

## Original Article

### Assessment of prevalence of pre-malignant Oral Lesions in a known population

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#### ABSTRACT:

**Background:** The incidence of oral cancer worldwide is around 500 000 new cases every year. Likewise, there is also an equal increase in incidence of potentially malignant disorders. Hence; the present study was undertaken for assessing the prevalence of oral pre-malignant lesions in a known population. **Materials & methods:** A total of 500 patients were analyzed. Data of all the patients was obtained that reported to the department for any kind of oral and dental problem. Frequency of occurrence of oral premalignant lesions was recorded. Correlation of occurrence of these lesions with age group and gender was done. **Results:** The overall prevalence of oral lesions was 8 percent. The lesions encountered in the present study were oral leukoplakia, Erythroplakia and Palatal changes associated with reverse smoking. **Conclusion:** Oral premalignant lesions should be carefully screened because of premalignant potential of these lesions. **Key words:** Oral Premalignant lesions, Prevalence.

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#### INTRODUCTION

The incidence of oral cancer worldwide is around 500000 new cases every year, accounting for approximately 3% of all malignancies, thus creating a significant worldwide health problem. The American Cancer Society estimated 40 250 new cases of these cancers for 2012 in the United States alone. Tobacco use and alcohol consumption are regarded as the main risk factors for oral squamous cell carcinoma (OSCC), while human papilloma virus (HPV) infection is emerging as the leading risk factor in cancers of the oropharynx. The most common form of oral cancer is squamous cell carcinoma (SCC), which accounts for 96% of all cancers of the oral cavity.<sup>1-4</sup>

The incidence of oral cancer has risen in the past decade and is usually recognized when symptomatic and at a late stage. The overall 5-year survival rates for oral cancer have remained low at approximately 50% for the past decades and have remained among the worst of all cancer death rates, considerably lower than that for colorectal, cervix and breast origin. This is in part due to the lack of training of health professionals for early detection and diagnosis. Despite significant advances in cancer treatment, early detection of oral cancer and its curable precursors remains the best way to ensure patient survival and improved quality of life.<sup>5-9</sup>

Hence; the present study was undertaken for assessing the prevalence of oral pre-malignant lesions in a known population.

#### MATERIALS & METHODS

The present study was conducted with the aim of assessing the patients with different oral lesions. Ethical approval was obtained from institutional ethical committee and written consent was obtained after explaining in detail the entire research protocol. Data of a total of 500 patients was analyzed. Data of all the patients was obtained that reported to the department for any kind of oral and dental problem. Also patients who reported for head and neck pathology were also included. Complete demographic and clinical details of all the patients were obtained. Frequency of occurrence of oral lesions was recorded. Also separate recording the spectrum of different oral lesions was also done. Correlation of occurrence of these lesions with age group and gender was done. All the results were recorded in Microsoft excel sheet and were analyzed by SPSS software. Chi- square test was used for assessment of level of significance.

#### RESULTS

A total of 500 patients were analyzed. Among these 500 patients, oral premalignant lesions were present in 40 patients. Therefore, the overall prevalence of oral lesions was 8 percent. The lesions encountered in the present study were oral leukoplakia, Erythroplakia and Palatal changes associated with reverse smoking. In the present study, non-significant results were obtained while assessing the age-wise distribution of patients with different oral premalignant lesions. Also, non-significant results were obtained while assessing the gender-wise distribution of patients with oralpre-malignant lesions.

**Table 1:** Prevalence of oral premalignant lesions

Parameter	Number	Percentage
Oral premalignant lesions	40	8
Total patients	500	100

**Table 2:** Distribution of patients with oral lesions

Oral lesions	Number	Percentage
Oral leukoplakia	29	72.5
Oral Erythroplakia	6	15
Palatal changes associated with reverse smoking	5	12.5
Total	40	100

**Table 3:** Age-wise distribution of patients with oral lesions

Oral lesions	Less than or equal to 30 years	31 to 40 years	More than 40 years
Oral leukoplakia	10	8	11
Oral Erythroplakia	1	2	3
Palatal changes associated with reverse smoking	1	3	1
Total	12	13	15

