



RETROSPECTIVE ANALYSIS OF ORAL POTENTIALLY MALIGNANT DISEASES- AN INSTITUTIONAL EXPERIENCE.

Maxillofacial Surgery

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ABSTRACT

Aim: Epidemiological and clinical analysis of patients with oral leukoplakia (OL) diagnosed and treated in the Department of Maxillofacial and Oral Surgery. **Material And Methods:** Retrospective study was conducted among 112 patients in the department of Oral and Maxillofacial Surgery considered from the year 2018 – 2022. **Results:** The most common location of lesions was buccal mucosa (55%). The risk of malignant transformation is relatively high. Males shows high prevalence (60%) more than females (40%). The highest incidence of these lesions was recorded in the third and fourth decades of life with significant association between age group and oral potentially malignant lesions. As per the present study, the predominant site of involvement was found to be buccal mucosa. The most common oral potentially malignant lesion assessed was Leukoplakia (62%). Oral submucous fibrosis (OSMF) (22%) stands second in the list followed by oral lichen Planus (10%) and erythroplakia (6%). **Conclusions:** This study gives us an opportunity to explore about tobacco awareness and early detection of oral premalignant lesions.

KEYWORDS

Leukoplakia, Oral premalignant lesion, Epidemiology.

INTRODUCTION

Potentially malignant diseases of the oral cavity often manifests clinically as an unusual area on the mucosal lining of the oral cavity. According to the WHO, the premalignant lesions of the oral cavity which may undergo malignant transformation are called as potentially malignant disorders (PMD).¹ There are five types of lesions of the oral cavity described as potentially malignant disorders such as Leukoplakia, Erythroplakia, Lichen planus, Oral submucous fibrosis (OSMF), Verrucous hyperplasia.^{2,3}

Early diagnosis and prompt treatment of the potentially malignant diseases of the oral cavity is crucial for preventing subsequent transformation into squamous cell carcinoma.^{4,5} Malignant transformation of oral lichen planus is recorded in 1% of cases; the development of Oral Squamous cell carcinoma (OSCC) is more likely to occur in erosive, atrophic and plaque-like lesions⁶. The mechanism of malignant transformation remains unknown. Induced therapy depends on the presence or absence of dysplasia. Oral submucous fibrosis (OSMF) occurs in Southern Asia. Lesions in the course of OSMF are associated with chewing areca nut and betel palms. Alkaloids present in the seeds, which affect the deposition and degradation of collagen, are crucial in pathogenesis of OSMF. Neoplastic transformation is recorded in 0.5% of cases⁷. The clinician often face difficulty for diagnosis of the premalignant lesions on the basis of clinical findings only as it may consists of disorderly mixture of the dysplastic and non dysplastic cells. So, the clinicians should not underestimate difficult situation and always suspect the threat malignancy in these benign looking lesions of the oral cavity.

MATERIAL AND METHODS

Retrospective study was conducted in the department of Oral and Maxillofacial Surgery considered from the year 2018 - 2022. Common lesions considered were Leukoplakia, OSMF, Lichen planus and Erythroplakia. [FIGURE 1]

The lesions were assessed for site, distribution, age and gender. The study data was collected by a single observer. The inclusion criteria includes histopathological reports and clinical data. Exclusion criteria included malignant lesions and lesions with no malignant potential. Results were analysed using Chi-Square Test.

Statistical Analysis

Test used for this study - Chi-square test. Preferred to use to find out the relation between age, gender and location of oral premalignant lesions.

RESULTS

In this institutional study, 112 cases of Oral Potentially malignant

diseases were considered. Cases were selected and the assessment year considered, was from 2018 to 2022. This retrospective study included all the oral potentially malignant diseases from the archives of Department of Oral and Maxillofacial Surgery. The prevalence of various oral potentially malignant disease is shown in table 1.

Table - 1. Incidence And Gender Distribution Of Oral Premalignant Lesions.

