

## Original Article

### Assessment of Prevalence and Clinical Spectrum of Oral Lichen Planus: An Observational Study

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#### ABSTRACT:

**Background:** Oral lichen planus (OLP) is a chronic inflammatory disease that its incidence is more in women than men with different age range in around the world. The prevalence of OLP in the general population varies from 1-2%. Hence; we planned the present study to assess prevalence and clinical spectrum of oral lichen planus. **Materials & methods:** The present study it included assessment of prevalence and clinical spectrum of oral lichen planus (OLP). A total of 1500 patients were included in the present study, who reported to the department of oral medicine and radiology for various dental problems. Complete demographic data of all the patients was obtained. Prevalence of OLP was recorded. Clinical spectrum of OLP was also recorded. All the results were recorded and analyzed by SPSS software. **Results:** Prevalence of OLP was found to be present in 1.2 percent (18 patients). Among females, the prevalence of found to be 0.47 percent, while the prevalence among males was found to be 0.73 percent. Reticular and papular forms were found to be present in 0.4 percent and 0.27 percent of the patients respectively. Erosive and atrophic type of OLP was found to be present in 0.33 and 0.2 percent of the patients respectively. **Conclusion:** OLP is more common among females of more than 50 years age, with reticular and erosive form being the most common clinical subtype encountered.

**Key words:** Oral lichen planus, Prevalence, Spectrum.

Received: 05 December 2018

Revised: 20 January 2019

Accepted: 22 January 2019

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**This article may be cited as:** Karishma. Assessment of Prevalence and Clinical Spectrum of Oral Lichen Planus: An Observational Study. J Adv Med Dent Scie Res 2019;7(2):104-106.

#### INTRODUCTION

Oral lichen planus (OLP) is a chronic inflammatory disease that its incidence is more in women than men with different age range in around the world.<sup>1</sup> The prevalence of OLP in the general population varies from 1-2%. Clinically OLP is divided into six forms: reticular, papular, plaque like, atrophic, erosive and bullous types.<sup>2-4</sup> The Koebner phenomenon is not only present in CLP but can also occur in the setting of OLP. Eisen suggested that the mechanical trauma of dental procedures, cigarette smoking, mucosal trauma from sharp cusps, and oral habits such as lip chewing are Koebnerogenic factors that can exacerbate OLP. The reported prevalence rates of oral lichen planus (OLP) vary from 1% to 2% of the population. Although relatively frequent, oral lichen planus is the target of much controversy, especially in relation to its potential for malignancy.<sup>5-7</sup> Hence; we planned the present study to assess prevalence and clinical spectrum of oral lichen planus.

#### MATERIALS & METHODS

The present study was conducted in the department of oral medicine and radiology and it included assessment of

prevalence and clinical spectrum of oral lichen planus (OLP). A total of 1500 patients were included in the present study, who reported to the department of oral medicine and radiology for various dental problems. Complete demographic data of all the patients was obtained. Diagnosis of all the patients with OLP was confirmed based on the criteria previously described in the literature.<sup>8</sup>

Exclusion criteria for the present study included:

- Patients with presence of any systemic illness,
- Patients with any known drug allergy,
- Patients with presence of any other dermal pathology

Prevalence of OLP was recorded. Clinical spectrum of OLP was also recorded. All the results were recorded and analyzed by SPSS software.

#### RESULTS

In the present study, a total of 1500 patients were analyzed. Prevalence of OLP was found to be present in

1.2 percent (18 patients). Higher prevalence of OLP was seen among patients of more than 50 years of age. Among females, the prevalence of found to be 0.47 percent, while the prevalence among males was found to be 0.73 percent. Reticular and papular forms were found to be

present in 0.4 percent and 0.27 percent of the patients respectively. Erosive and atrophic type of OLP was found to be present in 0.33 and 0.2 percent of the patients respectively.

**Table 1:** Prevalence of OLP among patients divided on the basis of age-group

Age group (years)	Number of patients with OLP	Percentage of patients with OLP
Less than 30	2	0.13
30 to 50	6	0.4
More than 50	10	0.67
Total	18	1.2

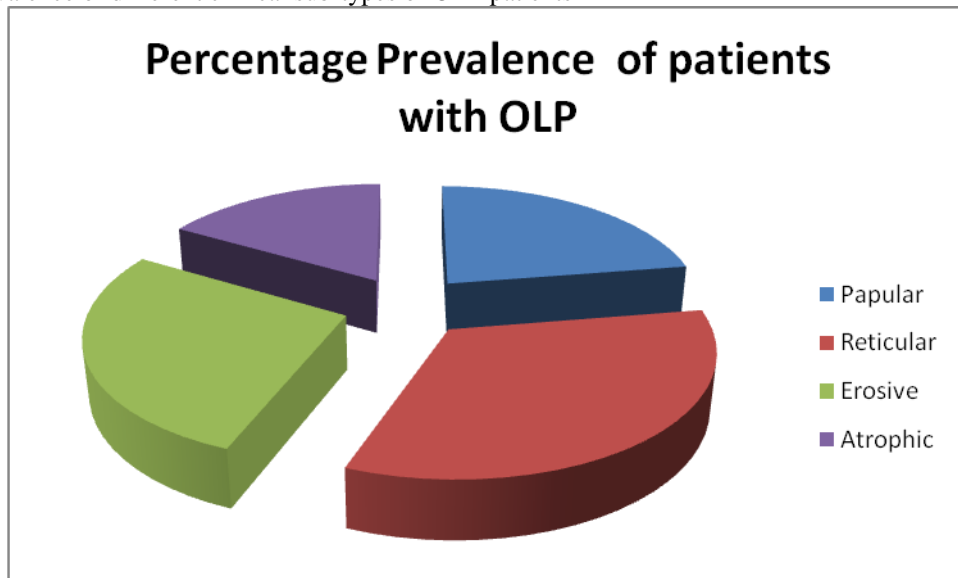
**Table 2:** Prevalence of OLP among patients divided on the basis of gender

