

Prevalence of Oral Mucosal Abnormalities in Dental Patients in Tamil Nadu

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ABSTRACT

Aim: The incidence of oral mucosal lesions is increasing day by day due to adverse oral habits and emerging infections. Hence, a novel attempt is made to assess the prevalence of oral mucosal abnormalities in patients visiting dental department of ESIC Hospital and Medical College, KK Nagar, Chennai, Tamil Nadu.

Materials and methods: A retrospective study was designed to assess the prevalence of oral mucosal abnormalities in ESIC Hospital and Medical College, KK Nagar, Chennai. A total of 2315 patients were assessed between May 2014 and October 2014 to find the prevalence of oral mucosal abnormalities.

Results and conclusion: The prevalence of oral mucosal abnormalities was found to be 13.31%. The most prevalent oral mucosal abnormalities were smoker's palate, frictional keratosis, aphthous ulcers, oral submucous fibrosis, and traumatic ulcers.

Clinical significance: Knowing the prevalence of oral mucosal abnormalities is very significant because early detection and prompt treatment of the same would help in reducing the morbidity and enhancing the patients' quality of life.

Keywords: Abnormalities, Oral lesions, Oral mucosa, Prevalence.

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INTRODUCTION

Identification of oral mucosal pathologies is an integral part of health care. Oral soft tissue examination must be carried out in a careful and systematic manner.¹ Oral lesions can interfere with day to day activities like speech,

chewing, and swallowing.² Knowledge of the lesions, relative frequency, or prevalence at one point of time ("point prevalence") are the key factors in establishing the diagnosis of a lesion.³

Oral mucosal lesions and conditions are becoming more prevalent in the recent decades due to change in life style and oral habits. This study has been proposed to evaluate the prevalence of both habit and nonhabit-related oral mucosal abnormalities. Lesions and conditions, such as frictional keratosis, smoker's palate, leukoplakia, lichen planus, aphthous ulcers, oral submucous fibrosis, candidiasis, smoker's palate, etc., are documented. There is a dearth of studies that assess the prevalence of both habit and nonhabit-related lesions in Tamil Nadu and hence this present study is taken in a larger representative population to estimate the same.

MATERIALS AND METHODS

A population of 2315 patients of all age groups and either gender who had attended the outpatient Department of Dentistry, ESIC Medical College and Postgraduate Institute of Medical Sciences and Research, Chennai, Tamil Nadu were retrospectively assessed to know the prevalence of oral mucosal abnormalities during the 6 months' period between May 2014 and October 2014. The normal oral mucosal variants were excluded from the study. Only prevalence of various oral mucosal abnormalities was assessed and documented. The patients were categorized according to their age into four groups. The four age groups were: 15 to 30 years and below, 31 to 45 years, 46 to 60 years, and 61 to 75 years and above. The number of oral mucosal abnormalities present in males and females were documented as well. Percentage analysis was done to find the prevalence of oral mucosal abnormalities.

RESULTS

A total of 2315 patients were assessed for the prevalence of oral mucosal abnormalities. Out of 2315 patients, 13.31% had abnormal oral mucosal lesions and condition. The patients were categorized into four various age groups and the results showed that the prevalence of oral mucosal abnormalities increases with age. The total number of oral mucosal abnormalities was 2.2% in the age group of 15 to 30 years or below. The total number of oral mucosal

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Table 1: Age- and gender-wise distribution of oral mucosal abnormalities

Sl. no.	Oral mucosal abnormality	Age groups				Total	Gender		Habit related
		15–30	31–45	46–60	61–75 and above		M	F	
1	Frictional keratosis	16	19	27	14	76	43	33	No
2	Smoker's palate	8	11	18	15	52	52	–	Yes
3	Aphthous ulcers	12	18	6	2	38	20	18	No
4	Oral submucous fibrosis	7	17	10	2	36	29	7	Yes
5	Candidiasis	1	5	13	7	26	16	10	No
6	Traumatic ulcers	3	8	5	6	22	14	8	No
7	Chewer's mucosa	–	2	9	7	18	7	11	Yes
8	Lichen planus	2	5	4	–	11	3	8	No
9	Oral carcinoma	–	1	5	5	11	6	5	Yes
10	Leukoplakia	–	–	2	3	5	2	3	Yes
11	Fibroma	1	1	2	1	5	1	4	No
12	Lichenoid reaction	–	1	2	–	3	2	1	Yes
13	Epulis fissuratum	–	–	1	1	2	2	–	No
14	Mucocele	1	1	–	–	2	1	1	No
15	Pyogenic granuloma	–	2	–	–	2	–	2	No
16	Squamous papilloma	–	–	1	–	1	–	1	No
Total (n)		51	91	105	63	310	198	112	

M: Male; F: Female

abnormalities was 3.93% in the age group of 31 to 45 years. The total number of oral mucosal abnormalities was 4.53% in the age group of 46 to 60 years. The total number of oral mucosal abnormalities was 2.72% in the age group of 61 to 75 years or above. The prevalence of oral mucosal abnormalities was more common in males compared to females in the present study. The prevalence of oral mucosal abnormalities in males was 8.5%. The prevalence of oral mucosal abnormalities in females was 4.8% (Table 1).

