



Demographic Prevalence of Oral Lichen Planus in Males: A Retrospective Study

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Abstract

Introduction: Lichen planus is an immunologically mediated mucocutaneous disease that is triggered by varied etiological agents. Lichen planus shows many clinical features affecting the skin, oral cavity, genital organ, nail, and scalp. Lichen planus has well documented clinical findings and histological findings that aid in the diagnosis.

Objective: The objective of this retrospective study was to assess the demographic prevalence of oral lichen palnus in males visiting the dental outpatient department.

Material and Methods: In the present study total 102 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: 102 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 in 1869 first explained about 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 appears as flat papules in ankles, wrist, and genitalia region, but chiefly the facial skin is spared [8,9]. Oral lichen planus is a chronic inflammatory di-sorder that include 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]. Although the actual etiology of oral lichen planus is not clear,

in most cases a multi factorial 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 [11,12]. There are six recognized oral lichen planus types: reticular, popular, plaque, atrophic, erosive, and vesiculo-bullous [13,14]. 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 buccal mucosa and tongue [15-17]. We have done this retrospective dental college study to assess the demographic prevalence of oral lichen planus in males among the 102 oral lichen planus patients.

Materials and Methods

Study design and study population

In this retrospective dental college study (December 2018 to April 2019), data of 102 oral lichen planus biopsies were taken from oral pathology laboratory records. It included demographic data of 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 were 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 SPSS windows Microsoft version 21.0 (SPSS Inc, Chicago, USA) was used for calculations of the data.

Results and Discussion

A total of 102 cases of histopathologically confirmed oral lichen planus were taken during the study period. Among the patients, there were 77 (75.4%) male and 25 (24.5%) female patients [Table 1]. Maximum of the patients were in the age group of 41–61 years (61.7%) among which males were (57.00%) and it was found to be statistically significant ($P = 0.027$) [Table 2].

Gender	Number of cases (%)
Male	77 (75.4%)
Female	25 (24.5%)

Table 1: Prevalence of oral lichen planus according to gender (n=102).

Age (years)	Males (n=77) (%)	Females (n=25) (%)	Total (n %)	P
<40	16(20.7%)	0 (0.00)	16(15.6%)	0.027
40-60	44 (57%)	19(76.0%)	60(61.7%)	
>60	17(22.0%)	6(24%)	23(22.5%)	

Table 2: Prevalence of oral lichen in various age group (n=102).

In the present study the most common sites of involvement, were found to be buccal mucosa (48%) and gingiva (24.5%) [Table 3]. The presence of oral lichen planus at various mucosal sites, in males and females, did not show any statistical significance ($P = 0.881$). In the study reticular lichen planus was more in number (67.6%), followed by erosive pattern of lichen planus, (26.4%) [Table 4].

Oral mucosa site	Males (n=77) (%)	Females (n=25) (%)	Total (n %)	P
Buccal mucosa	37 (48.0%)	12 (48.0%)	49 (48.0%)	0.881
Gingiva	16 (20.7%)	9 (36.0%)	25 (24.5%)	
Tongue	15 (19%)	4 (16%)	19 (18.6%)	
Labial mucosa	5 (6.4%)	0	05 (4.9%)	
Floor of mouth	4 (5.19%)	0	04 (3.9%)	

Table 3: Main site of presence of oral lichen planus (n=102).

Clinical variant	Number of cases (n=102) (%)
Reticular	69 (67.6%)
Erosive	27 (26.4%)
Bullous	6(5.8%)

Table 4: Clinical variant of oral lichen planus.

Discussion

In this retrospective dental college study we assessed the demographic and clinical features of oral lichen planus with 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 feature of patients in our study presented many similar features and few different features with other studies. In this study, we observed that out of 102 patient the male were more as compare to the female; males were 75.4% which is not in accordance with various other studies but was found to be similar to the study done by Anita D Munde., *et al.* where male were 61.7% and females 38.2% [18-21]. In various other studies female predominance is reported, Mostafa B found 68.75% females and 31.25% males in their study which was not present in the present study and found to be rare feature [17]. Oral lichen planus is more

prevalent in 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, UK and Spain; 5th to 6th decade of life.

The lesions of oral lichen planus are usually bilateral, symmetrical and the buccal mucosa is the the most common site of involvement, and less common on gingiva and the tongue [10,13-15]. Solitary lesions present on gingiva, palate, and floor of mouth are rare in 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 48%, gingiva 24.5% found similar to 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 4.9% and floor of mouth 3.9%; which did not have any statistical significance (P = 0.881).

In the study of total 102 patient reticular variant of oral lichen planus was the most common form and present in 69 (67.6%) patients. Erosive type was diagnosed in 27 (26.4%) patients while bullous type was present in 6 (5.8%) patient, found similar with various other studies. The pigmentation of the oral mucosa was a important characteristic in reticular variant and it was presented in 48% cases of buccal mucosa. The pigmentation was diffuse, vary from brown to black in color and present mostly on the buccal mucosa. Malignant transformation of oral lichen planus was not present in this study which was found similar with studies by Murti., *et al.* and Andreasen [14].

Conclusion

In the present retrospective study we stated the demographic and 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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Conflict of Interest

None

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