Journal of Advanced Clinical & Research Insights (2019), 6, 53–56

CASE REPORT

Oral lichen planus: A case series

Durga Okade, Tejavathi Nagaraj, Poonam Sahu, Swati Saxena, Arundhati Biswas, Soniya Kongbrailatpam

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

Keywords:
Cytotoxic CD8+ T cells, matrix metalloproteinase, mucocutaneous

Correspondence:
Dr. Poonam Sahu, Department of Oral Medicine and Radiology, Sri Rajiv Gandhi College of Dental Sciences, Bengaluru, Karnataka, India. Phone: +91-9845347985. E-mail: poonam_sahu@yahoo.com

Received 09 February 2019;
Accepted 20 March 2019

doi: 10.15713/ins.jcri.259

Abstract

Oral reticular lichen planus (OLP) is a common mucocutaneous disease of uncertain cause. The disease seems to be autoimmune disease in which the apoptosis is triggered by CD8+T cells and non-specific mechanisms such as activation of matrix metalloproteinase and degranulation of mast cell. It is most often reported in patients with 30–60 years of age, group with a gender predilection, and female-to-male ratio of 1.4:1. This article is a case series of different forms and appearances of OLP with etiopathogenesis, clinical presentation, oral findings, diagnosis, malignant transformation potential, and treatment of OLP.

Introduction

Oral lichen planus is a chronic mucocutaneous disease affecting stratified squamous epithelium. Oral reticular lichen planus (OLP) is thought to be quite common, nearly 1–2% of the population is affected.[1] Lichen planus has both skin and oral lesions. The skin lesions are self limiting and pruritic, whereas the Oral lesions are rare, long standing, has periods of remission and exascerbation, potentially malignant disorder and often a source of morbidity. Clinically, the oral lesions have been classified into various forms – reticular, papular, plaque like, atrophic, erosive, and bullous forms.[2] It usually occurs in a symmetrical pattern bilaterally, commonly affecting buccal mucosa, gingivae, and dorsum of the tongue. Pain and burning sensation may be associated with erosive and atrophic forms, although it is painless in most cases.[3,4]

1st Case Report

A male patient aged 40 years reported to the oral medicine and radiology department, complaining of deposits and stains on teeth surface and wants to get it cleaned. His built was moderate and nourished moderately as well. On examination, intraorally revealed on inspection a grayish-white patch seen on the left and right buccal mucosa measuring about 1 cm × 2 cm in size extending from the mesial aspect of 37 to retromolar area on the left side and extending from distal aspect of 46 to distal aspect of 47 on the right side with white striae [Figure 1a and b]. On palpation, it was non-scrapable and non-tender suggestive of OLP. After taking informed consent from the patient, incisional biopsy was performed and a final diagnosis of OLP was given. The patient was counseled and Turbocort ointment local application was advised twice daily for 3 weeks.

2nd Case Report

A female patient aged 42 years reported to the oral medicine and radiology department, complaining of burning sensation of mouth for 2 months. Her built was moderate and nourished moderately as well. The patient had visited private dental practitioner 1 month back and was prescribed some mouth gel, a week back she consulted another practitioner who prescribed Kenacort ointment to be applied for 15 days. Intraoral examination revealed well-defined hyperpigmented patches measuring 1.5 cm × 2.0 cm with white striae along the borders, on the left buccal mucosa, one and on the right buccal mucosa, two patches [Figure 2a and b]. On palpation, non-scrapable and non-tender suggestive of post-inflammatory OLP. On histopathologic examination, the diagnosis of OLP was confirmed and the patient was prescribed tablet Wysolone

10 mg, thrice for 2 weeks followed by tapering also capsule Lycored, once for 2 weeks. Follow-up of the patient showed decrease in the symptoms followed by complete resolution.

