

Oral Lichen Planus: A Case Report

Dr. Varsha Sangle, Dr. Smita Chaware, Dr. Noopur Managoli-Kulkarni, Dr.Gauri Ugale.

ABSTRACT: Oral lichen planus (OLP) is an autoimmune, mucocutaneous disease affecting oral mucosa, skin, scalp, genital mucosa and nails. It is one of the common skin diseases present in the oral cavity. An immune mediated reaction is recognized in lichen planus, but exact etiology is unknown. The disease mostly affects middle-aged females and is infrequently found in children. The atrophic and erosive forms of OLP are less common. Potential of OLP to malignancy is controversial. Hence it is essential for the clinicians to keep an index of suspicion for all intraoral lichenoid lesions. Periodic follow-up of patients with OLP is recommended. We report a case of a purplish white lesion involving the right buccal mucosa of 40 years old male patient with cutaneous lesions, with a special emphasis on clinicopathological of the condition and management.

KEYWORDS: Mucocutaneous Lesion, Autoimmune Disease, Oral Lichen Planus

INTRODUCTION:

The term lichen planus (LP) is derived from the Greek word leichen meaning tree moss and the Latin planus meaning flat. Erasmus Wilson first described the condition LP in 1869, as a chronic inflammatory disease affecting the skin, scalp, nails, and mucosa, with possible rare malignant transformation. (1,2) Other areas like mucous membranes of oesophagus, genitalia or conjunctiva and skin appendages like scalp, hair or nails can also be affected. One or several areas can be involved, either concomitantly or sequentially.(3) The overall prevalence of Lichen Planus was reported in different studies from 1 to 2% and it is more commonly seen in females as compared to males.

Oral lichen planus(OLP) has been present in six clinical appearances including reticular, atrophic, plaque, papular, erosive and bullous types. Common sites of involvement are the buccal mucosa, dorsum of the tongue and rarely of gingival. The erosive or atrophic forms of oral lichen planus are commonly presents with severe discomfort or pain and also intolerance to consume hot or spicy food. Also, the risk of malignant transformation in atrophic or erosive lesions is



found to be higher than other types of oral lichen planus, as the deeper layers of epithelium are exposed to oral environment. Thus, these type of lesions should be monitored and treated in the long term.(5,6)

The present article shows a case report of erosive lichen planus in a 40 year old male patient having pigmented lesions on flexor parts of hands at the time of presentation.

CASE REPORT:

The 40-year-old male patient came to the Oral pathology and Microbiology department with a chief complaint of burning sensation to hot and spicy foods in the posterior region of the oral cavity. Burning sensation was started almost 6 months back which was insidious in nature and aggravated on taking hot and spicy food. Dental history and medical history of the patient was not present.

On inspection, multiple hypo-pigmented areas on the flexor surface of both the arms were noticed. (Fig.1) Oral examination revealed white interlacing striae (Wickham's striae) extending from commissural to the retromolar region on both sides of the buccal mucosa along the level of the occlusal plane. The lesion on the left buccal mucosa presented with a 2 cm \times 3 cm erosive lesion localized in the retromolar region in relation to 37, while a reticular type variant of OLP was evident on the right buccal mucosa presenting with the peculiar slender radiating white striae (Wickham's striae). (Fig.2)

After unremarkable hematological investigations and obtaining informed and written parent's consent, an incisional biopsy was taken from the perilesional left buccal mucosa region. Histopathology showed typical features of LP, i.e., acanthotic epithelium with dense band-like of lymphocytic infiltration (ruling out OLR in which infiltrates are composed of plasma cells and eosinophils) and irregular saw tooth rete pegs. There were no atypical/dysplastic changes evident histopathologically. Final diagnosis of Oral Lichen Planus was given. (Fig. 3&4)



DISCUSSION:

Lichen planus (LP) is a chronic, inflammatory, mucocutaneous, immune-mediated condition with variable clinical presentations. Oral lichen planus (OLP) affects about 1–2% of the general adult population with characteristic relapses and remissions. OLP is about twice as common in females as in males. The most commonly involved oral sites are the buccal mucosa, lateral surfaces of the tongue, and gingivae, respectively. Six clinical patterns of OLP are described in literature: reticular, plaque-like, erythematous, erosive/ ulcerative, papular, and bullous. (5,6,7)

There is a variety of evidence that cell-mediated immunity, possibly initiated by endogenous or exogenous factors in individuals genetically predisposed to the disease, is crucial for the pathogenesis of the disease. Activated T lymphocytes and increased production of cytokines result in increased expression of the intercellular adhesion molecule (ICAM-1) and the major histocompatibility complex type II by keratinocytes, which leads to tissue destruction. This process results in immune vacuolar degeneration, lysis of cells in the basal layer, and, finally, dissolution of the cells of the basal layer (8).

Stress was identified as one of the most frequent causes of acute exacerbation of the disease (8,9). A recent study suggests that patients with OLP exhibit higher levels of anxiety and depression compared with control groups. In addition to the discomfort that is caused by the lesion, many patients are concerned about a possible malignancy and the contagious nature of the lesion, which is favored by the lack of educational materials available to individuals with the disease. Therefore, the education of patients with OLP can minimize their anxiety (8).

Six clinical forms of OLP have been described: reticular, papular, plaque-like, erosive, atrophic and bullous (8,9). A more simple clinical classification consists of three types of lesions: reticulated lesions, including rows, plaques and whitish papules; atrophic or erythematous lesions; and erosive lesions, including ulcerations and bullous lesions. Whereas the reticular lesions are asymptomatic, the erythematous and erosive ones induce discomfort (8).