Smoker's palate and frictional keratosis were the common oral mucosal abnormalities found, which accounted for 3.28 and 2.24% respectively. The other oral mucosal abnormalities found were aphthous ulcers (1.64%), oral submucous fibrosis (1.55%), candidiasis (1.12%), traumatic ulcers (0.95%), chewer's mucosa (0.77%), lichen planus (0.38%), oral carcinoma (0.47%), leukoplakia (0.21%), fibroma (0.21%), lichenoid reaction (0.12%), epulis fissuratum (0.08%), mucocele (0.08%), pyogenic granuloma (0.08%), and squamous papilloma (0.04%) (Table 2).

Habit-related oral mucosal abnormalities encountered in the present study constituted smoker's palate, oral submucous fibrosis, oral carcinoma, chewer's mucosa, leukoplakia, and lichenoid reaction. Nonhabit-related oral mucosal abnormalities constituted frictional keratosis, aphthous ulcers, traumatic ulcers, candidiasis, lichen planus, fibroma, epulis fissuratum, mucocele, pyogenic granuloma, and squamous papilloma.

DISCUSSION

The present study assessed the prevalence of abnormal oral mucosal lesions and conditions. The lesions hence

Table 2: Prevalence of oral mucosal abnormalities

Sl. no.	Oral mucosal abnormality	Percentage
1	Frictional keratosis	3.28
2	Smoker's palate	2.24
3	Aphthous ulcers	1.64
4	Oral submucous fibrosis	1.55
5	Candidiasis	1.12
6	Traumatic ulcers	0.95
7	Chewer's mucosa	0.77
8	Lichen planus	0.47
9	Oral carcinoma	0.47
10	Leukoplakia	0.21
11	Fibroma	0.21
12	Lichenoid reaction	0.12
13	Epulis fissuratum	0.08
14	Mucocele	0.08
15	Pyogenic granuloma	0.08
16	Squamous papilloma	0.04
Total		13.31

encountered include frictional keratosis, smoker's palate, leukoplakia, lichen planus, aphthous ulcers, oral submucous fibrosis, candidiasis, etc.

The present study assessed only the prevalence of oral mucosal abnormalities and was found to be 13.31%. Mathew et al⁴ conducted a study in Karnataka, India on 1190 subjects and the results showed the presence of one or more mucosal lesions in 41.2% of the population. Ghanaei et al² assessed the prevalence of oral mucosal lesions in an Iranian population and the prevalence was found to be 19.4%. Cebezi⁵ conducted a study to predict the overall incidence of oral mucosal changes or lesions and found it to be 15.5%.

The oral mucosal abnormalities in the present study in males and females were 8.55 and 4.83% respectively, which showed a greater prevalence in males compared to females. This was, in accordance with the study, conducted by Ghanaei et al.² The prevalence of oral mucosal abnormalities increased with age in the present study which was similar with the findings of Ali et al.¹

Frictional keratosis and smoker's palate were the commonly found oral mucosal abnormalities which were in accordance with the study conducted by Mathew et al.⁴ All the subjects with smoker's palate were only males and the findings were similar to the findings of Mathew et al.⁴

Aphthous ulcers were prevalent in 1.64% of the studied population, which was nearly similar to the study conducted by Axéll and Henricsson⁶ where the prevalence was estimated to be 2%. The prevalence of traumatic ulcer in the present study was 0.95%, which was in accordance with the study conducted by Cebeci et al,⁵ where the prevalence of traumatic ulcers was assessed to be 0.9%.

Chewer's mucosa was prevalent in 0.77% of the population studied and this was comparable to the results of Mathew et al⁴ where the prevalence of chewer's mucosa was estimated to be 0.84%. The prevalence of candidiasis in the present study was found to be 1.12%. Ikeda et al⁷ conducted a study to investigate the prevalence of oral mucosal lesions in a Cambodian population and the prevalence of oral candidiasis was found to be 1.4%, which was almost similar to the findings of our study.

Oral submucous fibrosis was prevalent in 1.55% of the population, whereas a cross-sectional study conducted by Saraswathi et al⁸ found the prevalence of oral submucous fibrosis to be 0.55% and Mathew et al⁴ estimated the prevalence to be 2.01%.

Oral carcinomas were prevalent in 0.47% of the total oral mucosal abnormalities found. The prevalence in our study was more than that assessed by Cebeci et al⁵ (0.08%) and less than that found by Mathew et al⁴ (1.7%). The prevalence of oral leukoplakia was assessed to be 0.21% in the present study, and it was relatively less than that found by Saraswathi et al⁸ in which the prevalence of oral leukoplakia was found to be 0.59%. Prevalence of oral lichen planus was 0.47% in the present study, whereas Pentenero et al⁹ estimated the prevalence of oral lichen

planus to be 1.46%, which was greater than the prevalence observed in our study.

The other oral mucosal abnormalities encountered in the present study included fibroma, lichenoid reaction, mucocele, pyogenic granuloma, and squamous papilloma. The estimated individual prevalence of these lesions was around 0.2% or lesser.

CONCLUSION

Awareness about oral health and oral lesions is mandatory to curtail the prevalence of preventable oral mucosal lesions over the long run. Oral health education pertaining to the same would enhance the prevention of such lesions.

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