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ORIGINAL ARTICLE

Prevalence of Oral Mucosal Lesions Among the Patients Visiting a Dental Hospital: A cross-sectional study

MARRYAM RIAZ[1], FAREED AHMAD[2], ALI ANWAAR[3], MOMINA GUL[4], ADEEL IJAZ RANA[5], MUSTAFA QADEER[6]
[1]*BDS, MPhil. Assistant Professor, Azra Naheed Dental College*
[2]*BDS, MCPS. Assistant Professor, Institute of Dentistry, CMH-Lahore Medical College, National University Of Medical Sciences.*
[3]*BDS, Msc. Assistant Professor, Institute of Dentistry, CMH-Lahore Medical College, National University Of Medical Sciences*
[4]*(BDS) House Officer (HO) in Fatima Memorial Hospital, Lahore*
[5]*BDS, MPH, Demonstrator, Institute of Dentistry, CMH-Lahore Medical College, National University Of Medical Sciences.*
[6]*BDS, MSc, Associate Professor, Institute of Dentistry, CMH-Lahore Medical College, National University Of Medical Sciences*
Correspondence to Dr. Adeel Ijaz Rana. Email: adeel554@gmail.com; +92 333 4700289

ABSTRACT

Objective: To determine the prevalence of oral mucosal lesions among the patients visiting a dental hospital.
Design of the Study: It was a cross-sectional study.
Study Settings: This study was carried out at Outpatient Department of Dentistry Combined Military Hospital, Lahore from November 2020 to April 2021.
Material and Methods: Clinically all the patients were examined then questioned if there are any habits such as (pan, chewing, alcohol intake and smoking) and questions were also asked about frequency and the period of their habit and time of systemic disease. The screening of the disease was made by taking history and observing the clinical features as per guidelines of WHO.
Results of the Study: Total 178 patients were included in this study out of total sample 76 (42.69%) were male and 57.30% females. Out of 178 patients 91(51.12%) had oral mucosal lesions. Out of 91 patients 48 had females with oral lesion with percentage 26.96 of all the screened patients, while 43 male patients had OMLs making 24.15%.
Conclusion: The prevalence of oral mucosal lesions was significantly affected by socio-demographic characteristics like sage, gender, occupation, cigarette use, alcohol use and tobacco chewing. Our study has highlighted facts and figures about epidemiology of the oral mucosal lesions that provide help in organizing the future studies about oral health.
Keywords: oral mucosal lesions, chewing, alcohol, who, prevalence, smoking, cigarette

INTRODUCTION

Oral mucosal lesion is described as in color any abnormal alteration or alteration in appearance of surface, loss or swelling of integrity of surface of oral mucosal lesion, which directly affect the quality of life of affected person.[1] For an individual oral health has a significant role in the excellence of life. Oral mucosa functions as a protective wall and usually attacked by pathologies that may be either harmful or harmless. Oral lesions may lead to impairment in speech and inability to eat anything. Certain lesions may cause dysesthesia, halitosis or xerostomia. Factors such as lethal habits, sharp or irregular teeth, poor oral hygiene and ill-fitting prosthesis may also contribute to the development of OMLs. The etiologies behind OMLs include local trauma, infection, immunologic, neoplastic and metabolic disease.[2,3]

The prevalence of oral mucosal lesions increased with physiological changes in oral cavity, age and also due to constant effect of risk habbits.[4]

Decrease flow of saliva ongoing effects of systematic and local factors like consumption of alcohol, snuff, smoking use of drugs prompt patients to different type of lesions which are less likely present in children due to some normal mucosal variations like geographic tongue which already oocur in youth.[5]

Globally across different areas and countries prevalence of oral mucosal lesions varies significantly from 4.9% to 64.7%.[6,7,8] Feng et al.[9] reported that prevalence of OMLs to be 13.3% in population of China. Habash et al.[11] noted the prevalence of oral mucosal lesions to be 29.4% in population of Palestin. Rohini[12] reported its prevalence to be 25.33% in Indian population. In Western Maharashtra Kamble et al.[13] reported out of 1500 patients 39.1% diagnosed with OMLs males were 70.8% and females 29.1%. Oviya et al.[14] noted that prevalence of OMLs were significantly high in age group of 20 to 40 years (50.6%) and in males patients (96.6%) were observed.

