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# RETROSPECTIVE STUDY TO ASSESS THE PREVALENCE OF ORAL LICHEN PLANUS AMONG MALE PATIENTS IN KANPUR CITY

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## Abstract

**Introduction:** Numerous etiological substances can cause lichen planus, a mucocutaneous disease mediated by the immune system. The diagnosis of lichen planus is aided by well-documented clinical and histological features. This retrospective study set out to determine the prevalence of oral lichen palnus in males who visited the dentistry outpatient department in Kanpur City.

**Material and Methods:** In the present study, 204 clinical and histopathological diagnosed patients were included, and demographic, clinical, and histopathological details of all the patients were recorded. All the collected data were analyzed by appropriate software.

**Results:** 204 confirmed cases of oral lichen planus were taken and males (75.4%) were predominantly present, and buccal mucosa was the most common site involved in the study.

**Conclusion:** With the new life pattern evolving, oral lichen planus can be present in males.

**Keywords:** Lichen Planus; Males; Oral Mucosa; Prevalence; Reticular

## INTRODUCTION

Lichen planus is a chronic muco-dermatologic disorder that is mainly present among humans. British physician Erasmus Wilson 1869 first explained the disease. [1,2] It mainly occurred in middle-aged adults with women dominating trait.[3-5]It is present clinically as reticular, papular, plaque-like, erosive, atrophic, or bullous variants.[6-8] The skin lesions appear as flat papules in ankles, wrists, and the genitalia region, but chiefly the facial skin is spared.[8,9] Oral lichen planus is a chronic inflammatory disorder that includes the stratified squamous epithelial layer of mucosa. It affects the oral mucous membranes of buccal mucosa, gingival, tongue and to some extent esophageal mucosa, larynx.[10]

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Although the actual etiology of oral lichen planus is not clear,in most cases, a multifactorial process is considered to be involved, with the participation of genetic, psychological, and infectious factors, which may act as normal agents, while others may trigger the process.[11-14]The clinical features of oral lichen planus are usually bilateral and/or multiple symmetrical lesions, such as white Wickham's striae and raised papules or plaques, erosions, or often-painful atrophic lesions present over the buccal mucosa and tongue.[15-17] We have done this retrospective study to assess the prevalence of oral lichen planus in males among the 204 oral lichen planus patients.

## MATERIAL AND METHODS

### Study design and study population

In this retrospective dental college study (December 2024 to March 2025), data from204 oral lichen planus biopsies were taken from oral pathology laboratory records. It included demographic data of the patient along with, site of the lesion, clinical appearance, and histopathological diagnosis.

### Inclusion and exclusion criteria

All data was collected, including 20-60 years of age patients of both sexes with oral lichen planus symptoms. Patients with other oral lesions and systemic conditions were excluded from the study.

### Ethical approval and informed consent

The study protocol was approved by the Institutional Review Board and ethical approval was obtained. A written informed consent form was also obtained from all the participants' outpatient department forms. Patient identity was not disclosed throughout the study.

### Data collection and Statistical analysis

Chi square test and Statistical Product and Service Solutions **(**SPSS) Windows Microsoft version 21.0 (SPSS Inc, Chicago, USA) was used for calculations of the data.

## RESULTS

A total of 204 cases of histopathologically confirmed oral lichen planus were taken during the study period. Among the patients, there were 140 (68.6%) male and 64 (31.3%) female patients [Table 1]. Maximum of the patients were in the age group of 41–61 years (57.8%) among which males were (52.10%), and it was found to be statistically significant (P = 0.027) [Table 2].

