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Original Research Article

A Study of Oral Mucosal Lesions

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Abstract

Background: The oral cavity has been looked upon as a 'window to the body' and 'mirror of general health. There are common potentially malignant disorders like leukoplakia, erythroplakia, oral submucous fibrosis, lichen planus; some systemic disorders can also be premalignant. We undertook the study to find out common conditions in our region and their demographics to see the etiological factors associated with them.

Methods: This study consists of 560 patients who presented to the ENT department of our institution from November 2020 to November 2022 with lesions of the oral cavity. After complete ENT examination, provisional diagnosis was made. Biopsy was taken to confirm the clinical diagnosis cases with suspicious premalignant lesions which were diagnosed clinically.

Results: In present study, majority of oral lesions were seen in the age of 21-60 year. Out of 560 patients 330(59%) were males and 230(41%) were females. The most common site of involvement was buccal mucosa followed by tongue. Oral submucous fibrosis seen in maximum number of patients as habit of pan masala chewing is more prevalent in Gujarat. In present study 71 patients are having malignant lesion ,202 with premalignant lesion,287 with benign lesion.

Conclusion: In Indian population, oral lesions are very common due to various systemic diseases, addictions and low socio-economic state. Oral submucous fibrosis, leukoplakia common premalignant conditions seen in middle aged patients. Early diagnosis and prompt treatment prevents morbidity as well as disease progression. Tobacco consumption in all forms smoking tobacco and alcohol, are the major risk factors associated with malignant lesions.

Keywords: Oral lesions, Benign, Premalignant lesions.

Introduction

The oral cavity has been looked upon as a 'window to the body' and 'mirror of general health'. [1] Oral cavity encounters various antigens, microorganisms and physical agents affecting local and systemic health. Recurrent aphthous stomatitis (RAS) is one of the most common and painful conditions in the oral cavity. Although variable, the lesions typically begin in childhood or adolescence, occur more frequently in females.

Mucocele represents mucin spillage into the oral soft tissues resulting from rupture of a salivary gland duct. Oral fibromas form as a result of irritation or masticatory trauma, especially along the buccal occlusal line. Oral candidiasis (thrush) often appears as white, cheesy plaques that stick tightly to the mucous membranes and leave red erosions when wiped off. [2] Thrush is most common among patients with diabetes or immune compromise status and among those who are taking antibiotics. Warts may occur in the mouth (oral squamous papilloma). Ordinary warts (verrucae vulgaris) can infect the mouth if a person sucks or chews one that is growing on a finger. Different etiological factors are able to provoke genetic and epigenetic alterations in the genome and can cause alteration in oral mucosa epithelium leading to premalignant lesions. It includes a variety of lesions and conditions characterized by an increased risk for malignant transformation. [1] There are common potentially malignant disorders like leukoplakia, erythroplakia , oral submucous fibrosis, lichen planus; some systemic disorders can also be premalignant.4 There are well-recognized risk factors such as tobacco chewing, tobacco smoking, areca-nut (for OSMF) and alcohol. Due to emergence of gutkha and pan masala, which are packed attractively and easily available, incidence of cancer in young individuals is increasing. Premalignant conditions have huge geographical, socioeconomic and population variations with accepted prevalence of 1-5% and are frequently found in the buccal mucosa, lower gingivae, tongue and floor of mouth. Oral potentially malignant disorders can be differentiated by site of oral lesion, its clinical presentation and histopathological features. With increasing rates of oral malignancy in India and the world, WHO experts have warned that oral malignancy may become an epidemic in South East Asia. [3] Early diagnosis is the most effective way of reducing the burden of the disease to the individual, as well as to the society, decreasing morbidity and mortality and improving quality of life as well as survival. For understanding the process, natural history and clinical outcomes of patients in oral malignancy, early diagnosis and effective management of oral pre-malignant disorders is necessary. We undertook the study to find out common conditions in our region and their demographics to see the etiological factors associated with them.

Aims and Objectives:

1. To study the demographics of different lesions of the oral cavity.
2. To study incidence of various oral lesions.
3. To study the epidemiological and etiological factors associated with oral lesions.
4. To study clinical features of various oral premalignant lesions.