So for a few studies have been conducted on OMLs. So the objective of the study was to determine the prevalence of oral mucosal lesions in patients attending outdoor of the dental hospital. This information may help to determine the epidemiology and severity of oral lesions in Pakistan. It could also serve as a baseline for future studies with the goal of finding ways to improve oral health in Pakistan. To date there is very scarce data regarding oral mucosal lesions in Pakistan so we undertake this study.

MATERIAL AND METHODS

This was a cross-sectional study which was carried out at Outpatient Department of Dentistry Combined Military Hospital, Lahore from November 2020 to April 2021. The study was approved by the ethics committee of hospital. Informed consent was obtained from patients participating in the study. Patients of both genders age between 10-70 years included in this study who visited OPD of dentistry for treatment and consultation. Patients who declined from consent and those patients who were mentally retard excluded from this study. Patients in whom an intraoral examination was not possible due to inadequate mouth opening were excluded from the study. Sample size of 100 patients was calculated with 95% level of significance and

80.0% power of test using expected frequency of oral mucosal lesions to be 13.3%.[9]

An oral medicine expert trained 2 general dentists to perform examination of neck using a light, mirror which use in dentistry and a piece of gauze for examination of the tongue. In oral cavity in diagnosing pathological and anomalous processes their competencies was assessed by the clinical oral medicine and oral pathologist expert before the start of the study. Meij et al. (2009) proposed diagnostic criteria on base of WHO definition OMLs that was used to recognize the cases of OMLs which involved presence of lace like network of faintly raised greywhite lines, bilateral, frequently symmetrical lesions, atrophic, erosive, plaque and bullous type of lesions. Size, location, basic characteristics, fundamental lesion, color and consistency of lesions were note down.

All this information was recorded in a predesigned proforma along with age and gender of the patient. Age has been described by mean ±SD while gender and oral mucosal lessons and its types have been described by frequency and percentage. Chi-square test has been used considering p≤0.05 as significant.

RESULTS

Total 178 patients were included in this study out of total sample 76 (42.69%) were male and 57.30% females (Table 1). Out of 178 patients 91(51.12%) had oral mucosal lesions. Out of 91 patients 48 had females with oral lesion with percentage 26.96 of all the screened patients, while 43 male patients had OMLs making 24.15%. In table 2 OMLs were given according to their gender which contained eleven types of lesion. In table 3 the allocations of the OMLs were given according to their age for both genders. In table 4 site of OMLs of the patients was given.

Table 1: Socio-demographics of oral mucosal lesion patients

Characteristic	Patients screened	Frequency
Gender	Male	76(42.69)
	Female	102(57.30)
Age group	≤30	88(49.4)
	(30–60)	62(34.83)
	>60	26(14.6)
Occupation	Student	35(19.66)
	Employee/self-	62(0.79)
	Housewife/retired	52(29.21)
Cigarette use	Non-smoker	80(44.94)
	Current smoke	98(55.5)
Alcohol use	Non-user	146(82.02)
	Occasional	32(17.9)
Tobacco chewing	Non-chewer	121(67.97)
	Current chewer	57(32.02)

Table 2: Gender wise distribution of OMLs patients

Items	Gender: Female=102 Male=76	Frequency (%)	P-Value
Oral Mucosal Lesion	Male=43 Female=48	*24.15* *26.96*	
Abscess	Male	14(32.5)	0.79
	Female	16(33.33)	
Pericoronitis	Male	8(18.60)	0.008
	Female	11(22.91)	
Pulp Polyp	Male	4(9.30)	0.77
	Female	3(6.25)	
Candidiasis	Male	1(2.32)	0.03
	Female	5(10.41)	
Material alba	Male	6(13.95)	0.001
	Female	2(4.16)	
Linea alba	Male	2(4.65)	0.16
	Female	3(6.25)	
Muccocel	Male	1(2.32)	0.005
	Female	2(4.16)	
Leukoplakia	Male	2(4.65)	0.55
	Female	1(2.08)	
Lichenplanus	Male	2(4.65)	0.03
	Female	2(4.16)	
Fibroma	Male	1(2.32)	0.7
	Female	2(4.16)	
Hairy tongue	Male	2(4.65)	0.00
	Female	1(2.08)	
Total	**M43+F48=91**	**51.12%**	

