

# Prevalence of Premalignant Lesions of Oral Cavity and its Sociodemographic Correlates: A Cross Sectional Study from SRT Rural Govt. Medical College, Ambajogai.

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## ABSTRACT

**Background:** The overall prevalence of precancerous lesion among patients attending hospital in certain places of India range between 2.5% to 8.4%. Oral premalignant lesions have shown a rate of progression to cancer up to 17% within a mean period of 7 years after diagnosis. According to WHO, working group of oral cancer, there are six oral conditions described as potentially malignant disorders previously it was termed as precancerous lesions & conditions: leukoplakia, Erythroplakia, lichen planus, oral submucous fibrosis, and palatal lesion of reverse smoking, discoid lupus erythematosus. Prevalence of these PMDs vary from country to country. Objectives: To study the prevalence of precancerous lesions of oral cavity and its sociodemographic correlates. **Methods:** Present study is a hospital OPD based -cross sectional study conducted in Dental OPD at SRT Government Medical College Ambajogai, Maharashtra over a period of six months. Ethical clearance was obtained from institutional ethics committee. All the cases of dental OPD patients with habits & without habits of both sexes and who gave written consent were included. Patients were explained with the details of study. The data was analyzed using SPSS 24.0 version IBM USA software. **Results:** The prevalence premalignant lesion in the study population was found to be 1.83%. Majority were from less than 40 years age group i.e. 65 (58.5%). Males were commonly affected i.e. 69(62.2%) compared to females i.e. 42(37.8%). Prevalence of OLP in our study was 0.8% followed by OSMF as 0.6%, LP as 0.3%. Out of 69 males, 15.9% had leukoplakia (LP), 27.5% had oral submucous fibrosis (OSMF), 44.9% had oral Lichen Planus (OLP), 7.2% had OSMF+LP and 4.3% had OLP+ LP. In our study, out of 42 females, 16.7% had leukoplakia (LP), 38.1% had oral submucous fibrosis (OSMF), 35.7% had oral Lichen Planus (OLP) and 9.5% had OLP+ LP. There was significant association between PMD and gender. There was no significant association between PMD and gender in our study. ( $p>0.05$ ). **Conclusion:** Prevalence premalignant lesion in the study population was found to be 1.83%. Commonly observed was OLP with the prevalence being 0.8%. It was commonly seen in below 20-40 years age group with male predominant involvement. Prevalence was more in middle and lower socioeconomic class in our study.

**Keywords:** Premalignant lesions and conditions, prevalence

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## INTRODUCTION

Oral cancer is very important Global healthcare problem. Oral cancer is the 6th most common cancer in the world.<sup>[1]</sup> As per data base of WHO 2020, there are an estimated 657,000 new cases of cancers of the oral cavity and oropharynx each year. Among them death occurs in more than 3,30,000.<sup>[2]</sup> India alone accounts for one third of the world's oral cancer and has a high rate of pre-malignant lesions and conditions. The overall prevalence of precancerous lesion among patients attending hospital in certain places of India range between 2.5% to 8.4%. Oral premalignant lesions have shown a rate of progression to cancer up to 17% within a mean period of 7 years after diagnosis.<sup>[3]</sup>

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According to WHO, working group of oral cancer, there are six oral conditions described as potentially malignant disorders (PMDs) previously it was termed as precancerous lesions & conditions: leukoplakia, Erythroplakia, lichen planus, oral submucous fibrosis, palatal lesion of reverse smoking, discoid lupus erythematosus. Prevalence of these PMDs vary from country to country.<sup>[4]</sup>

Tobacco chewing and smoking have been identified as major risk factors for oral cavity pre-cancer and cancer in India. Bidis, slime, hand-rolled, unfiltered inexpensive locally produced product, are more commonly smoked than cigarettes in rural areas and among groups of lower socio-economic status. Tobacco consumption has been found to be higher among the people of lower socio-economic groups.<sup>[5]</sup> In addition, various demographic factors including age, gender, occupation, education level, and socioeconomic status have been associated with OPLs. It is also the case that human papillomavirus (HPV) infections have received considerable scrutiny in the aetiological basis of OPLs and oral cancer.<sup>[6]</sup> Its incidence is increasing day by day. Usually it is presented in late stage. So, screening programmes

have been introduced for an other major cancers and proved effective in their early detection. As there is high morbidity & mortality rates associated with oral cancer, there is need to determine effectiveness of screening programme for this disease. Evidence suggest that visual oral examination of high-risk individuals may be cost-effective screening strategy.<sup>[1]</sup>