Materials and Methods:

Prospective observational study was taken in patients coming to ENT OPD at our

hospital with complaints of oral cavity lesion amongst which all patients who gave informed consent are included in the study.

Study Design: Prospective observational study

Study Period: November 2020 to November 2022.

Study Population: All patients coming to ENT OPD of our hospital, Ahmedabad.

Inclusion Criteria: Patients of all age will be included with complaint of oral cavity lesion. Patients who are willing to give informed consent.

Exclusion Criteria: Patients who are not willing to give informed consent.

This study consists of 560 patients who presented to the ENT department of our institution from November 2020 to November 2022 with lesions of the oral cavity. All cases were studied in detail with the clinical features and relevant history and were recorded as per the proforma. After complete ENT examination, provisional diagnosis was made. Biopsy was taken to confirm the clinical diagnosis cases with suspicious premalignant lesions which were diagnosed clinically. Appropriate treatment was started in all the patients.

Data collected from the cases was analysed for the epidemiology, aetiology, risk factors and clinical features of various oral cavity lesions.

Results

Table 1: Age group distribution of oral lesions

Age group	Present study (%) n=560	Suvernkar et al (%)[6] n=210	Prabhakar et al(%)[5] n=80
≤20	80(14.28)	26(12.38)	8(10)
21-40	218(38.8)	58(27.62)	28(35)
41-60	202(35.9)	85(40.17)	32(40)
>60	60(10.7)	41(19.52)	12(15)
Total	560(100)	210(100)	80(100)

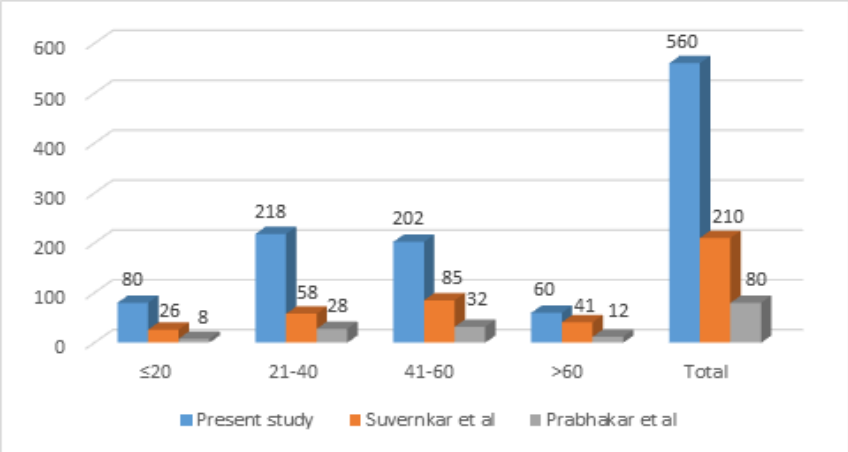


Table 2: Gender distribution of oral lesions

Gender	Present study (%) n=560	Prabhakar et al(%)[5] n=80	Suvernkar et al (%)[6] n=210
Male	330(59)	46(58)	122(58.10)
Female	230(41)	34(42)	88(41.90)
Total	560(100)	80(100)	210(100)

