

Case Report

Lichen planus/lupus erythematosus overlap with hypothyroidism: a case report

Nabeela Shahzadi, Khawar Khurshid, Sabrina Suhail Pal

Department of Dermatology, Unit II, King Edward Medical University/Mayo Hospital, Lahore, Pakistan

Abstract Lupus erythematosus (LE) and lichen planus (LP) are usually seen as individual entities. Their overlap comprises patients who have clinical, histological and/or immunopathological characteristics of both diseases simultaneously. This rare syndrome has been associated with certain other disorders e.g. vitiligo, pemphigus foliaceus, Hashimoto's thyroiditis and Reynold's syndrome. We report a case of LE/LP overlap associated with hypothyroidism.

Key words

Lichen planus, lupus erythematosus, hypothyroidism

Introduction

Lichen planus (LP) and lupus erythematosus (LE) overlap share features of LP and LE both.¹ Characteristically, atrophic plaques and patches with hypopigmentation, livid red to blue violet color, telangiectasia and scaling are commonly seen on extremities. Classic lesions of LP and discoid lupus erythematosus (DLE) are uncommon. Chances of conversion of the syndrome into systemic lupus erythematosus are 5-10%.² Histologically, a lichenoid reaction characteristic of LP and features of LE are usually present in the same biopsy.³ Direct immunofluorescence (DIF) is helpful in histologically doubtful cases, revealing cytooid bodies staining with IgG, IgM and C3 intraepidermally or at the dermoepidermal junction (DEJ) as seen in classic LP.⁴ Occasionally linear to granular deposits of IgM and C3 as seen in LE are also visible. Oral retinoids, ciclosporin⁵ and

hydroxychloroquine⁶ may be effective in this syndrome.

Case report

A 24-year-old female presented with six-year history of multiple plaques on scalp, neck, back and lips and painful ulceration in the mouth.

On examination plaques were well-defined, 2-4 cm in size with hyperpigmented borders and depressed hypopigmented, scaly center and cicatricial alopecia on the scalp (**Figure 1**). Lips showed scaly, violaceous and atrophic plaques (**Figure 2**). Buccal mucosae revealed bluish lace-like pattern and ulceration (**Figure 3**). Other significant examination finding was a diffuse and soft swelling on front of neck, moving on deglutition.

Histopathology of the skin showed epidermal atrophy, follicular plugging, basal cell vacuolar degeneration, periappendageal infiltrate and interface dermatitis while that

Address for correspondence

Dr. Nabeela Shahzadi,
205-L Block, Model Town (Ext)
Lahore, Pakistan
Ph: +92-42-5166521, +923324336610



Figure 1 Scalp shows well-defined areas of cicatricial alopecia



Figure 2 Lips show plaques with erythematous, violaceous lace like centre and areas of crusting surrounded by hyperpigmented borders



Figure 3 Buccal mucosa reveals erythematous, lace like pattern of ulceration

of oral mucosa revealed parakeratosis, hypergranulosis, acanthosis and interface dermatitis. DIF could not be performed because of lack of facility.

Antinuclear antibody, anti-dsDNA antibodies and complement levels were within normal limits. Thyroid function tests showed values of free T4 16.3 pmol/L (10-25 pmol/L) and TSH 9.03 mU/L (0.3-3.5 mU/L). Treatment included oral prednisolone 40mg and tab thyroxine 50microgram daily resulting in improvement in mucocutaneous lesions and thyroid functions within 6 weeks.

Discussion

To our knowledge, association of LP/LE overlap with hypothyroidism is being reported for the first time.

A genetic, autoimmune, viral or drug etiology has been postulated as a cause of LE or LP.⁷ Perhaps LE and LP are a spectrum of same disease and a viral infection in a genetically predisposed host leads to their presentation. Causes of hypothyroidism include congenital, drugs, iodine deficiency, autoimmune, infective, infiltrative, postsurgical, postradiation and peripheral resistance to thyroid hormone.⁸ In our patient, history regarding causes of LE, LP or hypothyroidism was insignificant.

It is observed that in a genetically predisposed host, diseases with autoimmune etiology may present simultaneously, as highlighted by reported associations of LE/LP overlap with vitiligo,⁷ pemphigus foliaceus⁹ and Reynold's syndrome.¹⁰ LE, LP and hypothyroidism together can be a mere reflection of the autoimmune nature of these disorders or a more complex pathogenetic interplay of other triggering factors e.g. viral, drug, food, stress, sun exposure, iodine deficiency etc. or a combination of these within a single patient.

We have reported this case to add up to the pool of literature regarding LE/LP overlap and its associations. Follow up is mandatory to see the fate of this syndrome and to look for the development of any other autoimmune disease. Detailed history, clinical examination and relevant investigations should be carried out at intervals in these patients.

References

1. Inaloz HS, Chowdhury M, Motley R *et al.* Lupus erythematosus/lichen planus overlap syndrome with scarring alopecia. *J Eur Acad Dermatol Venereol* 2000; **15**: 171-4.
2. Jablonska S, Blaszyk M. Lupus erythematosus. What's new? *J Eur Acad Dermatol Venereol* 2000; **15**: 103-5.
3. Pittelcow MR, Daould MS. Lichen planus. In: Wolff K, Goldsmith LA, Katz SI, eds. *Fitzpatrick's Dermatology in General Medicine*, 7th edn. Philadelphia: McGraw-Hill; 2008. p. 250-*
4. Galliano D, Cardesi E, Gondolfo S *et al.* Keratotic lesions of the oral cavity. Notes on histopathologic differential diagnosis in leukoplakia, lichen planus, lupus erythematosus. Cases investigation. *Minerva Stomatol* 1989; **38**: 481-7.
5. Grasbe S, Kolde G. Coexisting lichen planus and subacute cutaneous lupus erythematosus. *Clin Exp Dermatol* 1995; **20**: 249-54.
6. Tursen U, Oz O, Ikizoglu G *et al.* A case of lichen planus lupus erythematosus overlap syndrome with eyelid involvement. *Eur J Ophthalmol* 2002; **12**: 244-6.
7. Ahmed AR, Patricia S, Abramovits W *et al.* Coexistence of lichen planus and systemic lupus erythematosus. *J Am Acad Dermatol* 1982; **7**: 478-83.
8. Jameson JL, Weetman AP. Disorders of the thyroid gland. In: Kasper DL, Braunwald E, Fauci AS, eds. *Harrison's Principles of Internal Medicine*, 16th edn. Philadelphia: McGraw-Hill; 2005. p. 2104-27.
9. Ng PP, Ng SK, Chng HH *et al.* Pemphigus foliaceus and oral lichen planus in a patient with systemic lupus erythematosus and thymoma. *Clin Exp Dermatol* 1998; **23**: 181-4.
10. Muller FB, Groth W, Mahrle G *et al.* Multiple autoimmune syndrome. Reynolds syndrome (acral scleroderma, primary biliary cirrhosis, Sjogren's syndrome) associated with the lupus erythematosus/lichen planus overlap syndrome. *Hautarzt* 2004; **55**: 465-70.

JPAD is also available online

www.jpap.org.pk