**Table 4:** Gender -wise distribution of patients with oral lesions

Oral lesions	Males	Females
Oral leukoplakia	18	11
Oral Erythroplakia	3	3
Palatal changes associated with reverse smoking	3	2
Total	24	16

**DISCUSSION**

Oral malignancies are the sixth most common cancer around the globe. Oral mucosal lesions could be due to infection (bacterial, viral, fungal), local trauma and or irritation (traumatic keratosis, irritational fibroma, burns), systemic disease (metabolic or immunological), or related to lifestyle factors such as the usage of tobacco, areca nut, betel quid, or alcohol.<sup>10</sup> A total of 500 patients were analyzed. Among these 500 patients, oral premalignant lesions were present in 40 patients. Therefore, the overall prevalence of oral lesions was 8 percent. The lesions encountered in the present study were oral leukoplakia, Erythroplakia and Palatal changes associated with reverse smoking. Bhatnagar P et al determined the priorities in oral health education, preventive measures, and identify the group in urgent need of treatment. The study was conducted over a period of 6 months in 2010, when 8866 subjects were offered structured interviews and standardized extraoral and intraoral examinations according to the World Health Organization (WHO) guidelines. Overall prevalence of OML was 1736 (16.8%), the most prevalent being smoker's palate (10.44%) followed by leukoplakia (2.83%), oral submucous fibrosis (1.97%), oral candidiasis (1.61%), recurrent aphthous stomatitis (1.53%), oral lichen planus (0.8%) and others (0.78%). The highest prevalence of the tobacco habit in

both forms was recorded in the group aged 40–44 years and those aged between 60 and 64 years who wore dentures. Lesions were most prevalent in those aged 40–44 years with a significant predominance of males at 3:1 (M = 12.6% and F = 4.3%). Patients who consumed tobacco in any form or wore dentures had a significantly higher prevalence of OML (P < 0.001). The highest number of lesions were on the palate (59.7%) followed by buccal mucosa (19.9%). Various normal mucosal variants were recorded. Fordyce's granules (0.13%), fissured tongue (3.3%), leukoedema (1.47%), and lingual varices (2.73%) were also recorded. The tongue showed the highest number of variants (64.4%). Patients were grouped according to the treatment needed under the WHO criteria. One hundred and ninety-seven patients were given oral hygiene instructions only, whereas 1422 patients were advised on change of habit and a follow-up and 674 patients needed definitive treatment. This study thus highlighted diagnostic criteria, multifactorial risk factors to make standard measurements of OML a basis for planning and evaluating oral health programs for data collection.<sup>11</sup>

In the present study, non-significant results were obtained while assessing the age-wise distribution of patients with different oral premalignant lesions. Also, non-significant results were obtained while assessing the gender-wise

distribution of patients with oral premalignant lesions. Mehrotra Ret al determined the prevalence of oral soft tissue lesions in patients and to assess their clinicopathological attributes. 3030 subjects belonging to a semi-urban district of Vidisha in Central India were screened. 8.4 percent of the population studied had one or more oral lesions, associated with prosthetic use, trauma and tobacco consumption. With reference to the habit of tobacco use, 635(21%) were smokers, 1272(42%) tobacco chewers, 341(11%) smokers and chewers, while 1464(48%) neither smoked nor chewed. 256 patients were found to have significant mucosal lesions. Of these, 216 cases agreed to undergo scalpel biopsy confirmation. 88 had leukoplakia, 21 had oral submucous fibrosis, 9 showed smoker's melanosis, 6 patients had lichen planus, 17 had dysplasia, 2 patients had squamous cell carcinoma while there was 1 patient each with lichenoid reaction, angina bullosahemorrhagica, allergic stomatitis and nutritional stomatitis. The findings in this population reveal a high prevalence of oral soft tissue lesions and a rampant misuse of variety of addictive substances in the community.<sup>12</sup>

#### CONCLUSION

From the above results, the authors conclude that oral premalignant lesions should be carefully screened because of premalignant potential of these lesions.

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