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| Gender | Number of cases (%) |
|---|---|
| Male | 140 (68.6%) |
| Female | 64 (31.3%) |

**Table 1:** Prevalence of oral lichen planus according to gender (n=204)

| Age (in years) | Males(n-140) (%) | Females (n-64) (%) | Total (n/%) | P |
|---|---|---|---|---|
| <40 | 34 (24.2%) | 11 (17.1%) | 45 (22%) | 0.025 |
| 40-60 | 73 (52.1%) | 45 (70.3) | 118 (57.8%) | |
| >60 | 53 (37.8%) | 08 (12.5%) | 61 (29.9%) | |

**Table 2:** Prevalence of oral lichen in various age groups (n=204)

In the present study, the most common sites of involvementwere found to be buccal mucosa (56.8%) and tongue (18.6%) [Table 3]. The presence of oral lichen planus at various mucosal sites in males and females did not show any statistical significance (P = 0.882). In the study, reticular lichen planus was more in number (65.1%), followed by erosive pattern of lichen planus (22%) [Table-4]

| Oral mucosal site | Males (n-140) (%) | Females (n-64) (%) | Total (n/%) | P |
|---|---|---|---|---|
| Buccal mucosa | 85 (60.7%) | 31 (48.4%) | 116 ((56.8%) | 0.882 |
| Tongue | 22 (15.7%) | 17 (26.5%) | 38 (18.6%) | |
| Gingiva | 20 (14.2%) | 08 (12.5%) | 28 (13.7%) | |
| Labial mucosa | 04 (2.8%) | 07 (10.9%) | 11 (5.3%) | |
| Floor of mouth | 09 (6.4%) | 01 (0.7%) | 10 (4.9%) | |

**Table 3:** Main site of presence of oral lichen planus (n=204)

| Clinical variant | Number of cases (%) |
|---|---|

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| | |
|---|---|
| Reticular | 133 (65.1%) |
| Erosive | 45 (22%) |
| Bullous | 04 (1.9%) |
| Plaque | 07 (3.4%) |
| Papular | 15 (7.3%) |

**Table 4:** Clinical variant of oral lichen planus.

## DISCUSSION

In this retrospective study, we assessed the clinical features of oral lichen planus with a small sample size of patients. According to the clinical and histopathological criteria of the WHO, the results of this retrospective study stated that oral lichen planus is present in middle-aged patients, with males more in number.

The clinical features of patients in our study presented many similar features and few different features with other studies. In this study, we observed that out of 204 patient the male were more as compare to the female; males were 75.4% which is notby various other studies but was found to be similar to the study done by Anita D Munde.et al. where male was 61.7% and females 38.2%. [18-21] In various other studies, female predominance is reported. Mostafa B found 68.75% females and31.25% males in their study, which was not present in the present study and found to be a rare feature.[17] Oral lichen planus is more prevalent in the 4th to 6th decade of life in our study, that is 62.2%, which is almost similar to the age group reported in central China, the UK, and Spain in; 5th to 6th decade of life.

The lesions of oral lichen planus are usually bilateral,symmetrical, and the buccal mucosa is the most common site of involvement, and less common on the tongue and the gingiva.[10,13-15] Solitary lesions present on the gingiva, palate, and floor of mouth are rare in the oral cavity, whereas these sites usually associated with buccal mucosa or tongue were affected in various oral lesions. In the present study involvement of buccal mucosa was 56.8%, and gingival was 13.7%,which was similar to the study of Munde A. et al., where buccal mucosa and gingival was 88.2% and 23.4%, respectively.[21]

While other site of oral mucosa was involved in the number of tongue 18.6%, labial mucosa 5.3%, and floor of mouth 4.9%, which did not have any statistical significance (P = 0.881).In the study, a total of 204patients, reticular variant of oral lichenplanus was the most common form and present in 133 (65.1%)patients. Erosive type was diagnosed in 45 (22%) patients while papular type was present

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in 15 (7.3%) patients, found similar with various other studies. The pigmentation of the oral mucosa was an important characteristic in the reticular variant, and it was presented in 48% of cases of buccal mucosa. The pigmentation was diffuse, varying from brown to black, and present mostly on the bucca mucosa. Malignant transformation of oral lichen planus was not present in this study, which was found similar to studies by Murti et al. and Andreasen.[14]

## CONCLUSION

In the present retrospective study, we stated the demographicand clinical features of oral lichen planus in a small group of patients. Most of the features are similar with other studies while our study we found that males were predominant over females in oral lichen planus which is considered as female dominating disease. Since, oral lichen planus is a chronic mucosal disease, and change in life style pattern may trigger the etiological factors for increasing the prevalence of disease more in males as that of females.

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