



# Premalignant Lesions of Oral Cavity - A Clinicopathological Study



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## Abstract

We conducted a study on a total of 360 patients to find out the incidence of premalignant disorders in the oral cavity who attended the ENT opd of Saraswathi Institute of Medical Sciences, Hapur. The study design was cross sectional in nature. Out of all the 360 patients who were suspected to have premalignant disorders of oral cavity were subjected to biopsy and 87 of them were found to be premalignant. Incidence was found to be 24.53% in males and 23.6% in females. Buccal mucosa was most common site of involvement.

## Introduction

A precancerous lesion is a morphologically altered tissue in which oral cancer is more likely to occur than in its apparently normal counterpart. It poses a threat to convert to frank malignancy if not treated. However, in a World Health Organization Workshop, held in 2005, it was decided to use the term "potentially malignant disorders. The same workshop identified following condition as potentially malignant disorders: Leukoplakia, Erythroplakia, Palatal lesion of reverse cigar smoking, oral lichen planus, Oral submucous fibrosis, And Discoid Lupus Erythematosus. However out of these WHO has given special stress on leukoplakia which has many a times been attributed to the habits an addictions of the people and has also been reflected in the findings of this paper.

## Material and Methods

The study period duration was one year starting from 1<sup>st</sup> February 2014 to 31<sup>st</sup> January 2015. A total of 360 patients who were suspected of premalignant disorders were subjected to either incisional or excisional biopsy and out of them 87 were found to be PMDs as proved by biopsy report. Out of them 53(60.9%) were male and 34 (39.08%) females. In all these cases detailed history which included addiction to various kinds of known carcinogens was taken and routine blood examinations, Urine examination, VDRL, x-ray were done.

## Observation

Of all the 87 patients that were detected belong to the age group 28 years to 78 years and mostly belong to middle and lower socio-economical class as per kuppusswamy classification. Most of them were asymptomatic with only few having some symptoms. Out of 216 male patients 53(24.53%) and out of 144 females 34(23.6%) were found to be affected [1-4].

## Age wise distribution (in years)

Among males the number of patients found were 6(2.77%), 13(6.01%), 16(7.4%), 12(5.55%), 6(2.77%) and in females 2(1.3%), 5(3.4%), 9(6.25%), 11(7.6%), 7(4.86%) in the age groups 28-38, 39-48, 49-58, 59-68, and 69-78 years respectively.

## Types of lessons found

Leukoplakia was most common of all lesions 76(87.35%), erythroplakia 1(1.155%), OSMF 6(6.89%), and lichen planus 4(4.59%).

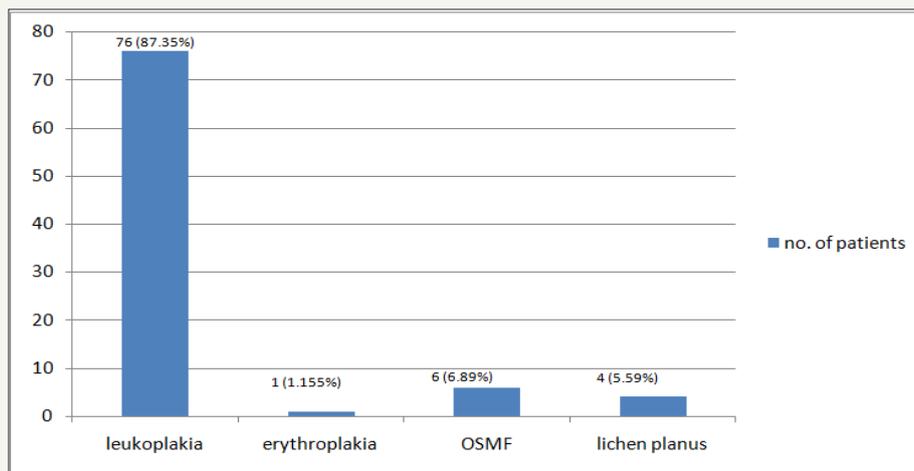
**Sites of involvement:** Buccal mucosa was found to be involved in 60(68.9%), mandibular mucosa 38(43.6%), maxillary mucosa 19(21.8%), retromolar trigone 9(10.3%), floor of mouth 5(5.7%), tongue 3(3.4%), palate 1(1.1%), lip 13(14.9%) and bilateral involvement was found in 58(66.6%) of the cases.

**PMDs and oral cavity hygiene:** 78(89.65%) patients were found to have unhealthy oral cavity, while 6(6.89%) were found to be having healthy oral hygiene and 4(4.59%) had edentulous condition.

