

CASE REPORT



Case reports of two clinical forms of oral lichen planus with review of literature

Tejavathi Nagaraj, C. K. Sumana, Arundhati Biswas, Haritma Nigam

Department of Oral Medicine and Radiology, Sri Rajiv Gandhi College of Dental Sciences, Bengaluru - 560032, Karnataka, India

Keywords:

Erosive type of lichen planus, immunological, reticular lichen planus, topical corticosteroids, Wickham's striae

Correspondence:

Dr. C. K. Sumana, Department of Oral Medicine and Radiology, Sri Rajiv Gandhi College of Dental Sciences, Bengaluru - 560032, Karnataka, India.
Phone: +91-9901034300.
E-mail: drsumanack83@yahoo.com

Received: 02 December 2018;

Accepted: 25 January 2018

doi: 15713/ins.jmrps.121

Abstract

Oral lichen planus (OLP) is an immune-mediated and inflammatory mucocutaneous lesion. Reticular form is usually asymptomatic and erosive form is present as symptomatic erythematous areas in the oral cavity intermixed with lacy white lines, most commonly in the buccal mucosa. Typical clinical features will aid in diagnosis, but biopsy is essential to arrive at the diagnosis and to exclude dysplastic changes in erosive form. This is a case report of two different clinical forms of OLP.

Introduction

Dr. Erasmus Wilson first described lichen planus in 1869.^[1] It is a common immune-mediated mucocutaneous lesion which affects the skin and mucosa. Etiology is not clearly understood. Most common in middle aged and rare in children.^[2] Females are affected more than males.^[3]

Reticular lichen planus is usually asymptomatic, but erosive type is associated with pain and burning sensation of the mucosa.^[4] Diagnosis is confirmed by histopathological examinations. Topical steroids are the first line of management. Regular follow-up is essential.

Case Reports

Case 1

A female patient aged 35 years, came to the Oral Medicine Department, complaining of burning sensation of the cheek mucosa for 2 months. It was insidious and was aggravated on having hot and spicy food. Past dental history revealed that patient had undergone endodontic treatments 3 months

back. Her medical history and personal history were non-contributory. The patient revealed that she was under stress and tension.

Intraoral examination showed reddish areas with irregular whitish plaques on the right buccal mucosal region measuring about 2 cm × 1 cm, along with the third molar region [Figure 1]. Left buccal mucosal area showed white thin, lacy lines (Wickham's striae) arranged in ring-like pattern (annular). Pattern was seen on measuring about 2 cm × 1.5 cm in size extending from premolar to molar region.

Provisional diagnosis was given as erosive lichen planus on the right buccal mucosal region and reticular lichen planus on the left buccal mucosal region.

Biopsy (incisional) was performed for the erosive lichen planus on the right buccal mucosal region. Histopathological reports confirmed erosive lichen planus.

The patient was prescribed topical steroids containing triamcinolone acetonide for twice daily application. She was on regular follow-up, every 2 weeks for 4 months.

Patient is under regular follow-up and is symptom free [Figure 2].



Figure 1: Erythematous areas with scattered, irregular white keratotic flecks on the right buccal mucosa



Figure 3: Thin white lacy lines (Wickham's striae) arranged in reticular pattern on left buccal mucosa



Figure 2: Healed lesions on the right buccal mucosa after the treatment



Figure 4: Healed lesions on the left buccal mucosa after the treatment

Case 2

A female patient aged 51 years, came with a chief complaint of burning sensation in the cheek region while having hot and spicy food for 1 month. Medical history revealed that she is suffering from hypothyroidism for 5 years and is on medication.

On intraoral examination, left buccal mucosa showed thin white, lacy lines (Wickham's striae) arranged in reticular pattern measuring about 2 cm × 2 cm in size, extending from 37 up retromolar area, surrounded by normal mucosa [Figure 3]. The patient was advised for incisional biopsy, and histopathological report confirmed the diagnosed.

The patient was advised for topical corticosteroids for 15 days, and the patient was symptom free. Moreover, lesions were healed [Figure 4].

Discussion

Cutaneous lichen planus was first described and named by Erasmus Wilson in 1869. Thieberg reported the oral lesion in 1869.^[5] Prevalence of oral lichen planus (OLP) worldwide is about 1–2%. In India, 1.5–2% of the population suffers from this disorder. Females are affected more than males and common among the middle-aged population.^[6,7]

The etiology of OLP is unknown. It OLP appears to be a T cell-mediated autoimmune disease. Various causative factors considered are genetic, medications, autoimmune conditions, reduced immunity, psychological stress, Type 2 diabetes mellitus,^[8] and irritation from various factors such as dental materials, human papillomavirus, food allergy, and injury from sharp edge of dentures.^[1] Our patient gave a history of stress because of family problems.

OLP has a strong correlation with psychogenic factors such as stress and anxiety. It was found that, during this period, there is elevation of cortisol level in blood and saliva leading to a conclusion of the strong association of stress and development of OLP.^[9]

Types of OLP are as follows:

Reticular type

This is seen as white fine, thin striae arranged in an annular, circular, or reticular pattern (Honiton lace). These striations

are surrounded by an erythematous zone, which shows the inflammation of the subepithelial layer.^[2] Most commonly seen is buccal mucosa and vestibular region and rarely seen on mucosal side of lips, tongue, and gingiva.^[9]

Papular type

It is characterized by small pinpoint white papules of about 0.5 mm in size, later coalesce to form reticular pattern giving a pebbly white or gray appearance.^[9]

Plaque like

It clinically presents as homogenous whitish patch/plaque, surrounded by striae. Tongue and buccal mucosa are the commonly occurring sites.^[8] It is usually associated with tobacco smoking and has a poor prognosis.