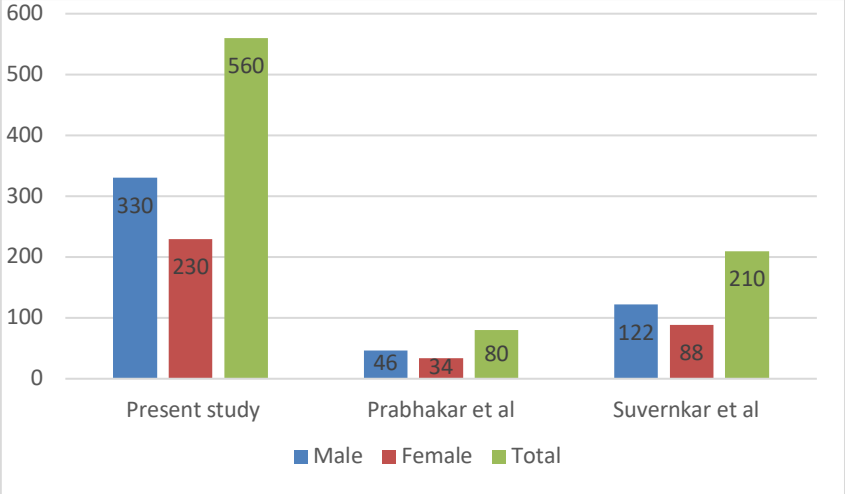


Table 3: Presenting complaints in patients with oral lesions

Symptoms	In present study number (%) n=560	Mohit et al number(%)[8] n=360	Suvernkar et al number(%)[6] n=210
Pain in oral cavity	134(24)	5(1.38)	-
Swelling in mouth	168(30)	-	134(63.81)
Difficulty in mouth opening	56(10)	6(1.66)	-
Oral ulceration	84(15)	-	25(11.90)
whitish patch	84(15)	85(23.6)	22(10.48)
Red patch	28(5)	4(1.11)	1(0.48)
Others	6(1)	252(70)	28(13.3)

Table 4 : Comparison of different types addictions in oral lesion cases in study

Habits	Present study (%) n=560	Santhosh et al(%)[6] n=979
Tobacco chewing	192(34.2)	214(21.9)
Smoking	80(14.2)	196(20.2)
Pan Masala	64(11.4)	-
Alcohol	18(3.2)	151(15.4)
More than one addiction	22(3.92)	301(30.70)
None	184(32.8)	117(11.9)
Total	560(100)	979(100)

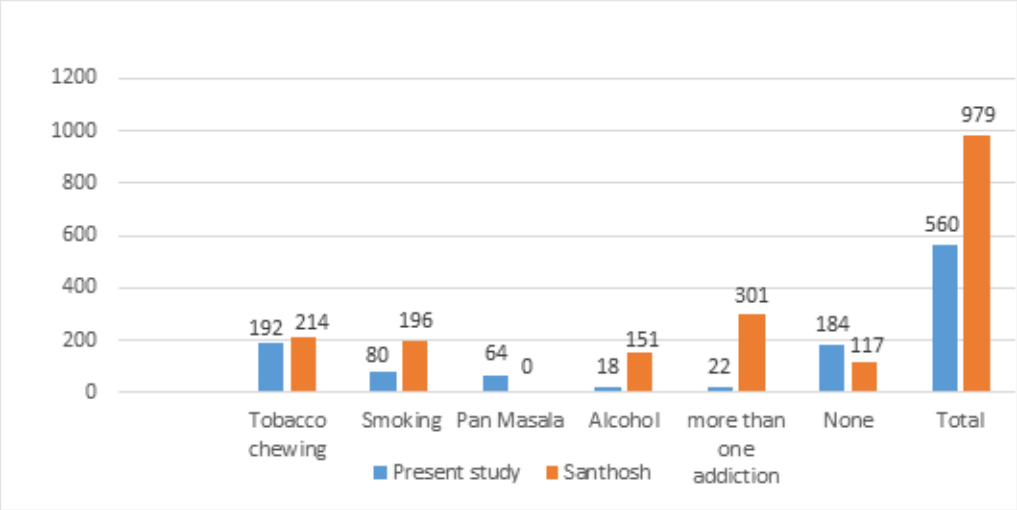


Table 5: Site wise distribution of oral lesions

Site of Lesion	Present study (%) n=560	Prabhakar et al(%)[5] n=80
Gingiva	18(3.21)	2(2.5)
Buccal mucosa	242(43.21)	27(33.75)
Lip	45(8.03)	5(6.25)
Tongue	136(24.28)	27(33.75)
Palate	97(17.32)	2(2.5)
Floor of mouth	4(0.71)	3(3.75)
others	18(3.21)	14(17.5)
Total	560(100)	80(100)