Oral cancers include the main subsites of lip, oral cavity, nasopharynx, and pharynx. A comprehensive approach is needed to reduce incidence of oral cancer, which includes health education and literacy, risk factor reduction and early diagnosis. In high prevalent regions such as, south central Asia, oral cancer screening in high-risk individuals should be trialed.<sup>[2]</sup> Screening is done on the idea that malignancy is preceded by clinically evident lesions, which if identified early and removed, can either prevent their malignant transformation or reduce their staging. Majority of Oral carcinomas are preceded by visible lesions, known as potentially malignant disorders (PMDs). Visual screening is nonsurgical & painless procedure and it is accepted socially.<sup>[1]</sup>

#### **Objectives of the study:**

To study the prevalence of precancerous lesions (PMDs) of oral cavity and its sociodemographic correlates at Dental OPD at SRTR Government Medical College, Ambajogai, Maharashtra.

### **MATERIALS & METHODS**

Present study is a hospital OPD based -cross sectional study conducted in Dental OPD at SRTR Government Medical College Ambajogai, Maharashtra over a period of six months. Ethical clearance was obtained from institutional ethics committee. All the cases of dental OPD patients with habits & without habits of both sexes and who gave written consent were included. Patients were explained with the details of study.

The National Screening Committee define screening as “a process of identifying apparently healthy people who may be at increased risk of a disease or condition” A visual screen is not surgically invasive, is painless and has been found to be socially acceptable. The most common screening method is visual inspection by a clinician but other techniques include the use of a special blue dye, the use of imaging techniques and measuring biochemical changes to normal cells. As a noninvasive technique, the oral cavity examination was performed quickly, is without additional diagnostic expense to the patient. Patients of dental OPD were screened for premalignant lesions & conditions, oral cancer. Co-Investigators & Assistant Doctors were trained for screening of lesions. Clinical detailed history was conducted by principal investigator who will record oral premalignant lesions & conditions. Interview based form was prepared by the investigators in order

to record the exposure of the subjects to known risk factors for oral pre cancer. Along with questions related to the type, frequency and duration of deleterious habits, the demographic information on characteristics such as age, sex, occupation, educational level, and socioeconomic status was also obtained. Visual examination of oral cavity was done using mouth mirror and probe. Clinical diagnoses were based on criteria defined by Axell et al<sup>[7]</sup> adopted by the WHO workshop held in London in 2005. As a noninvasive technique, the oral cavity examination was performed quickly, is without additional diagnostic expense to the patient. Association of oral precancerous lesions & conditions with smokeless tobacco, smoking or chewing betel leaf/nut, khaini or any other form of habit was analyzed.

#### **Statistical Analysis:**

The data was analyzed using SPSS 24.0 version IBM USA software. The data is presented in percentages, rates and ratios. Chi square test/Fischer’s exact test was used to find the association between attributes. The data was also presented in graphical format. A p value of <0.05 is considered as significant whereas p<0.001 is considered as highly significant.

### **RESULTS**

A Total 6000 patients were screened, among them 111 patients were diagnosed as premalignant lesions (PMDs). So, the prevalence premalignant lesion (PMDs) in the study population was found to be 1.83%.

**Table 1: Distribution according to age and gender**

		Frequency	Percent
Age group	< 30	36	32.4
	31-40	29	26.1
	41-50	14	12.6
	51-60	17	15.3
	> 60	15	13.5
Gender	Male	69	62.2
	Female	42	37.8

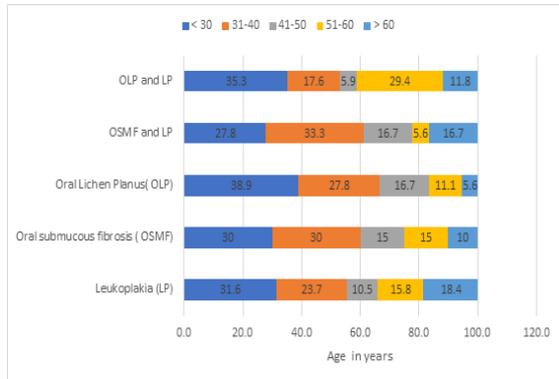
**Table 2: Distribution of subjects according to PMD type**

Type of PMD		Frequency	Percent
Type of PMD	Leucoplakia (LP)	18	0.3
	Oral submucous fibrosis (OSMF)	35	0.6
	Oral Lichen Planus (OLP)	46	0.8
	OSMF and LP	5	0.1
	OLP and LP	7	0.1

[Table 1] Out of 111 patients with PMD, majority were from less than 40 years age group i.e. 65 (58.5%), followed by 17 (15.3%) from 51-60 years age group. Mean age of the study population was 41.2±15.06 years. Males were commonly affected i.e. 69(62.2%) compared to females i.e. 42(37.8%).

