

**Adit Srivastava<sup>1</sup>,  
Srishti Srivastava<sup>2</sup>**

<sup>1</sup>Reader, Dept. of Oral  
Medicine and Radiology,  
<sup>2</sup>Junior Resident, Dept. of  
Oral Medicine and  
Radiology, Faculty of  
Dental Sciences, IMS,  
BHU.

**Correspondence to:**  
Dr. Adit Srivastava,  
Reader, Faculty of Dental  
Sciences, IMS, BHU.

**E-mail Id:** dr.adit69@  
gmail.com

**How to cite this article:**  
Srivastava A, Srivastava S.  
Oral Lichen Planus: A Case  
Report. *J Adv Res Dent  
Oral Health* 2016; 1(3&4):  
17-20.

ISSN: 2456-141X

## Oral Lichen Planus: A Case Report

### Abstract

Oral lichen planus is a chronic immunological inflammatory mucocutaneous disorder with various oral manifestations identified by relapses and remissions.

It is one of the most common and debilitating oral mucosal lesions in the adult population. The occurrence of oral lichen planus is common; an accurate diagnosis is necessary so that the correct treatment can be established. The objective of this article is to report a case of lichen planus in a female patient and to discuss the main aspects of this disease and treatment.

**Keywords:** Oral lichen planus (OLP), White lesion, Treatment.

### Introduction

The word lichen planus is derived from the Greek word-Lichen that means 'tree moss' and planus refers to 'flat'. Wickham in 1895 described the characteristic appearance of whitish striae known as 'Wickham's striae' and punctuations that develop atop the flat surface papules.

The lesions mainly appear on the buccal mucosa, tongue, gingiva, floor of the mouth, lips, and palate.<sup>2</sup>

Oral lichen planus is a common disorder that affects stratified squamous epithelium. Oral lichen planus is characterized by a chronic red, white, or mixed lesion of the mucosa with unknown etiology.<sup>3</sup> Oral lichen planus lesions usually contain a few B-cells or plasma cells and minimal deposits of immunoglobulin or complement. It is most common in females than males and the ratio is 2:1.

### Case Report

A 36-years-old female patient came to our department of oral medicine and radiology with the chief complaint of burning sensation from spicy and acidic food in the mouth since one month.

Burning sensation was intermittent, which aggravated after taking meals and subsided itself after sometime.

The patient's past medical, dental and family history was not significant; she was otherwise fit and healthy. No history of any adverse habits.

On extraoral examination there were no lesions on her body and face.

On intraoral examination, the buccal mucosa of the right side showed fine white radiating network like striae, which was surrounded by a discrete erythematous area (Fig. 1). Same condition was there on the buccal mucosa of the left side which showed white radiating striae (Fig. 2). She also had inflamed gingiva and poor oral hygiene with calculus and stains. All teeth were present. Root stump in relation to 26 was seen. The tongue and palate were normal.



**Figures 1&2. White striations on right and left buccal mucosa**

On the basis of clinical examination, the diagnosis of oral lichen planus was made.

Under the differential diagnosis of-leukoplakia, drug induced lesion, cheek biting, lichenoid reaction was considered.

We prescribed a topical antifungal to the patient for one week to remove superficial candida infections and then start with the steroids. As the patient was symptomatic, we prescribed her combined therapy systemic + topical corticosteroids. Triamcinolone acetonide 0.1% topical was prescribed for 15 days three times a day and prednisolone 10 mg systemic for 1 week two times a day then was tapered after 1 week 10 mg once in a day for 1 week, after that 5 mg once in a day for 1 week.

**Different authors have classified OLP in various ways:<sup>4</sup>**

Author	Classification
Andreasen (1968)	Reticular, papular, plaque, atrophic, ulcerative and bullous
Axell (1987)	White forms: Papular, reticular, plaque
	Red Forms: Atrophic, ulcerous, bullous
Silverman (1985)	Reticular (Lacy like keratotic) Atrophic (reticular keratotic and erythema) Erosive (ulcerative and atrophic)
Silverman (1991)	Reticular Atrophic (reticular keratosis with an erythematous mucosa) Erosive (Reticular and atrophic with mucosal ulceration)
Began-Sebastian (1992)	Group 1: Exclusively white lesions Group 2: Atrophic and/ or ulcerative lesion with or without reticular lesion
Eisen (2002)	Reticular (White line, plaque and papules) Atrophic or erythematous Erosive (ulceration and bullae)

In some patients, oral lesion presents as desquamative gingivitis.

Etiology of oral lichen planus is not clear. It is believed to be a T-cell mediated mucosal disease in which there is production of cytokines which leads to apoptosis.<sup>5</sup>

Along with the corticosteroids, we prescribed antioxidants (lycopene) once in a day for 15 days. We recalled her for follow up after 15 days.

After 15 days when she visited the department, there was no history of burning sensation and on intraoral examination no lesions were there. We described the patient about the condition and put her on follow up.

**Discussion**

Lichen planus is one of the most common mucocutaneous diseases that manifests itself in the oral cavity and is of worldwide distribution. Oral lichen planus is a chronic inflammatory disease that affects the mucus membrane of the oral cavity.

Other factors that may be associated with oral lichen planus are-administration of systemic drugs such as nonsteroidal anti-inflammatory drugs (NSAIDs), beta-blockers, some angiotensin-converting enzyme (ACE) inhibitors, etc.

In some patients, oral mucosal lichenoid lesions occur after a dental restoration performed because some patients may have some allergic reactions to the materials used for restoration.

Oral mucosal lichenoid lesions can also be found in the using of a denture.<sup>1</sup>

More than 90 controlled studies worldwide strongly give epidemiological evidences that hepatitis C virus (HCV) may be an etiologic factor in oral lichen planus.<sup>6</sup>

Patients with these lesions are psychologically very sensitive, with serious disease knowledge and carcinophobia.