Atrophic, erythematous type

It is seen as erythematous area with striations at the periphery.^[8] Most common site is attached gingiva.^[9]

Erosive, ulcerative, and bullous type

Ulcerative form is seen as pseudomembranous ulcers with whitish plaques and an erythematous area frequently showing radiating white lines/striae. Size of the bullae may range from 4 mm to 2 cm and easily ruptures leaving an erythematous area.^[7] Common site of occurrence is tongue and buccal mucosa at the line of occlusion particularly adjacent to the second and third molar region. These types of lichen planus can affect the quality of life of patient as it is symptomatic.^[9]

Histological examination shows dense, continuous, band-like infiltration of lymphocytes with “saw tooth” rete pegs in stratum basale. “Colloid or Civatte bodies” are seen which are eosinophilic remnants of anucleate apoptotic basal cells.

Direct immunofluorescence testing shows a band-like pattern due to the deposition of fibrinogen in the epithelial basement membrane, and enzyme-linked immunosorbent assays can also be helpful in confirmation of the diagnosis, especially when desquamative gingivitis is present.^[4]

The differential diagnosis for erosive lichen planus includes lichenoid drug reactions,^[2] non-homogenous leukoplakia, erythematous candidiasis, erythema multiforme, pemphigus vulgaris, bullous pemphigoid, secondary syphilis, and lupus erythematosus.^[1]

Corticosteroids are effective treatment modality to reduce signs and symptoms of erosive lichen planus.

In symptomatic OLP, topical corticosteroids such as 0.05% fluocinonide,^[2] betamethasone,^[4] hydrocortisone hemisuccinate, fluticasone propionate spray and betamethasone sodium phosphate mouth rinse,^[5] mometasone furoate,^[7] and clobetasol propionate 0.05% are available in different forms such as orabase, ointment, sprays, or aqueous

solution which have shown effectiveness to relieve pain and burning sensation in erosive lichen planus in many reported literatures.^[8]

Clobetasol propionate (0.05%) orabase paste tray application with nystatin 100,000 IU/ml has been found to be effective for severe erosive gingival lesions and was also found to be as useful as tacrolimus 0.1% in treatment.^[8] 0.1% Triamcinolone acetonide in orabase has shown better results than cyclosporine solution, pimecrolimus 1% cream.

Reported adverse reactions of topical corticosteroids include oral candidiasis, abdominal pain, or discomfort. Burning sensation was reported with the use of tacrolimus ointment and pimecrolimus cream. Erosive or atrophic forms can be problematic while performing daily teeth brushing leading to accumulation of dental plaque and candidiasis.^[9]

Lesions which do not respond to topical therapies can be treated with intralesional corticosteroids like triamcinolone acetonide 5 mg/ml. Depending on the severity of lesion, systemic prednisone 30–60 mg is usually administered.^[3]

Cyclosporine and retinoids are also used as adjuvants in combination with topical steroids.

Various other medications used are 100 mg dapsone once a day for 3 months, azathioprine: 150 mg/day, levamisole (150 mg/day for 3 consecutive days in 1 week), thalidomide (200 mg/day), or as 1% topical paste, PUVA therapy also has been shown to be effective in treatment of OLP.^[7]

Conclusion

Lichen planus is a T-cell-mediated immunological potentially malignant disorder caused by various factors and clinically ranging from an asymptomatic lesion to a severe ulcerative lesion. Topical steroids alone or with other adjuvant immunomodulatory drugs are the treatment of choice. The strong association of OLP was seen with psychological factors, and hence, psychiatric counseling is also proven to be effective in the management. Follow-up of the patient for a long term is a must because of its high rate of malignant transformation.

References

1. Gorouhi F, Davari P, Fazel N. Cutaneous and mucosal lichen planus: A comprehensive review of clinical subtypes, risk factors, diagnosis, and prognosis. *ScientificWorldJournal* 2014;2014:742826.
2. Patil A, Prasad S, Ashok L, Sujatha GP. Oral bullous lichen planus: Case report and review of management. *Contemp Clin Dent* 2012;3:344-8.
3. Cheng S, Kirtschig G, Cooper S, Thornhill M, Leonardi-Bee J, Murphy R, *et al.* Interventions for erosive lichen planus affecting mucosal sites. *Cochrane Database Syst Rev* 2012;12(5):125-133
4. Carrozzo M. How common is oral lichen planus? *Evid Based Dent* 2008;9:112-3.

5. Wilson E. On lichen planus. *J Cutan Med Dis Skin* 1869;3:117-32.
6. Greenberg MS, Glick M, Ship JA. *Burkets Oral Medicine*. 11th ed. Hamilton: BC Decker Inc.; 2008.
7. Rajendran R. Oral lichen planus. *J Oral Maxillofac Pathol* 2005;9:3-5.
8. Roopashree MR, Gondhalekar RV, Shashikanth MC, George J, Thippeswamy SH, Shukla A, *et al.* Pathogenesis of oral lichen planus – A review. *J Oral Pathol Med* 2010;39:729-34.
9. Madalliet V, Basavaraddi SM. Lichen planus – A review. *IOSR-J Dent Med Sci* 2013;12:61-9.

How to cite this article: Nagaraj T, Sumana CK, Biswas A, Nigam H. Case reports of two clinical forms of oral lichen planus with review of literature. *J Med Radiol Pathol Surg* 2018;5:19-22.