[Table 2] In majority of the subjects, we found OLP. Prevalence of OLP in our study was 0.8% followed by OSMF as 0.6%, LP as 0.3%. In our study, 55.3%

of Leucoplakia (LP), 60% of Oral submucous fibrosis (OSMF), 66.7% of Oral Lichen Planus (OLP), 61.1% of OSMF+LP and 52.9% of OLP+ LP were below 40 years age group. (p<0.05).



**Figure 1: Association of PMD with age group**

Chi square test-26.1, p-0.01, Significant

[Table 3] In our study, out of 69 males, 15.9% had leucoplakia (LP), 27.5% had oral submucous fibrosis (OSMF), 44.9% had oral Lichen Planus (OLP), 7.2%

had OSMF+LP and 4.3% had OLP+ LP. In our study, out of 42 females, 16.7% had leucoplakia (LP), 38.1% had oral submucous fibrosis (OSMF), 35.7% had oral Lichen Planus (OLP) and 9.5% had OLP+ LP. There was significant association between PMD and gender (p<0.05).

[Table 4] In our study, out of 40 subjects from middle SES, 30% had leucoplakia (LP), 40% had oral submucous fibrosis (OSMF), 15% had oral Lichen Planus (OLP), 5% had OSMF+LP and 10% had OLP+ LP. In our study, 66 subjects from higher SES, 31.8% had leucoplakia (LP), 39.4% had oral submucous fibrosis (OSMF), 13.6% had oral Lichen Planus (OLP) and 9.1% had OLP+ LP. There was no significant association between PMD and gender in our study. (p>0.05).

[Table 5] In our study, 73 subjects were having one or more habits i.e. 65.8%. Out of 73 subjects having habits, 15.9% had leucoplakia (LP), 27.5% had oral submucous fibrosis (OSMF), 47.8% had oral Lichen Planus (OLP), 7.2% had OSMF+LP and 7.2% had OLP+ LP.(p>0.05)

**Table 3: Association of PMD with gender**

Type of PMD	Male		Female		Total
	Frequency	Percent	Frequency	Percent	
Leukoplakia (LP)	11	15.9	7	16.7	18
Oral submucous fibrosis (OSMF)	19	27.5	16	38.1	35
Oral Lichen Planus (OLP)	31	44.9	15	35.7	46
OSMF and LP	5	7.2	0	0.0	5
OLP and LP	3	4.3	4	9.5	7
Total	69	100.0	42	100.0	111

Chi square test-18.09, p-0.0001, Highly significant

**Table 4: Association of PMD with socioeconomic status**

Type of PMD	Low		Middle		Higher	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Leukoplakia (LP)	2	40.0	12	30.0	21	31.8
Oral submucous fibrosis (OSMF)	1	20.0	16	40.0	26	39.4
Oral Lichen Planus (OLP)	1	20.0	6	15.0	9	13.6
OSMF and LP	0	0.0	2	5.0	4	6.1
OLP and LP	1	20.0	4	10.0	6	9.1
Total	5	100.0	40	100.0	66	100.0

Fischer's exact test-0.05, p-0.97, Not significant

**Table 5: Association of PMD with habits**

Type of PMD	Habit		No habit		Total
	Frequency	Percent	Frequency	Percent	
Leukoplakia (LP)	11	15.9	7	16.7	18
Oral submucous fibrosis (OSMF)	19	27.5	16	38.1	35
Oral Lichen Planus (OLP)	33	47.8	13	31.0	46
OSMF and LP	5	7.2	0	0.0	5
OLP and LP	5	7.2	2	4.8	7
Total	73	105.8	38	90.5	111

