Colocalisation of alopecia areata and lichen planus

Sir,

Frequent associations between alopecia areata and immune-mediated cutaneous disorders have been reported. Being common skin disorders, lichen planus and alopecia areata may rarely coexist. We report a case of co-localization of lichen planus and alopecia areata.

A 42-year-old man presented with a single patch of non-scarring hair loss of 4 months’ duration over the right parieto-occipital region. Alopecia areata was diagnosed and he was treated with topical betamethasone dipropionate. With that the lesion became static. He had no other lesion on any hair-bearing area.

Three months after the appearance of the initial lesion he developed a solitary violaceous papule in the center of the patch (Figure 1). The lesion was pruritic and mildly scaly. No mucosal lesion was present. A biopsy from the patch of alopecia revealed a typical perifollicular “swarm of bees” type lymphocytic infiltrate consistent with a diagnosis of alopecia areata (AA) (Figure 2). A biopsy from the central papular lesion showed hyperkeratosis, wedge-shaped hypergranulosis, irregular acanthosis, basal cell liquefaction and a band-like lymphocytic infiltrate and pigment incontinence in the superficial dermis suggestive of a diagnosis of lichen planus (LP) (Figure 3).

Figure 1: A patch of alopecia areata on the right parieto-occipital region with a centrally located papule of lichen planus

Figure 2: Perifollicular lymphocytic infiltrate of alopecia areata (H&E, 200x)

Figure 3: A band of lymphocytic infiltrate in the upper dermis with plenty of melanin incontinence suggestive of lichen planus (H&E, 100x)
Kanwar et al reported 20-nail dystrophy in a patient of AA due to LP. Brenner et al reported a case of coincidence of five dermatological disorders: vitiligo, AA, onychodystrophy, morphea and LP. Similarly, ulcerative colitis, myasthenia gravis, LP, AA and vitiligo were present in a single patient reported.

Patients with AA were found to be at a higher risk for developing LP (RR = 2.7; 95% confidence interval, 1.1 to 6.5). However, co-localization is very rare. Dhar et al had reported one child with co-localization of lesions both conditions. The incidence of AA in the Indian population is 0.7% whereas it is 0.8% for LP. The coexistence of these disorders may be purely coincidental. Gilhar et al found that induction of AA was possible with injection of CD8+ cells cultured with follicular homogenate but not with cultured CD4+ cells. The T lymphocyte is also pivotal in regulating epidermal cell recognition and epithelial destruction in lichen planus. T cells become activated via antigen-presenting cells such as Langerhans cells in conjunction with epidermal keratinocytes and co-stimulatory molecules. Though both CD4+ and CD8+ T cells are found in the lesional skin of LP, progression of disease leads to the preferential accumulation of CD8+ cells. The majority of the lymphocytes in the infiltrate of LP are CD8+ and CD45RO (memory)-positive cells and express the g/d T-cell-receptor. The ensuing immune reaction by CD8+ T lymphocytes against activated keratinocytes results in epidermal cell damage and development of the lichenoid reaction that is the hallmark of lichen planus.

Further studies might clarify whether co-localization of lichen planus and alopecia areata is a mere coincidence or represents a common pathogenic mechanism in these two predominantly CD8+ T lymphocyte-mediated disorders.

**ANA-negative systemic lupus erythematosus**

Sir,

We report a case of ANA-negative systemic lupus erythematosus diagnosed on the basis of ARA criteria.


Epidemiological evidence of the association between lichen planus and two immune-related diseases alopecia areata and ulcerative colitis. Gruppo Italiano Studi Epidemiologici in Dermatologia Arch Dermatol 1991;127:688-91.


**REFERENCES**


**Figure 1: Scaly skin lesions over malar area of the face**