Any stress, depression may increase the severity of the disease.<sup>1</sup>

Lichen planus has potential for malignant transformation, and the risk of malignant transformation varies between 0.4 and 5% in a period of observation from 0.5 to 20 years. However, many controversies remain with regard to the risk of malignant transformation, to the clinical form with the greatest potential for malignancy, and about therapies used for the treatment of oral lichen planus.<sup>7,8</sup>

Squamous cell carcinoma is more likely to develop in patients with oral lichen planus; risk is approximately ten times higher than that in the unaffected general population.<sup>9,10</sup>

Multiple topical and systemic treatments for oral lichen planus are effective including topical and systemic corticosteroids.

Topical corticosteroid has less severe side effect than the systemic corticosteroids because of its less systemic absorption.<sup>2</sup>

Triamcinolone acetonide is very effective because of its local anti-inflammatory properties of suppressing T-cell function.<sup>11</sup>

It has been proven that the triamcinolone acetonide ointment stick very well to the oral mucosa it can provide both the transport medium of the active drug and reasonable exposure time. Lycopene has various benefits: it has the property of antioxidant activity which contributes in inhibition of cancer cell proliferation. Thus it can help in prevention of oral lichen planus to the malignant transformation.<sup>12</sup>

Intralesional injection of steroids has been found effective and can reduce the symptoms in oral lichen planus patients.<sup>13</sup>

Tacrolimus is a potent immuno-suppressive agent and can control symptoms and significantly improve refractory erosive lichen planus.<sup>14</sup>

Cyclosporine may be useful in treatment of oral lichen planus because of its property of suppressing T-cell cytokine production.<sup>14</sup>

Ultraviolet irradiation, mainly in combination with psoralens, may suppress the cell-mediated immune reactivity and thus forms the basis for use in lichen planus.<sup>15</sup>

Surgical excision has been recommended for isolated plaques or non-healing erosions. Conventional surgical excisions, cryosurgery and CO<sub>2</sub> lasers all have been used.<sup>14,16</sup>



Figure 3. Pre-treatment Photographs of the Patient



Figure 4. Post Treatment Photographs of the Patient

## Conclusion

Oral lichen planus is a very common lesion of the oral cavity and the oral manifestations of lichen planus demonstrate considerable variation in appearance and presentation so accurate diagnosis is necessary for correct treatment plan. For the management of this disease, various drugs are there but they do not show the same effect in all the patients. The aim of therapy which is used in oral lichen planus is to eliminate mucosal erythema and ulceration, alleviate symptoms and reduce risk of oral cancer.

**Conflict of Interest:** Nil

## References

- Ongole R, Praveen BN. Textbook of oral medicine, oral diagnosis and oral radiology. Sec III. Chap 9. Elsevier Health, 2013: 206, 207.
- Sahebjamee M, Arbabi-Kalati F. Management of oral lichen planus. *Archives of Iranian Medicine* Oct 2005; 8(4): 253.
- Bajpai M, Agarwal D, Bhalla A et al. Unilateral lichen planus: A rare case report. *J Nat Sc Biol Med* 2014; 5: 453-55.
- Piboonnuyom S, Treister N, Pitiphat W et al. Scoring system for monitoring oral lichenoid lesions: A preliminary study. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 2005; 99: 696-703.
- Fitzpatrick SG, Hirsch SA, Gordon SC. The malignant transformation of oral lichen planus and oral lichenoid lesions: A systematic review. *J Am Dent Assoc* 2014; 145: 45-56.
- Rajendran R. Oral lichen planus. *J Oral Maxillofac Pathol* 2005; 9: 3-5.
- Lavanya N, Jayanthi P, Rao UK et al. Oral lichen planus: An update on pathogenesis and treatment. *J Oral Maxillofac Pathol* May-Aug 2011; 15(2): 127-32.
- Werneck JT, Costa TO, Stibich CA et al. Lichen planus: Study of 21 cases. *An Bras Dermatol* 2015; 90(3): 321-26.
- Silverman S. Oral lichen planus a potentially premalignant lesion. *J Oral Maxillofac Surg* 2000; 58(1): 1286-88.
- Sharma G, Das D, Mukherjee J et al. A rare case report of erosive lichen planus of tongue treated with lycopene. *International Journal of Current Research* Oct 2013; 5(10): 3192-94.
- Swarna YM, Ali IM, Annigeri RG et al. A Comparative evaluation of efficacy of tacrolimus and triamcinolone acetonide in the management of symptomatic oral lichen planus. *Journal of Indian Academy of Oral Medicine and Radiology* 2011; 23(3): 184-89.
- Saawarn N, Shashikanth MC, Saawarn S et al. Lycopene in the management of oral lichen planus: A placebo-controlled study. *Indian Journal of Dental Research* 2011; 22(5).
- McCreary CE, McCartan BE. Clinical management of oral lichen planus. *Br J Oral & Maxillofac Surg* 1999; 37: 338-43.
- Lodi G, Scully C, Carrozzo M et al. Current controversies in oral lichen planus: Report of an international consensus meeting. Part 2. Clinical management and malignant transformation. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 2005; 100: 164-78.
- Carrozzo M, Gandolfo S. The management of oral lichen planus. *Oral Diseases* 1999; 5: 196-205.
- Vedtofte P, Holmstrup P, Hansen EH et al. Surgical treatment of premalignant lesions of the oral mucosa. *Int J Oral Maxillofac Surg* 1987; 16: 656-64.

Date of Submission: 02<sup>nd</sup> Sep. 2016

Date of Acceptance: 27<sup>th</sup> Sep. 2016