# Study of Histopathology of Oral Premalignant and Malignant Lesions

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*Abstract:*
*Aim: To study spectrum and histopathology of premalignant and malignant lesions of oral cavity.*
*Introduction: Oral health is important for the quality of life of all individuals. Oral cancer is the most common cancer in the Indian subcontinent accounting for 40% of all cancers as compared to 2-4% of malignancies in the west.*
*Materials And Methods: This was a retrospective study over a period of one year. Histopathological examination of total number of 302 casesfor a period of one year from January 2016 to December 2016 was done.*
*Results: Out of 302 cases, 261 were malignant tumorsand 41were premalignant. Among malignant tumors most common was Well differentiated squamous cell carcinomaand among premalignant lesions most common was Leukoplakia with dysplasia. Peak incidence of tumors of both premalignant and malignant lesions was in the age group of 40-60yrs.*
*Conclusion: Histopathology is the current gold standard for diagnosis andhistopathologic assessment of a tissue biopsy for suspicious lesion.*
*Key Words: Oral cavity lesions, premalignant, malignant, histopathology*

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## I. Introduction

    Oral cancer is one of the most common cancer in developing countries. In India it accounts for 40% of all cancers, where as in Western countries it accounts for 2-4%. Hence it is the major health concern in Indian sub continent. [1] 90% of the tumors arising from oral cavity are Squamous cell carcinoma(SCC). [2] Many malignancies arise from regions which had premalignant lesions like dysplasia. Hence with accurate diagnosis of premalignant and malignant lesions, patients can be managed properly with improved longevity.

## II. Materials And Methods

    This was a retrospective study for the period of one year from Jan 2016 to Dec 2016 in the Department of Pathology, GovtRoyapettah hospital , Kilpauk Medical College , Chennai. A total of 302 cases of malignant and premalignant lesions of oral cavity were studied. Histopathological examination was the basis of the study. Patients with oral lesions from surgery and ENT department who underwent operative procedures were selected for our study.The excised specimens were received in 10% formalin, grossing was done and tissue bits were processed by routine paraffin embedding techniques. 3-5 micrometer thick sections were cut and stained with Hematoxylin and eosin stains.

## III. Results

The present study was conducted for the period of one year from Jan 2016 to Dec 2016. A total of 302 cases were studied. Among these, total malignant and premalignant were according to age, gender, location and histopathological type. Histopathological diagnosis of 302 biopsy cases is as follows:

- 261 (86.4%) were malignant lesions.
- 41 (13.58%) were premalignant lesions.

    Premalignant lesions included Leukoplakia and Erythroplakia. Leukoplakia with severe dysplasia/carcinoma in situ was the most common premalignant lesion (65.8%). The peak incidence of the premalignant lesion was in the age group of 40-60 years. [Table 3] Male to female ratio in premalignant is 3.5:1. Among the malignant tumors most common site was buccal mucosa [Table 1a] accounting for 255 (97.70%) of the cases. Of which the Well differentiated squamous cell carcinoma [Table 2] was the most common (79.69%), Moderately differentiated squamous cell carcinoma (16.48%) and Poorly differentiated squamous cell carcinoma (1.53%). Apart from these, 3 cases of Mucoepidermoid carcinoma, 2 cases of Sarcomatoid

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carcinoma and 1 case of granular cell tumor was diagnosed. The peak incidence of malignant lesions was in the age group of 40-60 years. Male: Female ratio in malignant lesions was 3.3 :1. Most common site of oral malignancies was buccal mucosa followed by tongue both in males and females.

## IV. Discussion

Out of the 302 cases of oral biopsies studied, the peak incidence of premalignant lesionswas in the age group of 40-60 years. Present study is in concordance with Liu et[3] at where the highest incidence of premalignant lesions were formed in 5th decade. Among the malignancies, maximum number of cases found in the age group of 40-60 years which in accordance with Yasmin Khan et al. [4] Both premalignant and malignant lesions were more common in males as compared to females which is in concordance with findings of Dietrich et al [5] and Durrazzo et al[6] respectively. As such gender is not a risk factor for all oral malignancies [7] but it is due to the high rate of tobacco and alcohol consumption among males as compared to females. Oral malignancies were most commonly found in buccal mucosa (37.16%) followed by tongue (35.63%), oropharynx (9.58%) and others (17.62%). [Table 1] In our study buccal mucosa was the most common site which is in accordance with the study of Ahluwalia et al [8], Sankarnarayanan R et al [9], Richard M [10]. Among the histopathological spectrum of premalignant lesion revealed leukoplakia with mild dysplasia 2 cases(4.88%). Leukoplakia with moderate dysplasia 10 cases (24.39%) and leukoplakia [11] with severe dysplasia/carcinoma in situ 21 cases (51.22%). Erythroplakia with mild dysplasia seen in 2 cases (4.88%) and Erythroplakia with moderate dysplasia 6 cases (14.63%).[Table 4]

Among the malignant spectrum, squamous cell carcinoma was the most common (97.70%) malignant tumor, which is in concordance with Dias et al [12] (93%) and Brandizzi D [13] et al (93%). In differentiation, Well differentiated Squamous cell carcinoma [Fig 1]was most common (79.69%) followed by moderately differentiated (16.48%) and poorly differentiated (1.53%). In present study the Well differentiated Squamous cell carcinoma being most common was in concordance with Patel MM [14] (60%) , Lype EM et al [15] (52%) and Ahluwalia et al (65%). Among 261 cases of malignant tumour 3 cases of Mucoepidermoid carcinoma, 2 cases of Sarcomatoid carcinoma and one case of granular cell tumour was revealed.

## V. Conclusion

Oral cancer is now considered as a new epidemic with incidence rates reaching high proportions, ranging from vast spectrum of premalignant. The current gold standard for the diagnosis is histopathological assessment of tissue biopsy.

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