3rd Case Report

A female patient aged 49 years reported to the oral medicine and radiology department, complaining of missing teeth in both the arches for 1 year. Her built was moderate, nourished well and gait was normal. On intraoral examination, two white patches seen over the dorsum of the tongue measuring about 2 cm × 3 cm in size with white striations seen over it [Figure 3]. Over the marginal and attached gingiva, white striations are seen in relation to 14, 15 and 24, 25. On the lower right buccal mucosa,

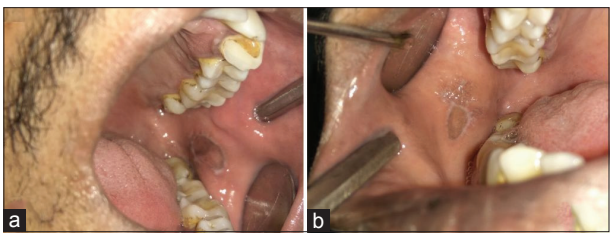

Figure 1: (a and b) Grayish-white patch seen on the left and right buccal mucosa

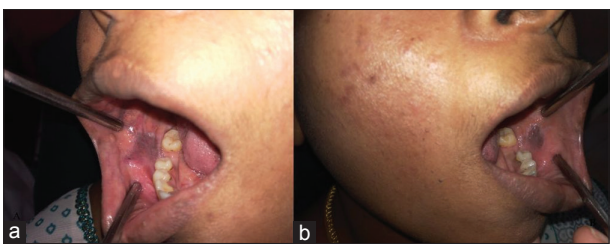

Figure 2: (a and b) Hyperpigmented patch with white striae along the borders on the left buccal mucosa and two hyperpigmented patches seen on the right buccal mucosa

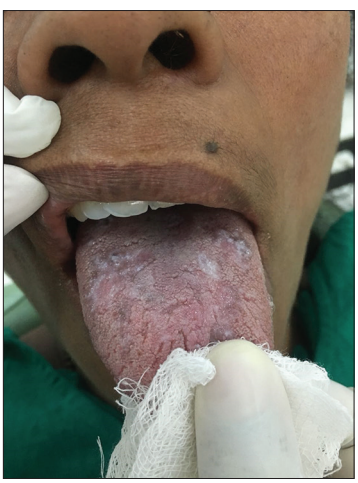

Figure 3: White patch seen over the dorsum of tongue

a white patch was seen measuring about 1.5 cm × 2.5 cm in size, extending into the buccal vestibule present in relation to 44, 45 and 46 (missing tooth) with striations seen along the borders and wrinkled appearance [Figure 4a and b]. On palpation, it is non-scrapable and non-tender suggestive of OLP on the tongue on dorsal surface, gingiva, and buccal mucosa. Topical antifungal therapy with clotrimazole 1%, t.i.d/day for 1 week, and follow-up showed improvement.

4th Case Report

A female patient aged 41 years reported to the oral medicine and radiology department, complaining of fractured dental filling and wants to get it filled. She was well built, nourished well and gait was normal. On intraoral examination, a diffuse grayish-white patch is seen bilaterally symmetrical on the left and right buccal mucosa with papillary pattern seen extending from retrocommissural area to retromolar area and upper to lower buccal vestibular region [Figure 5]. On palpation, it is non-scrapable and non-tender suggestive of papillary form of OLP.

In the above two cases, topical application of 1% triamcinolone

Figure 4: (a and b) White striations seen over the attached and marginal gingiva. White patch seen on the lower right buccal mucosa extending into buccal vestibule with white striations

Figure 5: Grayish-white patch seen on the left and right buccal mucosa

paste was prescribed, 3 times daily for 3 weeks followed tapering during the following 9 weeks until a maintenance dose of 2–3 times was reached.

