillary dermis, with perivascular histiocyte infiltrate confirming the diagnosis of lichen planus (LP) (Fig 4, 5). She was started on topical corticosteroids, antihistamines and emollients. After 3 months patient had aggravation of LP with patchy hair loss over few patches. (Fig 6). Skin biopsy from the lesion showed perivascular histiocytic infiltrate confirming the diagnosis of LP. She was advised for follow-up. Good response, no case report of coexistence of LP and AA has been reported previously.

This explains the coexistence of LP and AA in our case report. This rare case of sequential occurrence of LP followed by AA has not been reported previously and might offer possible theories which contributes to the literature of T cell mediated autoimmune disorders.

References


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Figure 1: Multiple violaceous papules to plaques of varying sizes over the extensor aspects of both legs bilaterally.
Figure 2: Multiple violaceous papules to plaques over the dorsum of feet bilaterally.
Figure 3: Few erythematous papules over the wrist area.
Figure 4: Photomicrograph showing hyperkeratosis, parakeratosis, hypergranulosis, band of dense lymphocytic inflammatory infiltrate, histiocytes admixed with congested blood vessels, along with periadnexal inflammatory infiltrate. (H & E, x 40).
Figure 5: Photomicrograph showing hyperkeratosis, parakeratosis, hypergranulosis, artifactual cleft formation between epidermis and papillary dermis (Max Joseph space), band of dense lymphocytic inflammatory infiltrate, histiocytes admixed with congested blood vessels, along with periadnexal inflammatory infiltrate. (H & E, x 10).
Figure 6: Multiple well demarcated, smooth, bald, round alopecic patches of hair loss of varying sizes on the scalp.