Fischer's exact test-2.67, p-0.26, not significant

**Table 6: Association of PMD with duration of habits**

Type of PMD	< 5 years		5 to 10 years		> 10 years		Total
	Frequency	Percent	Frequency	Percent	Frequency	Percent	
Leukoplakia (LP)	3	10.7	6	25.0	9	45.0	18
Oral submucous fibrosis (OSMF)	15	53.6	12	50.0	7	35.0	34
Oral Lichen Planus (OLP)	9	32.1	1	4.2	1	5.0	12
OSMF and LP	0	0.0	4	16.7	2	10.0	6
OLP and LP	1	3.6	1	4.2	1	5.0	3
Total	28	100.0	24	100.0	20	100.0	73

Fischer's exact test-7.22, p-0.12, Not significant

Prevalence of OSMF was 53.6% in (<5 yrs), 50% in 5-10 yrs duration and 35% in >10 yrs duration. Prevalence leucoplakia was 10.7% in (<5 yrs), 25%

in 5-10 yrs duration and 45% in >10 yrs duration. Prevalence of OLP was 32.1% in (<5 yrs), 4.2% in 5-10 yrs duration and 5% in >10 yrs duration. (p>0.05)

## DISCUSSION

### Age and gender

Out of 111 patients with PMD, majority were from less than 40 years age group i.e. 65 (58.5%), followed by 17 (15.3%) from 51-60 years age group. Mean age of the study population was  $41.2 \pm 15.06$  years. Males were commonly affected i.e. 69(62.2%) compared to females i.e. 42 (37.8%) [Table 1]. Narasannavar A. et al,<sup>[2]</sup> in his study observed 46% cases from 20-30 years age group with PMD. He also reported that 52.4% were males where as 47% were females. Similarly, study conducted in Qatar by Abdul Majeed K et al,<sup>[8]</sup> who stated that maximum number of participants (38.3%) falling in the age group of 31-40 years with mean age of the participants was 34.98 years. Patil PB et al,<sup>[9]</sup> from South India reported among 1200 study population (with habits), 1067 (88.9%) were males and 133 (11.1%) were females. Similar distribution was seen in the study conducted at Pakistan in which males were 60% and females were 40%.<sup>[3]</sup> Our findings with respect to age and gender were comparable with the findings of above-mentioned authors. This is perhaps the commonest age group where most of the habits formation takes place and with time duration it leads to occurrence of PMD.

### Prevalence of PMD:

Prevalence premalignant lesion in the study population was found to be 1.83%. In majority of the subjects, we found OLP. Prevalence of OLP in our study was 0.8% followed by OSMF as 0.6%, LP as 0.3% [Table 2]. Patil PB et al,<sup>[9]</sup> stated that out of 1200 subjects with smoking/chewing habits, 322 (26.8%) showed oral mucosal changes, out of these, leukoplakia was found in 99 (8.25%), OSF in 85 (7.08%), lichen planus in 30 (2.5%) which is very higher than our study. Pahwa V. et al,<sup>[10]</sup> reported prevalence as 3.73% with OPML (PMDs) with the prevalence of leukoplakia, erythroplakia and OSMF being 2.60%, 0.04%, and 1.22% respectively which is slightly higher than our study. Similarly, findings observed by Burungale SU et al<sup>[11]</sup> in Jaitala, in which the prevalence of OPML was 3.25%. However, prevalence of OSMF in the study was found to be higher (2.62%) and that of leukoplakia was lower (0.63%) compared to the present study.

In a similar study by Kumar et al,<sup>[12]</sup> in Indore, Madhya Pradesh, a higher prevalence of OSMF (8.06%), leukoplakia (4.02%) and lichen planus (1.38%) were reported while erythroplakia was found to be the least common OPML (PMDs) (0.24%). Our study also showed a low prevalence of PMD conditions. Saraswathi et al,<sup>[13]</sup> in a hospital-based study from Chennai reported a lower prevalence of OPML (1.29%) as well as all forms of OPML. The prevalence is less in our study compared to others. Leukoplakia is an asymptomatic and potentially malignant change in the oral mucosa. Leukoplakia can be defined as a white patch or plaque that cannot

be characterised clinically or pathologically like any other disease. A 10 year follow-up study conducted in India reported that oral leukoplakia preceded oral cancer in about 70% of cancer cases. Till date, there is no evidence of effective treatment or prevention of malignant transformation of leukoplakia apart from avoiding or quitting tobacco use. Treatments may be effective in the resolution of lesions, but relapses and adverse effects are common.