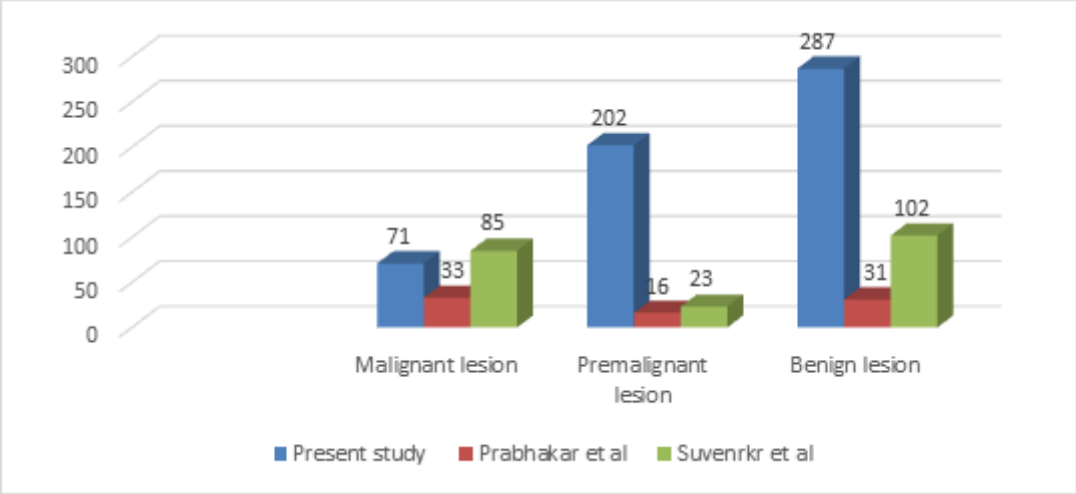
Table 6: Comparision of type of lesion in different study

Types of lesions	Present study(%) n=560	Azita Azad et al(%)[7] n=3001	Rashmi Goyal et al(%)[9] n=1280	Prabhakar et al(%)[5] n=80	Soundarya et al(%) n=1247
Apthous ulcer	45(8.03)	1(0.03)	570(44.53)	-	-
Coated tongue	10(1.78)	-	-	-	-
Traumatic ulcer	10(1.78)	3(0.09)	10(0.78)	-	-
Angular chelitis	12(2.14)	-	-	-	-
Geographic tongue	03(0.53)	-	45(3.51)	-	-
Ranula	05(0.89)	-	-	1(1.25)	-
Mucocele	33(5.89)	174(5.79)	45(3.51)	1(1.25)	-
Osmf	155(27.67)	-	-	-	876(70.24)
Candidiasis	10(1.78)	-	45(3.51)	-	-
Melanoplakia	44(7.85)	-	-	-	-
Lichen planus	64(11.42)	449(14.96)	108(8.43)	-	238(19.08)
Leukoplakia	52(9.28)	63(2.09)	166(12.96)	4(5)	112(8.98)
Erythroplakia	34(6.07)	4(0.13)	84(6.56)	-	21(1.68)
Epulis	2(0.35)	14(0.46)	-	-	-
hemangioma	2(0.35)	4(0.13)	-	4(5)	-

Malignant lesion	71(12.67)	132(4.39)	136 (10.62)	31(5.53)	-
Verrucous hyperplasia	8(1.42)	-	18(1.40)	-	-
other	0 (0)	2157 (71.87)	53(4.14)	39(48.75)	-
Total	560(100)	3001(100)	1280(100)	80(100)	1247(100)

Table 7 Different type of oral mucosal lesion

Oral mucosal lesion	Present study (%) n=560	Prabhakar et al[5](%) n=80	Suvenrkr et al[6](%) n=210
Malignant lesion	71(12.67)	33(41.25)	85(40.47)
Premalignant lesion	202(36.07)	16(20)	23(10.95)
Benign lesion	287(51.25)	31(38.75)	102(48.57)



Discussion

In present study, majority of oral lesions were seen in the age group of 21-60 years, out of which 38.8% were seen in 21-40 years while 35.9% were seen in the age groups of 41-60 years. As 21-40 age group is working class so they are more prone to get habituated to addictions due to mental stress and work load. In Suvernkar study [6] and in Prabhakar study5 majority lesions were seen in age group 21-60 years as it is seen in correlation with present study. [4]

In present study out of 560 patients, 59% were males and 41% were females, where in Prabhakar et al5 it was 58% males and 42% females and in Suvernkar study [6] 58.1% were male and 41.9% were female. Both the studies are correlating with the present study in sex distribution.

