



“ A STUDY OF SPECTRUM OF ORAL SQUAMOUS CELL CARCINOMA- INCREASING CASES AND DECREASING AGE OF PRESENTATION”

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ABSTRACT The Incidence of Oral Squamous Cell Cancers is on the rise especially in India. Histopathologically it is Oral Squamous Cell Carcinoma(OSCC) in approximately 90%. In the present retrospective study we analyzed 145 cases of oral and pharyngeal biopsies diagnosed histologically as oral squamous cell carcinoma predominantly Grade I in one year. Buccal mucosa being the most common site affecting predominantly the patients of 30-39 years of age. Age of presentation is now going downwards. Oral cancer has a long preclinical phase that consists of well-documented precancerous lesions. Initial lesion is Leukoplakia or Erythroplakia. Recent Research shows mutation in P53 gene and HPV infection leading to HPV DNA incorporation with Host Squamous cell DNA are associated with Oral cancers. The observed incidence patterns in this region points towards widespread unawareness, low healthcare utilization and non-existent cancer programmes. It also underlines the need to advocate for reliable cost-effective programmes generating awareness, early detection and appropriate management strategies. Cancer registry installation and implementation of preventive measures to combat this growing threat of oral cancer is a way to understand and prevent this dreaded disease.

KEYWORDS : Oral Cancers, Squamous Cell Carcinoma, Buccal Mucosa, Leukoplakia, P53 mutation

INTRODUCTION:

Oral cancer is one of the highly prevalent cancers worldwide with marked regional variation and a leading cause of mortality in certain regions like South-Central Asia. It is a major public health problem.[1,2,3]

Oral cavity cancer is a type of head and neck cancer. Worldwide, oral cancer accounts for 2%–4% of all cancer cases. In some regions, the prevalence of oral cancer is higher, reaching the 10% of all cancers in Pakistan, and around 45% in India [4]

The global incidence of lip, oral cavity, and pharyngeal cancers of 529,500, corresponding to 3.8% of all cancer cases, is predicted to rise by 62% to 856,000 cases by 2035 because of changes in demographics.[5]. According to GLOBOCAN 2012, lip and oral cavity cancer is the 12th most common cancer in Asia and ranks 8th among all the cancers in men in the year 2012. [3].

Squamous Cell Carcinoma of Oral Cavity is the common epithelial malignant tumor of the mouth that typically affects elderly men and women. Unfortunately, the cases are now increasingly reported at much younger ages too. The true incidence of multiple cancers is not known, but according to recent studies, it appears to be increasing.[6] It is more aggressive than conventional squamous cell carcinoma affecting other body regions. It is estimated that more of 90% of all oral neoplasms are OSCC [7,8]. The definite cause of the carcinoma is unknown. It is multifactorial with genetic mutations and viral infections as proposed aetiology.

Smoking, chewing of tobacco, radiation treatment for any reason and exposure to coal tar and arsenic are known predisposing causes. Tobacco smoking and oral cancer carries a six-fold risk of developing oral cancer compared to not smoking and non drinking. The combination of tobacco and alcohol use poses a fifteen-fold risk of oral cancer for users compared to non-users [9,10]. The squamous cell carcinoma usually presents as slow-growing skin lesions. The lesions may ulcerate and cause scarring of the oral cavity. It may be difficult to eat, swallow food, or even to speak. Surgical excision with clear margins followed by radiation therapy or chemotherapy, as decided by the healthcare provider is the treatment modality in vogue. In majority of the cases, the prognosis is good with appropriate treatment. Patients with cancer of the oral cavity have risk of developing second primary cancer aero-digestive tract of 10-35%. [11,12] Controlling this dreadful surge is based on learning more about the origin and vulnerabilities of neoplasms. It has led to a great progress in this field [13,14].

AIMS & OBJECTIVES:

The Aims of this study were :

1. To know the incidence of Oral Squamous Cell Carcinoma in the biopsies presented to Histopathology section of our Department and reported as OSCC.
2. To study the male:female ratio.
3. To know the age distribution.
4. To study the site predilection.