Gender	Number of patients with OLP	Percentage of patients with OLP
Males	11	0.73
Females	7	0.47
Total	18	1.2

**Table 3:** Prevalence of different clinical sub-types of OLP patients

OLP type	Number of patients with OLP	Percentage of patients with OLP
Papular	4	0.27
Reticular	6	0.4
Erosive	5	0.33
Atrophic	3	0.2
Total	18	1.2

**Graph 1:** Prevalence of different clinical sub-types of OLP patients



**DISCUSSION**

OLP was first described clinically by Wilson in 1869 as a chronic mucocutaneous disorder.<sup>6</sup> Cutaneous lichen planus is recurrent, itchy and not contagious. Concomitant disease involving the scalp, nails, esophageal mucosa, larynx and conjunctivae occurs much less frequently. In many patients, the onset of OLP is insidious, and patients are unaware of their oral condition. Some patients report a roughness of the lining of the mouth, sensitivity of the oral mucosa to hot or spicy foods, painful oral mucosa, red or white patches on the oral mucosa, or oral ulcerations. The clinical history includes phases of remission and exacerbation.<sup>9-12</sup>

In the present study, a total of 1500 patients were analyzed. Prevalence of OLP was found to be present in 1.2 percent (18 patients). Higher prevalence of OLP was seen among patients of more than 50 years of age. Among females, the prevalence of found to be 0.47 percent, while the prevalence among males was found to be 0.73 percent. Plaque-like OLP and leukoplakia have similar clinical presentations and therefore leukoplakia must always be ruled out.

This variant is more prevalent in tobacco smokers. The existence of plaque-like lesions is an indicator of a poor prognosis and a lesser likelihood of remission. Erosive OLP, the most advanced subtype, can clinically present as atrophic or erythematous ulcerations and erosions of the mucosa and faint radiating white striae. The associated ulcers are sometimes covered with a pseudomembrane. Typically, it has a multifocal pattern of distribution. It is clinically important because the lesions can be quite painful and therefore it may negatively affect the patient's quality of life.<sup>13, 14</sup>

In the present study, reticular and papular forms were found to be present in 0.4 percent and 0.27 percent of the patients respectively. Erosive and atrophic type of OLP was found to be present in 0.33 and 0.2 percent of the patients respectively. Rambhia KD et al studied the prevalence of autoantibodies and the clinical spectrum of disease in an Indian patient subpopulation with lichen planus. A cross-sectional epidemiological study comprising 100 lichen planus patients was conducted. Serum concentrations of circulating anti-nuclear antibodies, anti-desmoglein 1 antibody, anti-desmoglein 3 antibody, anti-keratinocyte antibodies, anti-mitochondrial antibodies and anti-thyroglobulin antibodies were determined by indirect immunofluorescence. It was found that 65 (65%) patients showed the presence of at least one of the six autoantibodies that we studied, while 35 (35%) tested negative for all six of them. Positivity of anti-keratinocyte antibody in 26 (26%), anti-nuclear antibody in 22 (22%), anti-desmoglein 1 antibody in 19 (19%), anti-desmoglein 3 antibody in 16 (16%), anti-mitochondrial antibody in 9 (9%) and anti-thyroglobulin antibody in 6 (6%) patients was detected. It was observed that 55 (71.4%) patients of cutaneous lichen planus, 6 (46.1%) patients of mucosal lichen planus and 4 (40%) patients of cutaneous and mucosal lichen planus overlap showed presence of at least one autoantibody. Presence of autoantibodies in lichen planus suggested the possible role of humoral immunity in lichen planus.<sup>15</sup> Pakfetrat A et al analyzed the 420 Iranian patients with OLP. Data was taken from the medical records of 420 consecutive patients referred to the Oral Medicine Department, and who were subsequently found to have clinical and usual histopathology consistent with features of OLP. Seventy percent of the patients had been referred to the Oral Medicine Department by general dental practitioners. 52.6% were referred due to oral mucosal and/or gingival pain or burning sensation. Reticular OLP was the most common presentation (76.9%); about 18% of patients reported symptoms or signs, or had a known history of OLP, or possible Lichen Planus affecting non-oral epithelia. A malignant transformation rate of 0.07% was observed.<sup>16</sup>

## CONCLUSION

Under the light of above obtained results, the authors conclude that OLP is more common among females of more than 50 years age, with reticular and erosive form being the most common clinical subtype encountered. However; further studies are recommended.

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