Case Report

Unilateral lichen planus: A rare case report

Manas Bajpai, Deshant Agarwal, Anindya Bhalla[1], R. M. Vatchala Rani[2], Malay Kumar[3]

Departments of Oral and Maxillofacial Pathology, and 1Public Health Dentistry, National Institute of Medical Sciences Dental College, Jaipur, [2]Departmens of Oral and Maxillofacial Pathology, Faculty of Dentistry, Jamiya Miliya Islamiya University, Delhi, [3]Department of Oral and Maxillofacial Pathology, Ahmedabad Dental College, Ahmedabad, India
Address for correspondence:
Dr. Manas Bajpai 104 Vaibhav Apartments Sethi colony Jaipur, Rajasthan India.
E-mail: dr.manasbajpai@gmail.com

Abstract

Oral lichen planus (OLP) is a mucocutaneous disease with well-established clinical and histopathological features. It has a prevalence of approximately 1%. The etiopathogenesis is poorly understood. The annual malignant transformation is less than 0.5%. There are no effective means to either predict or to prevent such event. Clinically, OLP present as bilateral symmetrical lesion and hence lichen planus isolated to a single oral site other than the gingiva is very uncommon. On the other hand lichenoid reaction (LR) are the lesions which are similar clinically and histopathologically with OLP, but they are induced with some drug reaction and usually they do not show bilateral pattern like lichen planus. We reported a very uncommon case of unilateral lichen planus which was clinically diagnosed as LR, but in the absence of any cause-effective relationship biopsy was taken for histopathological examination Histopathologically, LR cannot be differentiated with OLP, so the final diagnosis was made on the immunohistochemical ground.

Key words: Immunohistochemistry, lichenoid reaction, oral lichen planus, unilateral

INTRODUCTION

Lichen planus is a common mucocutaneous disease. It was first described by Wilson in 1869 and is thought to affect 0.5-1% of the world's population.[1] The condition can affect either the skin or mucosa or both. About half of the patients with skin lesions have oral lesions, whereas about 25% present with oral lesions alone.[2,3] Cutaneous lesions typically present as small (2 mm) pruritic, white to violaceous flat-topped papules, which can increase in size to as much as 3 cm.[4]

Oral lichen planus (OLP) is a chronic disease that can persist in some patients for a long time. In contrast to cutaneous lichen planus, the oral form may persist for up to 25 years.[3]

Oral lesions may coexist with lesions of the genital mucous membranes or with lesions of cutaneous lichen planus.[4] It affects woman more often than men in a ratio 2:3.[3,4]

OLP presents as white striations, white papules, white plaques, erythema, erosions, or blisters affecting predominantly the posterior buccal mucosa (90%), tongue (30%), and gingival/alveolar ridge (13%); but rarely seen on the palate or lip vermillion.[5]

They are usually symmetrical and bilateral lesions or multiple lesions in the mouth[3] and hence lichen planus isolated to a single oral site other than the gingiva is very uncommon.[5]

CASE REPORT

A 34-year-old male patient reported to a dental clinic with the chief complain of grayish white patch on right buccal mucosa, but had not experienced any burning sensation or other local discomfort [Figure 1]. Patient had a habit of snuff inhalation of four to five packets daily from last 7 years, but patient did not provide any drug history and he did not go through with any dental procedure till the date. Intraorally a unilateral, grayish white non-scrapable patch was examined extending from 44 to 48 measuring about 3 × 4 cm, but no cutaneous lesion was detected on general examination. According to the clinical features we thought of oral sub mucous fibrosis (but no bands could be palpated and mouth opening was normal), lichenoid reaction (LR; but no cause-effective relation could be established on the basis of the history given by patient), and lichen planus (but the lesion was unilateral). In order to lead to a final diagnosis, incisional biopsy was taken and sent for histopathological examination.

Histopathollogicaly, a parakeratinized epithelium with liquefaction degeneration of basal cell layer [Figure 2] and subepithelial band of chronic inflammatory cells which is chiefly composed of lymphocytes were seen [Figure 3], the features are very similar to lichen planus but any unilateral lichen planus on buccal mucosa could not be reported till date so we had to go for immunohistochemical staining. The pathogenesis of lichen planus is totally different with LR and oral submucous fibrosis and it has been advocated that CD8 + T cells are responsible for the basal cell degeneration in lichen planus.[6] So the immunohistochemical staining with CD8 + precursor cells was done. Immunohistochemical staining showed a strong positive expression of CD8 + T cells subepithelialy [Figure 4]. The final diagnosis of OLP was given.