Clinically, the lesions in the oral cavity are usually multiple and bilateral (8,9,10). OLP involves mainly buccal mucosa, gingival and tongue in oral cavity (8,9). The most common clinical presentation is whitish striae in a reticulated pattern (8,10). In the present case, the anatomical



area of the lesion was buccal mucosa, yonder cutaneous signs. The lesions in the buccal mucosa had a striae shape and were reticulated, whitish, and bilateral, multiple hypo-pigmented areas on the flexor surface of both the arms. The cases of LP that are restricted to oral mucosa, i.e., with minimal involvement of the skin, occur in 15% of all cases. Detailed reports of simultaneous occurrence of LP in the oral cavity and skin are uncommon (10). In the present case, lesions were identified on both the arms. Differential diagnoses include lichenoid eruptions associated with medications, lichenoid lesions associated with contact with restorative materials, leukoplakia, lupus erythematosus (9).

The diagnosis of OLP is based on clinical and histopathological findings. Classic histopathologic features include the presence of a lymphocytic infiltrate in the subepithelial region in band-like patterns, liquefactive degeneration of the basal layer, Civatte's bodies, which are the presence of numerous eosinophilic colloid bodies along with interface-epithelial tissue packs, variable degrees of focal ortho or parakeratosis and irregular acanthosis (8,9). The histopathological feature was consistent with the diagnosis of lichen planus.

The management of patients with OLP is very important. A regular follow-up of the patient with OLP should be done (11,12). The choice of treatment depends on the severity and the discomfort. Unfortunately, there is no treatment to permanently resolve the lesions. Drugs are used to improve the condition of the patient. These medicaments may be local or systemic. The active components are corticosteroids such as triamcinolone, fluocinolone acetonide and fluocinonida. An elixir of dexamethasone, clobetasol and triamcinolone has been used in patients with oral involvement (13). The propaedeutic used by our service was the elixir of dexamethasone 0.1 mg/ml for intra-oral lesions. The patient with skin manifestations was sent to a medical dermatologist for evaluation and treatment of the skin lesions.

An undesirable complication of OLP is the malignant transformation into squamous cell carcinoma (SCC). Many studies have been focused on this potential malignant transformation of OLP (12), but the potential for malignancy of these lesions is still controversial. The frequency of malignant transformation ranges from 0.4 to 5%, with the highest rates in the erythematous and erosive lesions (10,11).



CONCLUSION:

Lichen planus is an autoimmune mucocutaneous disease that does not have an effective treatment and that most frequently causes significant discomfort and pain for the patient. A suitable protocol for lichen planus includes the correct identification of lesions by biopsy and histopathological analysis and the use of anti-inflammatory drugs as a treatment. When lichen planus occurs in the skin, patients should always be referred to dermatologists; in other words, there is a very important role of the multiprofessional actuation to treat lichen planus, and regular clinical monitoring is important because of the risk of malignant transformation reported by some authors.

REFERENCES:

- 1) Pauly G, Kashyap R, Kini R, Rao P,Bhandarkar G. Reticular oral lichen planus: The intra-oral web A case report. Gülhane Tıp Derg 2017;59: 28-31.
- Eisen D, Carrozzo M, Bagan Sebastian JV, Thongprasom K. Oral lichen planus: clinical features and management. *J Oral Dis*. 2005; 1 (6): 338–349.
- Eisen D. The evaluation of cutaneous, genital, scalp, nail, esophageal, and ocular involvement in patients with oral lichen planus. Oral Surg Oral Med Oral Pathol Oral Radiol Endod 1999;88:431-6.
- 4) Pakfetrat A, Falaki F, Ahrari F, Bidad S. Removal of Refractory Erosive-atrophic Lichen Planus by the CO2 Laser. OHDM 2014;13(3):595-9.
- 5) Thakur A, Gupta SK, Bhattacharya A. Erosive Lichen Planus to SCC: Role of histopathology. Egyptian Dermatology Online Journal 2014;10(1):1-4.
- 6) Gupta S, Jawanda MK. Oral lichen planus: An update on etiology, pathogenesis, clinical presentation, diagnosis and management. Indian J Dermatol 2015;60:222-9.
- Farhi D, Dupin N. Pathophysiology, etiologic factors, and clinical management of oral lichen planus, part I: facts and controversies. Clin Dermatol. 2010;28(1):100–8.
- 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.
- 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.



- 10) Scully C, Carrozzo M. Oral mucosal disease: Lichen planus. Br J Oral Maxillofac Surg 2008;46:15-21.
- 11) Usatine RP, Tinitigan M. Diagnosis and Treatment of Lichen Planus. Am Fam Physician. 2011;84(1):53-60.
- 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.
- 13) Sousa FA, Rosa LE. Oral lichen planus: clinical and histopathological considerations. Braz J Otorhinolaryngol 2008;74:284-92.

FIGURE LEGENDS:

Fig.1: Multiple hypo-pigmented areas on the flexor surface of both the arms.

Fig.2: Whickham's striae on right buccal mucosa

Fig.3: Fig 3- The photomicrograph of H and E stained sections shows hyperkeratotic stratified squamous epithelium showing minimal/ no dysplasia. The rete pegs age stunted with prominent zone of juxtra epithelial inflammatory infiltrate.

Fig.4: The photomicrograph shows basement membrane is not distinct. The connective tissue stroma shows lymphocytic infiltrate and proliferation of numerous blood vessels.



Fig 1- Multiple hypo-pigmented areas on the flexor surface of both the arms.





Fig 2- Whickham's striae on right buccal mucosa



Fig 3- The photomicrograph of H and E stained sections shows hyperkeratotic stratified squamous epithelium showing minimal/ no dysplasia. The rete pegs age stunted with prominent zone of juxtra epithelial inflammatory infiltrate.





Fig 4- The photomicrograph shows basement membrane is not distinct. The connective tissue stroma shows lymphocytic infiltrate and proliferation of numerous blood vessels.