Case Report

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

Hassan I[1], Anwar P[2], Sajad P[3]

[1]Professor & HOD, [2,3]Senior Residents, Department of Dermatology, STD & Leprosy, Govt. Medical College, Srinagar (University of Kashmir), J & K, India.

Address for correspondence

Dr Iffat Hassan Shah

Professor and Head, Department of Dermatology, SMHS Hospital, Srinagar, J& K, India
E-mail: hassaniffat@gmail.com

Citation

Hassan I, Anwar P, Sajad P. Co-localization of alopecia areata and lichen planus: rare presentation. NJDVL 2014; 12(1): 45 - 47.

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*

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 voilaceous 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 voilaceous papules and plaques on extremities and trunk (Figure 2). There were reticulate hyperpigmentation found bilaterally symmetrically on the buccal mucosa. Nail examination was normal.

Case Report

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

Figure 2: Lesions of lichen planus on the trunk

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 voilaceous 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

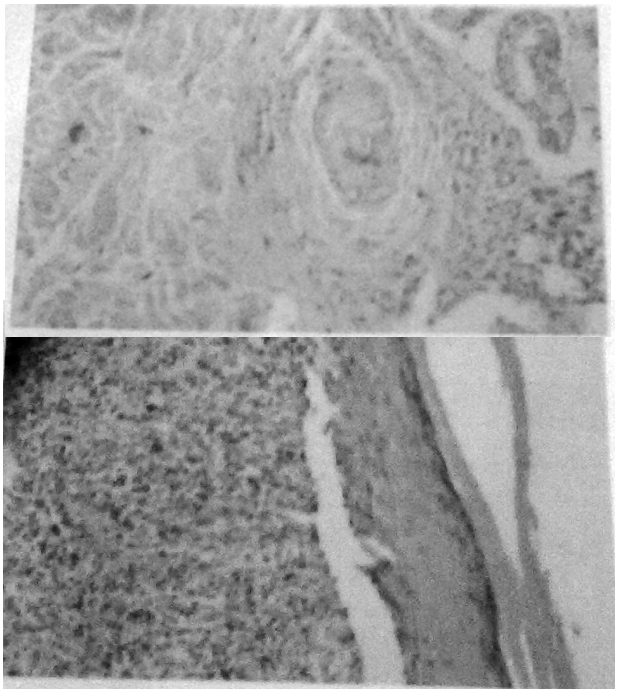

Figure 3: Histopathological examination of the skin biopsy of voilaceous papules and the area of alopecia (H & E, 40 X)

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

Case Report

described the coincidence of these two dermatoses within the same lesion.[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.[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.[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

1. Mohan MP, Ramesh TC. Multiple autoimmune syndrome. Indian J Dermatol Venereol Leprol 2003; 69: 298-9.
2. Humbert P, Dupond JL. Multiple autoimmune syndromes. Ann Med Interne 1988; 139: 159-68.
3. Sharma VK, Dawn G, Kumar B. Profile of alopecia areata in Northern India. Int J Dermatol 1996; 35: 22-7.
4. Singh OP, Kanwar AJ. Lichen planus in India: An appraisal of 441 cases. Int J Dermatol 1976; 15: 752-6.
5. Lewinski A, Dyla GB, Sewerynek E, Melen GZ, Szkudlinski M. Abnormalities in structure and function of the thyroid gland in patients with alopecia areata. J Am Acad Dermatol 1990; 23: 768-9.
6. Puavilai S, Puavilai G, Charuwichitratana S, Sakuntabhai A, Sriprachya-Anunt S. Prevalence of thyroid diseases in patients with alopecia areata. Int J Dermatol 1994; 33: 632-3.
7. Penders AJ. Alopecia areata and atopy. Dermatologica 1968; 136: 395-9.
8. Kaur S, Sharma V, Kumar L, Kumar B. Atopy and alopecia areata in North Indians. Indian J Dermatol Venereol Leprol 2002; 68: 267-9.
9. Brown A, Olkowiskz C, MacLaren J. Alopecia areata and vitiligo associated with Down´s syndrome. Arch Dermatol 1977; 133: 1269.
10. Allen HB, Moschella SL. Ulcerative colitis associated with skin and hair changes. Cutis 1974; 14: 85.
11. De D, Kanwar AJ. Eruptive lichen planus in a child with celiac disease. Indian J Dermatol Venereol Leprol 2008; 74: 164-5.
12. Konidena A, Pavani BV. Hepatitis C virus infection in patients with oral lichen planus. Niger J Clin Pract 2011; 14: 228-31
13. Muller SA, Winkelmann RK. Alopecia areata. Arch Dermatol 1963; 88: 290-7.
14. Madani S, Shapiro J. Alopecia areata: update. J Am Acad Dermatol 2000; 42: 549-66.
15. Thomas EA, Kadyan RS. Alopecia areata and autoimmunity: A clinical study. Indian J Dermatol 2008; 53: 70-4.
16. Tan RS. Ulcerative colitis, myasthenia gravis, atypical lichen planus, alopecia areata, vitiligo. Proc R Soc Med 1974; 67: 195-6.
17. Brenner W, Diem E, Gschnait F. Coincidence of vitiligo, alopecia areata, onychodystrophy, localized scleroderma and lichen planus. Dermatologica 1979; 159: 356-60.
18. Kanwar AJ, Ghosh S, Thami GP, Kaur S. Twenty-nail dystrophy due to lichen planus in a patient with alopecia areata. Clin Exp Dermatol 1993; 18: 293-4.
19. Manzoor S, Masood C. Alopecia areata in Kashmir: A study of 200 patients. Indian J Dermatol Venereol Leprol 2001; 67: 324-5.
20. Dhar S, Dhar S. Colocalization of alopecia areata and lichen planus. Pediatr Dermatol 1996; 13: 258-9.
21. Kar BR, Ebenezer G, Job CK. Colocalisation of alopecia areata and lichen planus. Indian J Dermatol Venereol Leprol 2004; 70: 242-3.
22. Gilhar A, Ullmann Y, Berkutzki T, Assy B, Kalish RS. Autoimmune hair loss transferred by T-lymphocytes to human scalp explants on SCID mice. J Clin Invest 1998; 101: 62-7.
23. Gadenne AS, Strucke R, Dunn D, Wagner M, Bleicher P, Bigby M. T-cell lines derived from lesional skin of lichen planus patients contain a distinctive population of T-cell receptor gamma delta-bearing cells. J Invest Dermatol 1994; 103: 347-51.