DISCUSSION

OLP is a T cell mediated chronic inflammatory oral mucosal disease of unknown etiology. OLP presents as white striations, white papules, white plaques, erythema, erosions, or blisters affecting predominantly the buccal mucosa, tongue, and gingiva.[7] Lichen planus isolated to a single oral site other than the gingiva is very uncommon. The term OLP is now considered to represent those lesions where no trigger can be identified and are hence "idiopathic", whereas all other lesions that are associated with drug intake, systemic disease (such as chronic liver disease), food or flavor allergies, hypertension, and diabetes mellitus are considered as lichenoid lesions.[8] Oral lichenoid lesions are similar to those of OLP. They can be distinguished from OLP lesions by their close relationship with resin or other metal restorations, and their tendency to be localized and asymmetrically distributed.[8] Drug induced LRs may resolve promptly when the offending drug is eliminated.[9] In contrast, OLP appears most commonly as a bilateral lesion.[10] This distinction may not hold

Figure 1: Grayish white lesion on right buccal mucosa

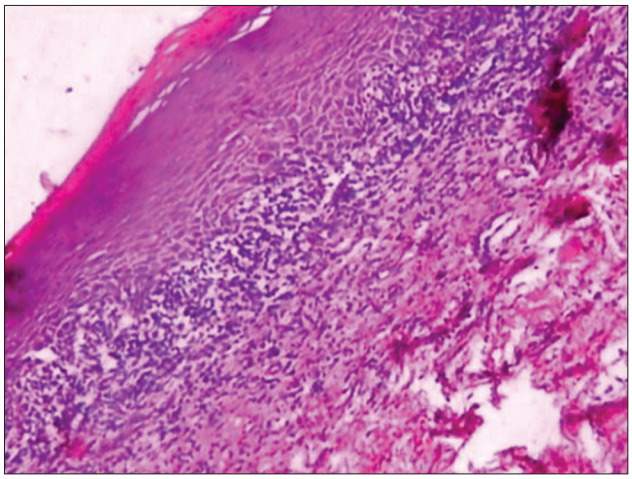

Figure 2: Liquefaction degeneration of basal cell layer (H and E ×10)

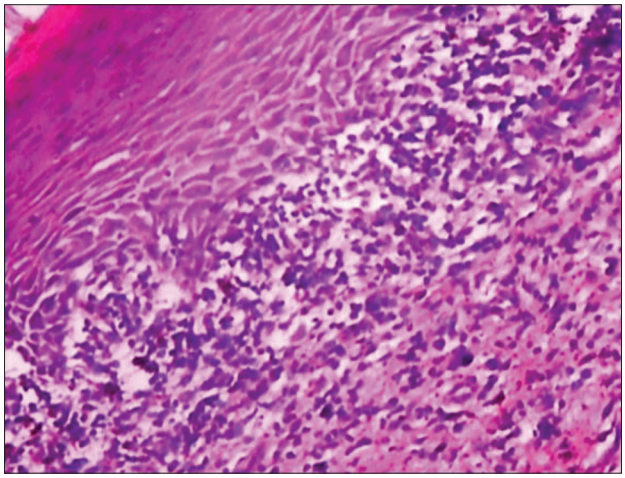

Figure 3: Chronic inflammatory cell infiltration beneath the epithelium (H and E staining, ×40)

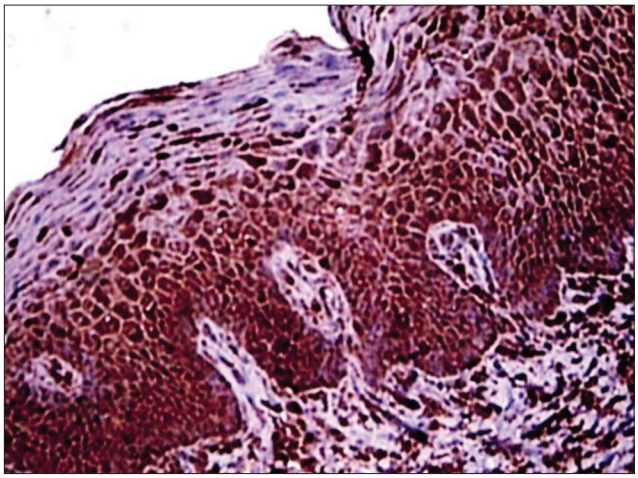

Figure 4: Positive CD 8 + T cell expression for lymphocytic infiltration beneath the epithelium (immunohistochemical staining, ×40)

