ORIGINAL RESEARCH

Correlation of Oral Mucosal Lesions with Deliterious Habits among Kashmir Population: An Invitro Study of 500 Subjects

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ABSTRACT

Aim: The aim of present study was to determine the prevalence of oral mucosal lesions and their co-relation with deleterious habits like smoking, tobacco and alcohol consumption. **Materials and Methods**: 500 patients visited from both urban as well as from rural areas and same were screened for oral lesions; information regarding oral habits was obtained through a questionnaire. **Results:** The result showed the prevalence of oral mucosal lesions in 76 subjects (15.2%). Among these the most prevalent lesion found was smokers palate 34.2% (26)followed by Fordyce 's granules 19.7% (15),leukodema14.4%(11),leukoplakia11.8%(9),oral submucous fibrosis 10.5%(8), recurrent aphthous ulcers 7.8% (6) and oral candidiasis1.3%. The prevalence of the oral mucosal lesions associated with habits was more among males than in females. **Conclusion:** The study concluded with the need for public health programmes and camps to aware public about the harmful effects of deleterious habits.

KEYWORDS: Prevalence, Oral Mucosal Lesions, Habits, Smoker's Palate

INTRODUCTION

Patients often present to family Physician and Anatomist with oral lesions. According to a recent studies, 10 most common oral lesions comprise almost three-quarter of all oral lesions. Oral lesions are common on the adult population. Oral lesions are more common than tension headaches, phlebitis or arthralgias.[1]

Epidemiological studies provide an important vision in determining the incidence, prevalence and severity of diseases .They also help in assessing the distribution the risk factors and associated aetiology .This information is useful in formulating health care programmes at the primary level to spread awareness and help in early diagnosis and lead to prompt treatment. Tobacco has been acknowledged as a risk factor for oral cancer.[2,3,4] Thus, this paper helps to evaluate the prevalence of oral mucosal lesions in Kashmir and to correlate the findings with the habit of consuming tobacco and alcohol in the population.

MATERIAL AND METHODS

Five hundred people were examined in this study. These patients were divided into four groups (I) 15 to 30years of age,(II) 31 to 45 yrs, (III) 46 to 60 yrs, (IV) 61 to 75 years. Examinations of these patients were done clinically by two trained dental professionals by using artificial light, mouth mirror and gauze. The Diagnosis was done on the basis of patient's history and clinical examination under standard accepted guidelines.[5,6] Information regarding smoking was made through questionnaire based interview.

Excluded from the study were those patients who had limited mouth opening, those patients who had recent maxillofacial trauma, those who had intermaxillary fixation (IMF) and unconsciousness and patients less than 15 yrs and more than 75 yrs of age. Chi –square test was used to determine the significant association between different variables.

RESULTS

Profile of the Study Population: Out of five hundred patients, 292 belong to rural strata while 208 were from the urban population. 300 (60%) of the study population were males while remaining 200 (40%) were females. 13% (65) of the population were in the age group of 15 to 30years. The majority of the subjects belonged to 31 to 45 years of age being 65% (325). The 46 to 60 age group included 20% (100) of the subjects and the least percentage of the study group was in 61 to 75 years which was 2% (10) (Table 1). Males outnumbered females in all divided groups under the study.

Prevalence of Habits: The prevalence of habit such as smoking ,chewing tobacco and alcohol consumption were 20% (100 subjects), 5% (25 subjects) and 0.2% (1 subject) respectively.The habit of smoking was most prevalent in the 15-30 age group with a higher prevalence in men than women. The majority of the participants smoked a cigarette and constitute 100 subjects of the total 500 subjects.

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Group (in yrs) n=500	Males - (%age)n=300	Females - (%age)n=200
15-30	42 (14%)	23(11.5%)
31-45	192 (64%)	133(66.5%)
46-60	60 (20%)	40 (20%)
61-75	6 (2%)	4 (2%)

Table 1: Subjects Among Various Age Groups

Males had a higher tendency to chew tobacco against women (Table 2). The study found the habit of smoking was more prevalent than tobacco and alcohol consumption. The study also found that the habits of chewing pan masala, betel nut, betel quid, and gutka were less prevalent.

