

# Prevalence of Lichen Planus in South Indian Population

Merlin Mathew<sup>1</sup>, Minnumol L<sup>2</sup>, Nafeesa Farsana M. M.<sup>3</sup>  
Dr. Giju George Baby<sup>4</sup>, Dr. Vineet Alex Daniel<sup>5</sup>, Dr. Hima John<sup>6</sup>

<sup>1,2,3</sup>Final Year Part 1 Students  
Dept of Oral Medicine and Radiology  
Annoor Dental College And Hospital, Muvattupuzha

<sup>4</sup>Professor,  
Dept of Oral Medicine and Radiology  
Annoor Dental College And Hospital, Muvattupuzha

<sup>5</sup>Prof and Hod, Dept of Oral Medicine and Radiology  
Annoor Dental College And Hospital, Muvattupuzha

<sup>6</sup>Associate Professor  
Dept of Oral Medicine and Radiology  
Annoor Dental College And Hospital, Muvattupuzha

## Abstract

The purpose of this study was to evaluate the prevalence of oral lichen planus from a population of patients attending the Department of oral medicine and radiology Annoor Dental College and Hospital, Muvattupuzha, Kerala, India.

A total of 25,687 patients who visited the department of oral medicine and radiology for diagnosis of various complaints over a period of 1 year (Jan 2019 - Jan 2020) were clinically examined for the presence of oral lichen planus.

**Keywords:** Lichen planus, dermatological disorder, inflammatory disease.

## MATERIALS AND METHODS

A study was designed to evaluate the prevalence of lichen planus in south Indian population from a sample of population of 25,687 outpatients seeking dental treatment at the department of oral medicine and radiology, Annoor Dental College, Muvattupuzha from 1st Jan 2019 to Jan 2020 were included in the study. All subjects were clinically examined and questioned regarding any habits like pan chewing, alcohol intake, and frequency & deviation of habit.

Lichen planus was designed on the basis of clinical presentation & histopathological analysis of mucosa & skin biopsy done for all patients suspected of having Lichen planus.

## RESULTS

Out of 25687 patients screened Lichen planus was seen in 51 cases (0.198%), when gender was considered female predilection were seen and increased prevalence for middle aged adults (40-60yrs) with lowest age of 24 years and highest age of 76 years. bilateral buccal mucosa was the common site when the distribution of site of oral lichen planus were considered. Reticular lichen planus was more commonly seen followed by atrophic and erosive lichen planus.

## DISCUSSION

Lichen planus is a common dermatological disorder occurring on skin & oral mucus membrane and has a lace like pattern produced symbolic algae & fungal colonies on surface of rocks in nature. The term lichen planus is derived as lesion looks like lichen on rock and planus is for flat.

It involves various mucosal surfaces, frequently the oral mucosa is involved. Lichen planus is a common inflammatory disease of the skin presenting with characteristic violaceous, polygonal and pruritic papules.

Prevalence of Lichen planus in general population is about 0.4 - 1.2 % and prevalence of oral lichen planus is reported between 0.1- 2.2 %. In our study prevalence of oral lichen

planus is 0.19%. It mainly occurs in adulthood between 30 to 60 years and in the study, it is seen more between 40 - 60 years and also seen as low as 24 years and high as 76 years. Lichen planus has more female predilection, out of 51 case 36 were females and 15 were males.

Lichen planus has been associated with various diseases such as Hepatitis C, oral cancer and diabetes mellitus. An interplay of host, lifestyle and environmental factors has been implicated in the etiopathogenesis of lichen planus. It is believed to be caused due to cell mediated immunity initiated by endogenous or exogenous factors.

It involves skin, oral and other mucus membrane. About 50% of the patients with skin lesion have oral lesion, were as 25% of all lichen planus has only oral lesion. In oral cavity buccal mucosa is most common site (84%) and other sites include tongue, lip, gingiva, floor of mouth and palette. There are 6 types of lichen planus which include reticular, papular, plaque like, atrophic, erosive and bullous. Clinically oral lichen planus appears as radiating white or grey velvety thread like lesion, which consist of papules in linear, annular or retiform arrangement. A tiny white elevated dot is present at the intersection of the white lines known as Wickham's striae an isomorphic response known as Koebner's phenomenon is common occurrence in lichen planus and develops in areas previously subjected to some type of trauma.

Reticular is the most common type, consisting of slightly raised fine whitish lines in an interlocking lace like keratotic pattern. Papular lesions are small white raised papules. Plaque type closely resembles leukoplakia with a reticular surrounding. Atrophic type appears as inflamed areas of mucosa covered by thin red appearing epithelium. Erosive type presents with atrophic mucosa with ulcers. Bullous form is very rare and is characterised by formation of large thin walled bullae. Papular, plaque like, atrophic and erosive lesions are very frequently accompanied by reticular lesions.

All form of lichen planus are generally asymp-

tomatic but atrophic, erosive and bullous forms are associated with pain and burning sensation. Atrophic and erosive lesions involving gingiva also result in desquamative gingivitis characterized by bright red areas involving the full width of attached gingiva. The incidence of malignant transformation ranges from 0.4 to 12.3 %, In India the incidence of malignant transformation is 0.4%. Erosive and ulcerative lesions have more chances of malignant potential.

### **CONCLUSION**

Lichen planus can present as skin and oral lesions. This study shows prevalence of oral lichen planus as 0.198% in South Indian population and increased prevalence of oral lichen planus in 40-60 years age group with female predominance. Lesions of oral lichen planus especially the erosive variety need to be monitored carefully as it has a higher risk for transformation into squamous cell carcinoma.

### **REFERENCES**

1. Textbook of oral medicine - Anil Govindrao Ghom.
2. Textbook of oral medicine, oral diagnosis and oral radiology - Ravikiran Ongole  
Burkets oral medicine - Michael Glick.
3. Journal of cancer prevention -  
Epidemiology of oral lichen planus in a cohort of south Indian population: A retrospective study.