true in exceptional cases of unilateral presentation of OLP, when no triggering factors can be identified. The distinction becomes even more difficult in the absence of skin lesions. An incorrect diagnosis may have serious implications in the treatment planning for such patients. So far, research has focused on immunological aspects in order to distinguish the two, and various studies have reported differences between them.[6-8] However, precise distinction between them still cannot be made using routine histopathological techniques. Histopathologically, the sub epithelial infiltration of chronic inflammatory cells in OLP is chiefly made up of lymphocyte without having neutrophil and eosinophils; in contrast, the sub epithelial infiltration of chronic inflammatory infiltrate of LR shows substantial numbers of plasma cells, eosinophils, and neutrophils.[9-11] The infiltration of OLP is mainly represented by CD8 + suppressor-cytotoxic cells. Previous studies have showed that CD8 + T cells constitute a high proportion of the cellular infiltrate in OLP.[11]

In the presented case, a 34-year-old male patient complained of unilateral non-scrapable patch of grayish white color without any pain or any other discomfort, it was found that patient was devoid of any cutaneous lesion and he was not taking any medication and did not go through any dental treatment, so the cause-effect relationship could not be established. Histopathologically, the lesion showed typical features of OLP, but it cannot be differentiated with LR on solely histopathological basis.[12]

Immunohistochemical staining was done for CD8 + T cell, a positive reaction beneath the epithelium towards the basement membrane was noted which gave a final diagnosis of OLP.

CONCLUSION

There are several oral lesions that resemble lichen planus or that even are indistinguishable from lichen planus clinically and histopathologically, but having a distinct etiology. Occasionally, it is difficult, if not impossible, to arrive at an accurate diagnosis. It has been described that concluding with a final diagnosis, clinical and histopathological features have to be correlated carefully but in a rare case like this it is not possible. Immunohistochemical staining by using CD4 and CD8 markers are very useful in order to reach the final diagnosis. Because the treatment for both pathologies are distinct and considering that one of them should be more carefully followed due to the risk of malignant transformation.

REFERENCES

1. Bouquot JE, Gorlin RJ. Leukoplakia, lichen planus, and other oral keratoses in 23,616 white Americans over the age of 35 years. Oral Surg Oral Med Oral Pathol 1986;61:373-81.
2. Andreasen JO. Oral lichen planus. 1. A clinical evaluation of 115 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. Sugerman PB, Savage NW, Walsh LJ, Zhao ZZ, Zhou XJ, Khan A, *et al*. The pathogenesis of oral lichen planus. Crit Rev Oral Biol Med 2002;13:350-65.
5. Zakrzewska JM. Re: Mollaoglu N. Oral lichen planus: A review. Br J Oral Maxillofac Surg 2000;38:370-7.
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. Roopashree MR, Gondhalekar RV, Shashikanth MC, George J, Thippeswamy SH, Shukla A. Pathogenesis of oral lichen planus: A review. J Oral Pathol Med 2010;39:729-34.
8. Rogers RS 3rd, Bruce AJ. Lichenoid contact stomatitis: Is organic mercury the culprit? Arch Dermatol 2004;140:1524-5.
9. Bhattacharyya I, Cohen DM, Silverman S Jr. Red and white lesions of the oral mucosa. In: Greenberg MS, Glick M, editors. Burket's Oral Medicine Diagnosis and Treatment, 10th ed. Hamilton: BC Decker; 2003. p. 85-125.
10. Huber MA Oral lichen planus. Quintessence Int 2004;35:731-52.
11. Eisenberg E. Oral lichen planus: A benign lesion. J Oral Maxillofac Surg 2000;58:1278-85.
12. Sugerman PB, Voltz MJ, Savage NW, Basford KE, Seymour GJ. Phenotypic and functional analysis of peripheral blood lymphocytes in oral lichen planus. J Oral Pathol Med 1992;21:445-50.

How to cite this article: Bajpai M, Agarwal D, Bhalla A, VatchalaRani RM, Kumar M. Unilateral lichen planus: A rare case report. J Nat Sc Biol Med 2014;5:453-5.

Source of Support: Nil. **Conflict of Interest:** None declared.

Access this article online	
Quick Response Code:	Website: www.jnsbm.org
	DOI: 10.4103/0976-9668.136248