Table 3: Distribution of OMLs patients according to age category for both genders

Oral mucosal lesions	≤30 years n=88	30–60 years n=62	>60 years n=26	*p* value
Abscess	15(8.42)	12(6.74)	3(1.68)	0.77
Pericoronitis	8(4.49)	6(3.37)	5(2.80)	0.53
Pulp Polyp	4(2.24)	3(1.68)	0(0.0)	0.004
Candidiasis	5(2.80)	1(0.56)	0(0.0)	0.005
Material alba	3(1.68)	4(2.24)	1(0.56)	0.87
Linea alba	3(1.68)	2(1.12)	0(0.0)	0.78
Muccocel	1(0.56)	2(1.12)	0(0.0)	0.23
Leukoplakia	1(0.56)	0(0.0)	2(1.12)	0.98
Lichenplanus	2(1.12)	2(1.12)	0(0.0)	0.21
Fibroma	2(1.12)	1(0.56)	0(0.0)	0.89
Hairy tongue	1(0.56)	0(0.0)	2(1.12)	0.12
Total	**45(25.28)**	**33(18.53)**	**13(7.30)**	**0.412**

Table 4: Distribution of patients according to site of the lesion

Site of the lesion	Number (%)
Alveolar ridge/gingiva	32 (17.9)
Lower 3rd molar area	18 (10.11)
Tongue	12 (6.74)
Lip	5 (2.80)
Lower first molar	9 (5.05)
Buccal mucosa	15 (8.42)
Total	91 (8.27)

DISCUSSION

The study observed that prevalence of oral mucosal lesions in Pakistani patients visiting dental hospital was 51.2%. In literature different studies showed variations in prevalence of OMLs country to country because of various habits adopted by their populations. It has been stated that oral mucosal lesions can affect 4.9-64.7 percent of peoples having different habits which depend on studied population.[16-19] Andreason et al.[20] reported that frequency of oral mucosal lessons to be 9.9%. Patil et al.[17] reported the prevalence of 64% having one or more than one oral mucosal lesions. These OMLs may be linked with consumption of betel nut, tobacco, or less important to trauma and prosthesis[17,21].

Resultantly prevalence of oral mucosal lesions comparatively was higher in older patients as compare to younger patients and it's due to various habits which are adopted with age. Smoking, chewing, frequently use of alcoholic beverages have develop as a common social habit.[22] The mean age of patients with oral mucosal lesion like lingual papillitis, fissured tongue, lichen planus, candidiasis, burning mouth syndrome and melanin pigmentation was less than 30 years old.[22]

In our study in category of age ≤30 years 49.4% patients were included, in category of age 30–60 years 34.83% patients were included and 14.6% patents were >60 years of age, our these finding are closely related to the results of Pratik et al.[22]

Patil et al.[17] reported that male patients were comparatively more affected as compare to females and statistically this difference was not significant ($p > 0.05$). In contrast our study reported those OMLs affected 24.15% male patients and only 26.8% female patients and statistically significant difference were found ($p < 0.05$).

In this study, the most common lesions were Abscess 32.5 followed by pericoronitis 18.60%. A similar study by Tortorici et al. in population of Caucasian reported that hairy tongue in 28.7% patients and Tortorici (14.54%). Our study is limited to all the lesions involved in the study are clinically diagnosed and no histopathological examination was performed. Future scope of the study can include a prospective and multicentric study design and patient's habits and other etiological factors.

To our knowledge, in Pakistani population it's the only study which reported prevalence and distribution of oral mucosal lesions. Our study population comprises the patients who come to the OPD of dentistry department of CMH, Lahore with various main complaint for a dental treatment which possibly upsurges the prevalence of oral mucosal lesions.

CONCLUSION

The prevalence of oral mucosal lesions was significantly affected by socio-demographic characteristics like sage, gender, Occupation, cigarette use, alcohol use and tobacco chewing. Our study has highlighted facts and figures about epidemiology of the oral mucosal lesions that provide help in organizing the future studies about oral health.

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