	TOTAL	MALE	FEMALE	P VALUE
Leukoplakia	69(62%)	42(61%)	27(39%)	0.085
OSMF	25(22%)	13(52%)	12(48%)	
Lichen planus	11(10%)	7(68%)	4(32%)	
Erythroplakia	7(6%)	5(73%)	2(27%)	
Total	112 (100%)	67(60%)	45(40%)	

Table- 2. Age Distribution Of Oral Premalignant Lesions

	0-20 Years	20-40 years	40-60 years	60-80 years	Total
Leukoplakia	3	40	21	5	69
OSMF	2	15	5	3	25
LichenPlanus	1	6	3	1	11
Erythroplakia	0	4	2	1	7

Table- 3. Anatomical Distribution Of Oral Potentially Malignant Lesions.

	Buccal Mucosa	Tongue	Other Areas	P value
Leukoplakia	38(55%)	22(32%)	9(13%)	0.015
OSMF	14(57%)	8(30%)	3(13%)	
Lichen Planus	6(60%)	4(35%)	1(15%)	
Erythroplakia	4(58%)	2(33%)	1(9%)	
Total	62(55%)	36(32%)	4(9%)	

Males shows high prevalence (60%) more than females (40%). The highest incidence of these lesions was recorded in the third and fourth decades of life. (Table-2) with significant association between age group and Oral Potentially malignant lesions. The most common oral potentially malignant lesion assessed was Leukoplakia (62%). OSMF (22%) stands second in the list followed by oral lichen planus(10%) and erythroplakia (6%). (Table-3)

DISCUSSIONS

Oral carcinoma are usually presaged by potentially malignant lesions, but are generally diagnosed quite late. It is estimated that approximately 50% of patients with oral cavity cancer have local or

distant metastases at the time of diagnosis, so it is very important to diagnose potential malignant lesions.^{8,9} The most common location where pathological changes occurred were the floor of the mouth, buccal mucosa and the lower lip. Bokor-Bratie et al found that lesions are more common in the buccal mucosa and alveolar ridge.¹⁰

Many authors suggested that smoking and consumption of alcohol are the main etiologic factors of emergence of PML. Chewing tobacco ("gutkha") and areca nut was found to be predominant etiologic factor in this study. According to recent studies and confirmed by our study, the incidence of potentially malignant diseases is on the rise. The average age of our sample was 69 years and the majority were males¹¹, which is in accordance with the findings.

In present study, the relative frequency of oral premalignant lesions was estimated to be 112 cases (15.2%) out of 736 cases in the department of Oral and Maxillofacial Surgery.

Leukoplakia was assessed the most common oral premalignant lesions with 69 cases (62%). Second prominent lesion was OSMF with 25 cases (22%) followed by oral lichen Planus with 11 cases (10%) and erythroplakia 7 cases (6%). The incidence was similar to studies like Maia, H.C. et al examined the incidence of potentially malignant lesions in a sample of 340 patients, of whom 106 had potentially malignant lesions (31.2%) and 61 (17.9%) underwent a biopsy¹². The most common malignant alterations were erythroplakia, leukoplakia¹³ while the most common PML in the Onofre, M.A. study is leukoplakia¹⁴ followed by lichen and actinic cheilitis. The prevalence of various oral premalignant lesions shown in (Table-1). Males shows high prevalence (60%) more than in females (40%). The incidence was similar to studies like Sanja Hadzic et al studies¹⁵. Our present study show incidence of oral lichen Planus cases 11 (10%), similar to studies like Aghbari, S.M.H. investigated the malignant transformation of lichen and, despite a small percentage of malignant transformation, recommended clinical observation of the lesion and cessation of smoking¹⁶ due to an increased incidence in smokers. Our study showed most predominant site of involvement was the oral buccal mucosa (55%).

CONCLUSION

This retrospective study gives us a scenario of predominantly widespread incidence of PML among which Leukoplakia (62%), OSMF (22%), Lichen planus (10%) and Erythroplakia (6%). Our study investigated 112 cases from the year 2018 to 2022. Present study has reported demographic data of various oral potentially malignant lesions with Leukoplakia, OSMF as the predominant lesions. The most common malignant alterations were erythroplakia and OSCC.

This study gives us an opportunity to explore about tobacco awareness and prior detection of PML. Knowledge of the relative incidence of oral PMLs in various parts of world, improves proper understanding and comparison of the lesions which enhance the concept of treatment and prognosis.

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Figure 1. Oral Pre Malignant Lesions Of Oral Cavity.

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