**Symptomatology of the patients:** White mucosal patch was found in 85(97.7%), burning sensation in 8(9.19%), pain in 5(5.7%), restricted movement in 6(6.8%) and red patch in 1(1.1%) of the patients.

**Addictions and PMDs:** Among males 50(94.33%), 45(84.9%), 40(75.47%), 43(81.13%) and in females 31(91.17%), 22(64.7%), 2(5.88%), 10(29.41%) were betel nut chewers, tobacco chewers, alcoholics and smokers respectively.

**PMD's and socioeconomic status of the patients:** In our study 56(64.36%) of the patients were from lower social class, 29(33.33%) from middle class and 2(2.29%) from upper class as per modified kuppusswamy classification (Figure 1).



**Figure 1:** Age wise distribution (in years).

## Discussion

The data showed the mean age (mean  $\pm$  2SD) as 53.4  $\pm$  12.76) with median to be as 53.5 years. Total number of patients increased as the age progressed and maximum numbers of patients were found in the age group 49-58 years (25 or 28.73%) which is slightly less than what was reported by Iype et al. (50-59 years) in 2001 but more than Saraswathi et al. 2006 which stated it as 40-61 years. However the number of patients started decreasing after 49-58 years and the least were found in the age group 69-78 years [5,6]. Incidence was more or less the same in males (24.53%) as compared to females (23.6%). The incidence in males went on increasing till age group 49-58 years (11.11%) but in females it increased till age group 59-68 years (7.6%). The incidence of leukoplakia was found to be 21.11% which was higher than Bhonsle et al. [2] 18%, Crivelli et al. 1990 20.5%, Petit JC et al. 1989 0.2-11.70% and Platkaaj et al. 1979 9%. The incidence of lichen planus was 0.925% among the males and 1.3% among the females while overall it was 1.1% which is less than that found by Charles A Waldron et al. 1975 1.5%. OSMF's incidence overall was 1.66% which is much higher than what was found by Murty et al. 1990 0.02%. In our study most common site of involvement was found to be buccal mucosa (68.9%) followed by mandibular mucosa (43.6%) then maxillary mucosa (21.8%), retromolar trigone (10.3%), floor of mouth (5.7%), tongue (3.4%), palate (1.1%), lip (14.9%) while bilateral involvement was found to be (66.6%). Our study found more or less the same data that coincides with that of Shafer Waldron et al. 1975, Bhonsle et al. [7], Pindborg et al. [2], Soames southan et al. 1984.

Around 85 patients (97.7%) presented with whitish mucosal patch while 8 (9.19%) complained of burning sensation and 5 (5.7%) complained of pain, 6 (6.16%) had restricted mouth opening and 1 (1.1%) had a red patch which was similar to that of workers like Pindborg et al. [2], Seedat et al. 1988. Very high percentages of patients were addicted to the betel nut chewing (94.13% for males and 91.17% for females) which was consistent with findings of Seedat et al. 1980, Jian XC et al. 1989. Tobacco chewing among males stood at 84.19% which was more than that found by Greer et

al. 1990. Alcohol intake was found in 75.47% which was in contrast with findings of Toru Nagao et al. 2005 who did not find any relation of premalignant lesions and alcohol intake. Female tobacco chewers were 64.7% while only few 5.88% were alcoholics but 29.41% of them did smoke [7,8].

Oral hygiene was generally poor in most (89.65%) while 6.89% had healthy oral cavity and 4.59% were edentulous which was similar to that stated by Mair et al. 1991 who attributed poor oral hygiene to self neglect as most patients were chronic alcoholics. Socioeconomic status of the patients showed that most of them belonged to lower socioeconomic strata 64.36% followed by middle class (33.33%) and only few (4.59%) belonged to upper class as was found by Kamel et al. 2013 who found most of premalignant lesions in the lower socioeconomic group.

## Conclusion

Incidence of premalignant disorders is very high in this part of the country. Most of these disorders can easily be attributed to betel nut chewing which is almost like a social tradition in this part of the country. Tobacco chewing, quid, smoking and alcohol intake all play important role in the development of these lesions. No sexual predilection was found in the study. Most of these disorders occurred in elderly persons.

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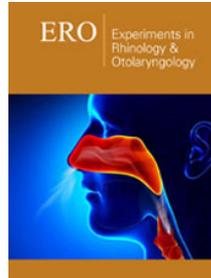
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