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Comparasion Of Clinico-Demographic, Histologic Parameters Between Oral Cancer And Precancer – Retrospective Study

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Abstract:
Background: *India ranks 3rd in the prevalence of oral squamous cell carcinoma in the world, Oral epithelial dysplasia is highly prevalent in the country. This can be seen due to a myriad of oral habits which includes smokeless tobacco chewing.*
Materials and methods: *One-year retrospective study to assess the prevalence and incidence of various tobacco and non- tobacco derived OED and OSCC.*
Results:
- *Most commonly associated habit with both OSCC and OED is smokeless.*
- *Age greater than 50 years are more commonly affected with OSCC while in case of OED age less than 50 years are commonly affected.*
- *Majority of the severe grade of OED is associated with leukoplakic patches.*

Conclusion: *Many of the results were seen to be similar to studies done around the world except the occurrence of Grade of OED with a particular clinical presentation. Hence, more studies need to be conducted in this area.*

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I. Introduction

OSCC is the most common malignancy of the head and neck region and comprises the majority of oral cancers. Approximately 90% [1] among risk factors for OSCC includes tobacco chewing consumption of alcohol, chronic irritation smoking and human papilloma virus[1] .The morbidity and mortality remains an issue across the world. OSCC is the most commonly reported in older men particularly around 6-8 decades of life[1].Though uncommon reports now indicate an increase in OSCC rates among younger patients especially with deleterious risk factors as mentioned above.

The term "Dysplasia" was invented by Reagon in 1958 in relation to the cells exfoliated from the lesions of the uterine cervix. Oral epithelial dysplasia is known risk factor for OSCC development with a transformation rate of 5-36% depending on the type of dysplasia .Oral epithelial dysplasia is an epithelial tissue in which the prevalence of OSCC is more likely to occur than its healthy counterpart. In such altered tissue the normal stratification and maturation pattern isaltered [2]. Studies have shown OSCC transformation correlating with OED [3]. This study aims to compare clinico demographic characteristics, histopathologic grade between patients with oral squamous cell carcinoma and oral epithelial dysplasia.

II. Materials And Methods

1-year retrospective observational study was conducted from the Dept. of oral pathology and oral microbiology in private institution of Andhra Pradesh. A patient with histopathological diagnosis of carcinoma and epithelial dysplasia was selected as study. The patients' habits, age, gender, demographic details, clinical features, DMFT scores, were collected and analyzed, prior clearance from the institutional committee was obtained.

III. Results And Discussion

Table 1 - Gender distribution of OSCC and Epithelial dysplasia

s.no	category	Oral squamous cell carcinoma	Epithelial dysplasia
1	Gender	28MALE &18FEMALE	18 MALE & 20 FEMALE

Table 2- Age distribution of OSCC and Epithelial dysplasia

2	AGE DISTRIBUTION	≤50 = 18 >50 = 28	≤50 = 20 >50 = 8

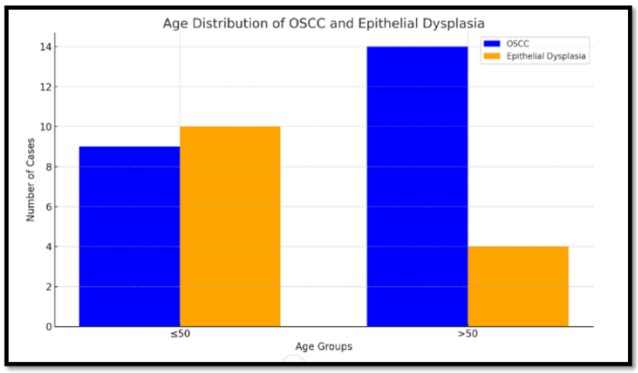

Figure 1: Age distribution of OSCC and Oral Epithelial dysplasia

Table 3- Habit distribution in OSCC and Oral Epithelial dysplasia

3	Habit distribution	• Smokeless = 40 • Smokeless + smoke = 4 • Reverse smoking = 2	• Smokeless = 26 • Reverse smoking = 2

Table 4 - Stage of the disease in OSCC and Epithelial dysplasia

4	Stage of the disease	• Well differentiated – 12 • Moderately differentiated – 20 • Poorly differentiated -2 • Infected radicular cyst -2 • Squamous cell carcinoma arising from dentigerous cyst – 2 • Mucoepidermod carcinoma -2 • Ghost cell odontogenic carcinoma – 2 • Verrucous carcinoma -2	• Severe – 12 • Moderate – 8 • Mild - 8

Table 5- Unique finding in OSCC with DMFT-4

5		DMFT – 4 is seen in poorly differentiated squamous cell carcinoma - 2

Table 6- Lesion type in OSCC and Oral Epithelial dysplasia

6	lesion type	• ULCER –30 • SWELLING - 8 • LEUKOPLAKIC PATCH -4 • OTHERS –4	• ULCER –6 • LEUKOPLAKIC PATCH -14 • OTHERS - 8

1. Comparatively males are more commonly affected with OSCC and OED
2. Age greater than 50 years are more commonly affected with OSCC while in case of OED age less than 50 years are commonly affected
3. Most commonly associated habit with both OSCC and OED is smokeless
4. Ulcer is most common type of lesion associated with OSCC while leukoplakic patch is the most commonly found lesion associated with OED .
5. Most common stage/grade of lesion is moderate in case of OSCC (moderately differentiated OSCC).
6. Majority of the severe grade of OED is associated with leukoplakic patches.

IV. Discussion:

Reshma Poothakulath Krishnan et al**.** conducted a study on comparison of Clinico-Demographic and Histological Parameters between Young and Old Patients With Oral Squamous Cell Carcinoma[5] in which males are more commonly affected, similarly in our study we have found the same result.

Shruti singh et al. in the year 2020 conducted a study on Prevalence of oral cancer and oral epithelial dysplasia[6] in which males are more commonly affected with OED. We also obtained the same i.e. males are more prone to OED.

Rafael Ferreira e Costaet al. conducted a study in the year 2022 on Oral Squamous Cell Carcinoma Frequency in Young Patients from Referral Centers Around the World[7], found that mean age of all OSCC cases was 62-yearswhile in our study we found that the most of the affected individuals are aged above 50 years.

Riikka Ellonen et al. conducted a study in the year 2023 on Histopathological findings of oral epithelial dysplasias and their relation to malignant transformation[7]. This study says that OED patients had a mean age of 59.0 years while in our study we found that majority of the OED patients are less than 50 years of age.

Prashanth Panta et al. reported a case in the year 2021 on Invasive oral squamous cell carcinoma induced by concurrent smokeless tobacco and creamy snuff use: A case report[8] in which it shows how smokeless tobacco is play a major role in occurrence of OSCC. Similarly in our study we found that the majority of patients who are having OED and OSCC are associated with habit of smokeless tobacco.

FábioRamôa et al. conducted a study in the year 2013 Oral squamous cell carcinoma: clinicopathological features from 346 cases from a single Oral Pathology service during an 8-year period[9, 10] found that ulcer is the type of lesion most commonly found OSCC regardless of gender. In our study we also found that majority of the OSCC patients are having ulcer.

V. Conclusion:

In this present study majority of the cases of Oral epithelial dysplasia were associated with leukoplakic patch, interestingly the severe grade of OED was more often associated to a white patch. Hence this shows that the oral cavity with or without deleterious oral habits has a great potential of harbouring inconspicuous white lesions. Therefore the mouth should be thoroughly examined even as a part of routine health check.

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