Oral lesions were seen predominantly in men owing to the greater incidence of smoking and chewing habits in men. Males are the breadwinners of the family and many occupations of men require a substantial amount of physical energy and a high level of concentration, with unusual hours of work, so to gain energy may be the reason for increased uptake of the addiction. The cultural constraints in our country prevent women from taking up these habits.

In present study most common presenting complaint was swelling in mouth which is significantly correlating with Suvernkar et al study [6]. In our study, swelling in mouth (30%) followed by pain in the oral cavity (24%) (burning or dull aching type) followed by whitish patches (15%), oral ulcers (15%) difficulty in mouth opening (10%) were common symptoms. In our study, 67.2% of patients were associated

with certain types of addictions in the form of tobacco chewing, smoking, alcohol, betel nut chewing. In Santhosh study [6], 88.2% of patients seen having some kind of addiction. Tobacco chewing and smoking are the most common risk factors for the majority of oral lesions. In India tobacco chewing products are used widely because of their low-cost and easy accessibility.

In present study, most common site which is affected is buccal mucosa followed by tongue same as seen in Prabhakar et al [5] study also significantly showing buccal mucosa and tongue are commonly affected site with highest number of cases.

Buccal mucosa is commonly involved in India because of habits of smokeless form of tobacco and a habit to keep tobacco in the oral cavity especially in gingivobuccal sulcus for a longer period of time or even overnight in some cases. Excessive pooling of saliva in this area and its close proximity with tobacco substances predisposes the changes in mucosal epithelium of buccal mucosa.

In present study oral submucous fibrosis seen in maximum number of patients followed by melanoplakia, erythroplakia and lichen planus. In present study oral submucous fibrosis seen in maximum number of patients as pan masala chewing is prevalent in population of Gujarat. Lichen planus is 2nd most common premalignant lesion seen in present study with 64 cases where we can see that in Azita Azad et al [7] study its 449 cases .

The various factors responsible for different lesions across the studies are geographic location, socioeconomic status, different patterns and different habits of addictions in particular regions. The factors affecting mouth opening are site of maximum fibrosis, duration and number of addictions, poor oral hygiene and negligence of initial symptoms. [8]

Oral mucosal lesions are divided into benign, premalignant and malignant .In present study, there are 71 patients shows malignant lesion where in Suvernkar study6 85 and Prabhakar study [5] 33 patients seen with malignant lesions. In present study, there are 202 patients shows pre malignant lesion where in Suvernkar study [6], 23 patients and Prabhakar study [5], 16 patients seen with potentially malignant lesion. In present study, there are 287 patients shows benign lesion where in Suvernkar study6, 102 and Prabhakar study [5], 31 patients seen with benign lesion. Early detection of potentially malignant lesion with through examination and observation can prevent transformation into malignant lesion. In present study, total 108 patients were taken for biopsy out of which 71 shows malignant lesion. [9]

Conclusion

Oral lesions are common finding in patients presenting to ENT OPD. In Indian population, oral lesions are very common due to various systemic diseases, addictions and low socio-economic state. A patient with oral mucosal lesion therefore, should be examined thoroughly as early diagnosis of the precancerous and cancerous conditions is the key factor for their effective and timely management along with simultaneous counselling to quit addiction. Oral submucous fibrosis, leukoplakia common premalignant conditions seen in middle aged patients. Early diagnosis and prompt treatment prevents morbidity as well as disease progression. Benign lesions like aphthous ulcer, pale coated tongue, geographic tongue can be treated easily with dietary modification, hygiene maintenance and vitamin supplementation. Burning sensation in mouth and difficulty in mouth opening are the common clinical features, seen in patients with oral submucous fibrosis. Tobacco consumption in all forms with smoking tobacco and alcohol, are the major risk factors associated with malignant lesions. Any mass lesion especially in the oral cavity should be

biopsied to rule out malignancy. The origin and nature of the oral cavity lesions cannot be confirmed by clinical examination alone. Premalignant lesion like oral lichen planus (11.42%), leukoplakia (9.28%), erythroplakia (6.07%), verrucous hyperplasia (1.42%) seen in present study, with early detection and diagnosis, conversion of premalignant lesion into malignant lesion can be prevented.

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