Discussion

Reticular lichen planus is an immunologic disorder with an uncertain cause characterized by T-cell infiltration into the epithelium, leading to inflammatory changes and cell death.[5] Certain parts such as the skin and oral cavity are mainly involved, also evident in other parts such as scalp, nail, and mucosa of the vagina in females.[5,6]

Oral lichen planus prevalence in the general population ranges between 0.5% and 2.6%.[6] The affected individuals are in the age group of 30–60 years with female predilection and uncommon in children.[2] In our case report, affected patients were of both genders in the age range of 40–50 years, which comes under the age group in which lichen planus is common. Although origin is uncertain, Ismail *et al*. listed the etiology and aggravating factors for OLP and reactions to medications such as antimalarial, antiretroviral, diuretics, and gold salts, dental materials such as dental amalgam, composite, and resin-based materials, and metals others such as genetics, chronic liver disease and hepatitis C virus, and habit of tobacco chewing.

In our case reports, there were no external agents like those mentioned above that could have initiated oral lichen planus. In genetically susceptible individuals, Cell mediated immunity influenced by external environmental /internal physiological factors are crucial for the pathogenesis of the disease. Destruction of the tissue is caused by increased production of cytokines and exaggerated expression of Intercellular adhesion molecule (ICAM) by the activated T lymphocytes and major Histocompatibility complex Type II by keratinocytes. The result is immune-mediated degeneration, lysis, and finally, cells of the basal layer are dissolved.[7]

Acute exacerbation of the disease is most frequently caused by stress. Patients are more concerned about the malignant transformation and its consequences rather than the mild discomfort like burning sensation of mouth. Therefore, the counseling of patients with OLP is needed to minimize the stress level. The various clinical forms of OLP have been described as reticular, papular, plaque like, erosive, atrophic, and bullous.[6,7]

The types of lichen planus are as follows: Reticular, papules, plaque type, atrophic or erythematous type, and erosive type, including ulcerations and bullous lesions. The reticular types are asymptomatic, whereas the erythematous and erosive ones cause discomfort like the burning sensation.

Clinically, the lesions in the oral cavity are usually bilateral and diffuse, seldom unilateral. OLP can involve any part of the oral cavity; however, the primary sites involved are the buccal mucosa, gingiva, and tongue.[8] The clinical presentation is white lines in a reticular (network) pattern. In the cases presented here, the anatomical sites of the lesion were the tongue, buccal mucosa, and lower lip and skin. Over the buccal mucosa was striae, reticulated, whitish with bilateral presentation, and a whitish papule over the tongue.

The skin involvement occurs in 15% of all cases. It is uncommon to find oral and skin involvement simultaneously in a patient. In few cases, the skin manifestation was on the lower limbs and extraorally on the lips. Cases of lichen planus isolated to a single site are rare,[7] and the cases involving multiple sites are in accordance as given in literature. Differential diagnoses include lichenoid reactions due to drug usage, contact reactions with silver amalgam, leukoplakia, systemic lupus erythematosus, and graft versus host disease. The clinical and histopathological findings confirm the diagnosis. The presence of band-like infiltration of lymphocytes in the subepithelial layer and the basal layer disintegration with histopathological features were consistent with the diagnosis.

The candidal infection due to the use of medications or irritation from ill-fitting prosthesis and factors that modify the clinical appearance should be evaluated with regular follow-up.[8] The severity and the discomfort of the lesion forms the basis for the treatment modality to be considered. Unfortunately, there is no permanently cure for the lesions, only symptomatic relief can be given. Topical or systemic medications can be prescribed. An elixir or oral carrier of dexamethasone, clobetasol, and triamcinolone has been used in patients with oral involvement.[3] For oral lesions, dexamethasone 0.1 mg/ml and clobetasol propionate 0.5 g/g in the cream form for local application over the lip. According to Ismail *et al*., oral hygiene maintenance can make the healing faster and alleviate symptoms and aggravating factors should control or remove.

