Case Report

Co-localization Of Alopecia Areata And Lichen Planus: Rare Presentation

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Introduction
Alopecia areata and lichen planus, two common autoimmune dermatologic disorders, are expected to coexist with each other and with other autoimmune conditions. There are enough literatures available for these type of associations. But the occurrence of the two diseases at the same anatomic site is rarely described in the literature. Keeping this in mind, we are reporting a rare case of co-localization of alopecia areata and lichen planus.

Case report
A 30 year old male patient, carpet weaver by occupation, presented to our department in May 2012, with 2 months duration of multiple solid eruptions on scalp and body. The lesions had started in the occipital area of the scalp and gradually progressed over a period of few weeks to appear over limbs and trunk. The lesions were associated with moderate itching. Patient was prescribed some antihistamines and topical steroids for these lesions. Three weeks after the eruptions over the scalp, patient noticed an area of hair loss over the same site of the scalp. There was no significant past history, family history and drug history. General physical and systemic examination was normal. On cutaneous examination, there were multiple discrete and coalesced violaceous papules on the occipital area of the scalp with surrounding area of non-cicatricial hair loss (Figure 1). There were also multiple discrete bilaterally symmetrical violaceous papules and plaques on extremities and trunk (Figure 2). There were reticulate hyperpigmentation found bilaterally symmetrically on the buccal mucosa. Nail examination was normal.

Abstract
Concurrence of alopecia areata and lichen planus, common dermatologic diseases in the general population, in the same patient is not uncommon and it has often been reported in the literature. But, anatomical coincidence of both diseases has rarely been reported. We report a case of co-localization of alopecia areata and lichen planus in a 30 year old male.

Key words: Alopecia areata, Co-localization, Lichen planus
Case Report

**Figure 1:** Flat topped, volaceous papules & plaques of lichen planus at the site of alopecia areata

**Figure 2:** Lesions of lichen planus on the trunk

**Figure 3:** Histopathological examination of the skin biopsy of volaceous papules and the area of alopecia (H & E, 40 X)

Complete blood count, liver function tests, kidney function tests and urine analysis was normal. Skin biopsy from the area of alopecia under hematoxylin and eosin staining showed peri-follicular dense chronic inflammatory infiltrate suggesting the diagnosis of alopecia areata (Figure 3) and that from the volaceous papules over the scalp showed hyperkeratosis, irregular acanthosis, pigment incontinence, band like dermal infiltrate along with max joseph spaces, thus confirming the diagnosis of lichen planus (Figure 3). We are reporting this rare case of co-localization of alopecia areata and lichen planus.

**Discussion**

Disorders of autoimmune pathogenesis occur with increased frequency in patients with another autoimmune disease. The tendency to develop another disease occurs in approximately 25% of these patients. 1, 2

Alopecia areata and lichen planus are common autoimmune disorders in general population (0.7% for alopecia areata and 0.8% for lichen planus in Indian population). 3, 4 Both diseases have been frequently described in association with other autoimmune and endocrinology diseases such as thyroid disease, 5, 6 atopic dermatitis, 7, 8 down's syndrome, 9 ulcerative colitis, 10 celiac disease, 11 hepatitis B & C, 12 diabetes mellitus, bullous pemphigoid, pemphigus vulgaris, vitiligo, pernicious anaemia, morphea, lichen sclerosus et atrophicus, pemphigus foliaceus, addison's disease, lupus erythematosus, and others. 13- 15 Furthermore, concurrence of alopecia areata and lichen planus in the same patient is not uncommon and it has often been reported in the literature. 16-19

Nevertheless, anatomical coincidence of both diseases has rarely been reported. To the best of our knowledge, only few previous reports have
described the coincidence of these two dermatoses within the same lesion.\textsuperscript{20, 21} In this context, we report this case of co-localization of alopecia areata and lichen planus.

Gilhar et al found that induction of alopecia areata was possible with injection of CD8+ cells cultured with follicular homogenate but not with cultured CD4+ cells.\textsuperscript{22} T lymphocyte is also pivotal in pathogenesis of lichen planus. Though both CD4+ and CD8+ T cells are found in the lesional skin of lichen planus, the majority of the lymphocytes in the infiltrate of LP are CD8+ and CD45RO (memory)-positive cells.\textsuperscript{23} 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.

**Conclusion**

Anatomical co-localization of alopecia areata and lichen planus is rarely described in the literature. Our case report of co-localization of alopecia areata and lichen planus may indicate the common immune-pathogenesis of the two autoimmune conditions, involving T cells.

**References**

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