Prevalence of appears to vary from one country to other. Few possible explanations for variation of prevalence are – 1. Precise etiology is not Known, 2. Role of behavioral, demographic & environmental risk factors are documented, 3. Pattern of risk factors vary geographically & culturally, 4. In India Ex. Areca nut is regarded as fruit of divine origin and used in social events such as weddings, engagement etc. And 5. Believed that beneficial health effects – traditional Ayurveda medicine.

### Habits and PMD-

In our study, 73 subjects were having one or more habits i.e. 65.8%. Out of 73 subjects having habits, 15.9% had leukoplakia (LP), 27.5% had oral submucous fibrosis (OSMF), 47.8% had oral Lichen Planus (OLP), 7.2% had OSMF+LP and 7.2% had OLP+ LP [Table 5]. Similarly, in the study of Belgaum, 88% patient had habit of betel nut /tobacco or both chewing habits.<sup>[2]</sup> Also it is found that there is association of smokeless tobacco (chewing) stronger effect on leukoplakia than smoking. Betel nut is known to produce mutagenic & genotoxic effects on tissues of body which may lead to various malignant & premalignant lesions. A study by Pimple et al,<sup>[14]</sup> observed that all those with OPML were found to be tobacco users which is in agreement with the present study. Similar association with tobacco use was also observed in studies by Burungale et al,<sup>[11]</sup> and Kumar et al.<sup>[12]</sup> Another important consideration is the relation between areca nut use and the development of oral cancer and its precursors, such as, leukoplakia and oral submucous fibrosis in India. It was stated that the elimination of betel nut influence may prevent leukoplakia and that of malignant transformation to oral carcinoma. There seems to be an association between the use of quid that incorporates tobacco and the occurrence of white lesions.

### PMD and age association:

In our study, 55.3% of Leukoplakia (LP), 60% of Oral submucous fibrosis (OSMF), 66.7% of Oral Lichen Planus (OLP), 61.1% of OSMF+LP and 52.9% of OLP+ LP were below 40 years age group. ( $p < 0.05$ ) [Figure 1]. Among ever tobacco users, those detected to have OPML were also around 4 times more likely to be in the 18-45 years age group [Adj OR =3.70 95% CI, 1.51-9.09]. However, according to the study done by Thomas et al,<sup>[15]</sup> in Trivandrum multiple oral pre-malignant lesions were more likely in the age group of 45-54 years. In the study by Pimple et al,<sup>[14]</sup> highest prevalence of OPML (PMDs) was found in

the age group of 35-45 years. These findings are consistent with our study findings.

#### **PMD and gender association:**

In our study, out of 69 males, 15.9% had leucoplakia (LP), 27.5% had oral submucous fibrosis (OSMF), 44.9% had oral Lichen Planus (OLP), 7.2% had OSMF+LP and 4.3% had OLP+ LP. In our study, out of 42 females, 16.7% had leucoplakia (LP), 38.1% had oral submucous fibrosis (OSMF), 35.7% had oral Lichen Planus (OLP) and 9.5% had OLP+ LP. There was no significant association between PMD and gender ( $p>0.05$ ) [Table 3]. The studies done by Kumar et al,<sup>[12]</sup> (2015) (OR=2.09, 95% CI=1.45–3.00) and Pimple et al,<sup>[14]</sup> (2012) ( $p<0.001$ ) showed that male gender was significantly associated with OPML (PMDs). These findings are corroborating with that of our study in which among, ever tobacco consumers, those with OPML were 12 times more likely to be males as compared to females.

#### **PMD and SES association:**

In our study, out of 40 subjects from middle SES, 30% had leucoplakia (LP), 40% had oral submucous fibrosis (OSMF), 15% had oral Lichen Planus (OLP), 5% had OSMF+LP and 10% had OLP+ LP. In our study, 66 subjects from higher SES, 31.8% had leucoplakia (LP), 39.4% had oral submucous fibrosis (OSMF), 13.6% had oral Lichen Planus (OLP) and 9.1% had OLP+ LP. There was no significant association between PMD and gender in our study which could be because of less sample size of PMD. ( $p>0.05$ ) [Table 4]. Pahwa V. et al,<sup>[10]</sup> reported that those with OPML were 1.9 times more likely to be from low socio-economic status as compared to high socioeconomic status and this was found to be statistically significant [OR=1.91, 95% CI 1.20 – 3.02), whereas in the study by Hashibe et al,<sup>[16]</sup> high socio-economic status was protective with an OR of 0.6 for development of OPML. Though the mechanism for the association is not clear, higher SES index, education and income were associated with decreased risk of oral premalignant lesions in our study. It is a lifetime risk in lower socioeconomic status.