Age group	Smoking	Chewing tobacco	Alcohol drinking
	Males/females	Males/females	Males/females
15-30	38/10	10/3	0/0
31-45	26/8	7/2	0/0
46-60	12/5	2/0	1/0
61-75	1/0	1/0	0/0

Table 2: Prevalence Of Habit According To Age And Gender

Prevalence Of Lesion: The oral soft tissue lesions were found to have a prevalence of 15.2% in the study population. They formed 76 subjects of the study population. Normal mucosal variants were seen in 424 people in the study. The most common lesion observed was smoker's palate. It was diagnosed in 26 cases, all of which were seen in men.

Fordyce's spots were found 19.7% of lesional subjects. Males had a higher predilection for this than females. This disease was mostly seen in 31-45 year age group. The prevalence of leukodema was 14.4%in affected subjects. Males had a higher predilection for this disease than females. Leukoplakia was found in 11.8%, mostly seen in 31-45 year age group, it had a higher predilection for males than females (Table 3).

Mucosal lesions	Males(%age)	Females(%age)
Smokers palate	26.2	8
Fordyce's granules	15	4.7
Leukodema	10.2	4.2
Leukoplakia	8.3	3.5
Oral submucous fibrosis	8.5	2
Recurrent apthous ulcers	5.4	2.4
Oral candidiasis	1.3	0

Table 3: Prevalence Of Lesion

DISCUSSION

Cross sectional study are the tools used to determine the prevalence of diseases in a population and to identify groups which are at higher risk .the prevalence of leukoplakia was 1.8% in our study. These findings were consistent with those of Bhatnagar et al. in Uttar Pradesh, India (2013)[7] and Espinoza in Chile (2003).[8] However, a very high prevalence was reported by Oakley et al. (13%)[9] in the habitual areca nut chewers amongg high school students of Micronesia and by zhang et al. in china(9.18%)[10] as with the other studies our study also shows an association between smoking habits and leukoplakia. The results were statistically significant and also, oral leukoplakia was found to be more prevalent in men than women. This could be due to a high number of male smokers as compared to females. Leukoplakia was commonly found on the buccal mucosa followed by the labial mucosa and the commissural area.it was also seen in the alveolar ridge and retromolar area.

The prevalence of oral submucos fibrosis was 1.6% and was less as compared to prevalence rate observed by Sharma et al in the rural areas of Jaipur.[11] This could be due to high number of participants in that study subjects consuming areca nut and gutka .The signs seen were generalized blanching, presence of fibrotic bands in the oral mucosa and the patients complaining of burning sensation.

The prevalence of oral candidiasis was less (0.2%) in our population as compared to that in south Brazil documented by Carrad V et al[12] also these lesions were found to be significantly associated with female gender as opposed to that observed in our study.

The most common type recorded in our study was the pseudo membranous candidiasis. There was high prevalence of oral candidiasis in older age group in our study referring to extreme age as a risk factor for candidiasis due to decreased immunity and use of complete dentures. The deliterious habit of smoking was predominant in young adults and there was no correlation found between smoking and candidiasis.

The presence of recurrent apthae being 1.2% in our population and is drastically less than found in a study of Iranian adults where it was concluded to be the common problem.[13] However these results were comparable to those of chattopady found in American population and Garcia polo Vallejo MJ[14,15] in the Spanish population. The most common site in our observation was the lip followed by buccal mucosa. The lesion was found more in males who were non smokers.

The information was gathered from questionnaire based survey which could lead to bias on the subject's part. The limited size of the sample is another shortcoming along with the fact that detailed data on the predilectors of oral lesions such as nutritional status could not be assessed.

CONCLUSION

The study observes increased prevalence of smoker's palate due to smoking also the habit of smoking has been confirmed as a risk factor for oral leukoplakia. Interventional public health programmes discouraging the use of tobacco should be formulated.

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