Management with electrocoagulation, cryosurgery, and laser therapy has been performed, but surgical excision is not the treatment of choice due to the potential inflammation, which has chances of recurrence.[6]

The malignant transformation frequency ranges from 0.4 to 5%, more with erythematous and erosive forms of the lesion. Krutchkoff and Eisenberg used the term lichenoid dysplasia to describe lesions that resemble OLP but that is dysplastic.[9] Loss of heterozygosity (LOH) seen in squamous cell carcinoma similar genetic changes is also seen in OLP. Zhang *et al*. found a low LOH (6%) in OLP without dysplasia when compared with OLP with dysplasia (40% for dysplasia average).[9] These findings of epithelial dysplasia in OLP support the finding of risk of malignancy in the lesion.[10]

It is a chronic, immunologically mediated genodermatoses which is most frequently causes significant burning sensation and discomfort to the patient. A treatment modality of lichen planus includes the accurate diagnosis by biopsy and histopathological examination and the appropriate drug usage. To begin with symptomatic cases are first treated with topical antifungal therapy- Clotrimazole 1%, thrice a day for a week. If the symptoms have subsided regular follow up once in 3 months, if not treat with topical steroids triamcinolone acetonide 0.1%, thrice a day till the symptoms improve (maximum for one month) fluocinolone acetonide 0.025%, clobetasol propionate 0.05%, and mometasonefuroate 0.1% all are given with tapering the dose. In case of no relief in symptoms topical and systemic steroids are combined in a combination therapy. For Eg; Tab.

Prednisolone 10 mg thrice for 2 weeks; 10 mg twice a day for 1 week; 10 mg once a day for 1 week and 5 mg once in 2 days(thrice). Intralesional steroids, immunomodulators, PUVA therapy, and newer drugs such as mycophenolate mofetil, tacrolimus, and pimecrolimus can be used.

Lichen planus patient with cutaneous manifestation should always be referred for dermatological consultation. In other words, there should be multidisciplinary approach for the management and regular follow-up is needed due to the reported potential of malignant transformation.

Conclusion

Oral lichen planus is having mucocutaneous manifestation, though it is multifactorial, stress is the most common etiologic factor nowadays and has to be managed first by counseling the patient and need to be followed up for at least 3 months. It is confirmed with incisional biopsy. Systemic and topical therapy can be given; in case, the symptoms do not subside with topical application of antifungals and corticosteroids. The physician should choose the appropriate mode of treatment/drug based on clinical situation.

References

1. Carrozzo M. How common is oral lichen planus? Evid Based Dent 2008;9:112-3.
2. Andreasen JO. Oral lichen planus. A clinical evaluation of cases. Oral Surg Oral Med Oral Pathol 1968;25:31-42.
3. Scully C, El-kom M. Lichen planus: Review and update on pathogenesis. J Oral Pathol 1985;14:431-58.
4. Brown KS, Bottomley WK, Puente E, Larigne GL. A retrospective evaluation of 193 patients with oral lichen planus. J Oral Pathol Med 1993;22:69-7.
5. Scully C, Carrozzo M. Oral mucosal disease: Lichen planus. Br J Oral Maxillofac Surg 2008;46:15-21.
6. Ismail SB, Kumar SK, Zain RB. Oral lichen planus and lichenoid reactions: Etiopathogenesis, diagnosis, management and malignant transformation. J Oral Sci 2007;49:89-106.
7. Einsen D. The clinical features, malignant potential, and systemic associations of oral lichen planus: A study of 723 patients. J Am Acad Dermatol 2002;46:207-14.
8. Epstein JB, Wan LS, Gorsky M, Zhang L. Oral lichen planus: Progress in understanding its malignant potential and the implications for clinical management. Oral Surg Oral Med Oral Pathol Oral Radiol Endod 2003;96:32-7.
9. Krutchkoff DJ, Eisenberg E. Lichenoid dysplasia: A distinct histopathologic entity. Oral Surg Oral Med Oral Pathol 1985; 60:308-15.
10. Zhang L, Cheng X, Li Y, Poh C, Zeng T, Priddy R, *et al*. High frequency of allelic loss in dysplastic lichenoid lesions. Lab Invest 2000;80:233-7.

How to cite this article: Okade D, Nagaraj T, Sahu P, Saxena S, Biswas A, Kongbrailatpam S. Oral lichen planus: A case series. J Adv Clin Res Insights 2019;6:53-56.