## **CONCLUSION**

Prevalence of premalignant lesions (PMDs) in the study population was found to be 1.83%. Commonly observed lesion was OLP with the prevalence being 0.8%. It was commonly seen in below 20-40 years age group with male predominant involvement. Prevalence was more in middle and lower socioeconomic class in our study. And hence an active preventive approach is required to limit the potential for development of oral cancer.

## **REFERENCES**

1. World Health Organization. Control of oral cancer in developing countries. Bull World Health Org. 1984; 62:817-30.
2. Narasannavar A, Wantamutte AS. Prevalence of oral precancerous lesions and conditions among tobacco consumers in rural population around Belgaum. A community based cross sectional study. IOSR J Dent Med Sci. 2014;13(4):31-4.
3. Hassona Y, Scully C, Almangush A, Baqain Z, Sawair F. Oral potentially malignant disorders among dental patients: a pilot study in Jordan. Asian Pac J Cancer Prev. 2014;15(23):10427-31.
4. Alsanosy RM. Smokeless tobacco (shammah) in Saudi Arabia: a review of its pattern of use, prevalence, and potential role in oral cancer. Asian Pac J Cancer Prev. 2014;15(16):6477-83.
5. Kumar S, Muniyandi M. Tobacco use and oral leukoplakia: cross-sectional study among the Gond tribe in Madhya Pradesh. Asian Pac J Cancer Prev. 2015;16(4):1515-8.
6. Juntanong N, Siewchaisakul P, Bradshaw P, Vatanasapt P, Chen SL, Yen AM, Chen TH, Promthet S. Prevalence and factors associated with oral pre-malignant lesions in Northeast Thailand. Asian Pacific Journal of Cancer Prevention. 2016;17(8):4175-9.
7. Axell T, Holmstrup P, Kramer IRH, Pindborg JJ, Shear M. International seminar on oral leukoplakia and associated lesions related to tobacco habits. JOURNAL 1984;12:145-54.
8. Abdul Majeed K, Thomas M, Kannampilly J. Prevalence of Oral Pre-malignant Lesions and its Risk Factors in an Indian Subcontinent Low Income Migrant Group in Qatar. Asian Pacific Journal of Cancer Prevention, 2014;15:4325-4329
9. Patil PB, Bathi R, Chaudhari S. Prevalence of oral mucosal lesions in dental patients with tobacco smoking, chewing, and mixed habits: A cross-sectional study in South India. J Family Community Med. 2013;20(2):130-5.
10. Pahwa V, Nair S, Shetty RS, Kamath A. Prevalence of Oral Premalignant Lesions and Its Risk Factors among the Adult Population in Udupi Taluk of Coastal Karnataka, India. Asian Pac J Cancer Prev. 2018;19(8):2165-2170.
11. Burungale SU, Durge PM, Burungale DS, Zambare MB. Epidemiological study of premalignant and malignant lesions of the oral cavity. J Academia Industrial Res. 2014; 2:519–23.
12. Kumar S, Debnath N, Ismail MB, et al. Prevalence and risk factors for oral potentially malignant disorders in Indian population. Adv Preval Med. 2015;1-7. doi:10.1155/2015/208519.
13. Saraswathi TR, Ranganathan K, Shanmugam S, et al. Prevalence of oral lesions in relation to habits: Cross-sectional study in South India. Ind J Dent Res. 2006;17:121–5.
14. Pimple S, Pednekar M, Majmudar P, et al. An integrated approach to worksite tobacco use prevention and oral cancer screening among factory workers in Mumbai, India. Asian Pac J Cancer Prev. 2012; 13:527–32.
15. Thomas G, Hashibe M, Jacob BJ, et al. Risk factors for multiple oral premalignant lesions. Int J Cancer. 2003; 107:285–91. [PubMed] [Google Scholar]
16. Hashibe M, Jacob BJ, Thomas G, et al. Socioeconomic status, lifestyle factors and oral premalignant lesions. Oral Oncol. 2003; 39:664–71. [PubMed] [Google Scholar]

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