METHODOLOGY: This retrospective study was conducted for 1 year from 1st June 2017 to 31st May 2018 in Histopathology section of Department of Pathology, Gajra Raja Medical College, Gwalior. The records of data of 145 patients, with oral biopsies diagnosed as OSCC were retrieved, compiled and summarized using frequency distribution and percentage proportion.

OBSERVATIONS:

Total 144 malignant cases were reported in this duration. Total 145 OSCC Cases were reported and included in the study. Most patients came from Lower socio-economic strata, rural background, uneducated with poor health and hygiene.

107 were males and 38 were females. Male: Female ratio was 2.8:1..(Fig.1)

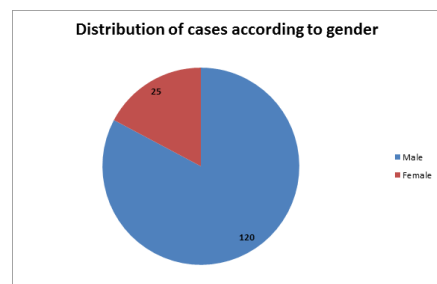


Fig: 1 Genderwise distribution

Maximum number of cases were reported in the age group 31 to 40 years. Youngest patient was 18 years old and oldest was 80 years old.(Table 1, Fig.2) Males were addicted to Tobacco chewing, Guthka, Betel leaves, Cigarette and Bidi much more than the females. All patients tried their best to hide the history of addiction initially. More than 50% males were habitually addicted. Surprisingly, the young patients did not present with addiction indicating multifactorial origin of oral cancers like most other cancers.

Table 1 : Distribution of cases according to age

Age group (years)	No. of cases	Percentage
0-10	0	0
11-20	1	0.68
21-30	20	13.79
31-40	39	26.89
41-50	31	21.37
51-60	34	23.44
61-70	15	10.34
71-80	05	3.44

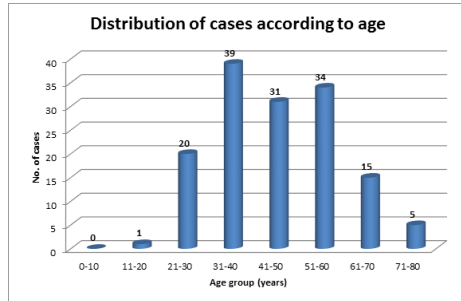


Fig:2 Age wise Distribution of cases

Buccal Mucosa/ Cavity was the commonest site followed by Tongue and Retromolar Trigone. Lateral border of tongue and lower lips were the sites of origin.(Table 2) All 03 cases in our study involved lower lips.02 cases of metastatic SCC in cervical Lymph nodes who were known cases of oral SCC were also reported.

Table 2 : Distribution of cases according to site of lesion

Site of lesion	No. of cases	Percentage
Buccal mucosa	88	60.68
Tongue	36	24.82
Retromolar (Trigone)	12	8.27
Pharynx	4	2.75
Lip (Lower)	3	2.06
Metastasis (Neck nodes)	2	1.37

Histologically all cases were reported as SCC. 103 cases (71.03%) were Well Differentiated Keratinising SCC (WDKSCC) Grade I, 34 Cases(23.44%) were Moderately Differentiated SCC (MDSCC)-Grade II , Poorly Differentiated SCC (PDSCC)-Grade III -08 Cases (5.51%).(Table 3).

Table 3 : Distribution of cases according to histopathological type

Histopathological type	No. of cases	Percentage
WDKSCC	103	71.03
MDSCC	34	23.44
PDSCC	08	5.57

DISCUSSION:

OSCC predominantly affects males with variable male:female ratios ranging in recent studies from 6:1 to 2:1.[15,16]

Oral cancer is more common in men and usually occurs after the 5th decade of life. About 1.5% will have another synchronous primary in the oral cavity or the aero-digestive tract (larynx, esophagus or lung).[17,18]

Our study reported maximum number of OSCC as Well differentiated Keratinising SCC.In a study by Fábio Ramôa PIREs, Amanda Barreto RAMOS et al reported most OSCC histologically diagnosed as Moderately Differentiated or Well Differentiated tumors. [15]

In India, individuals with low income groups were more likely to chew tobacco, smoke bidi and drink alcohol. Poor people eat less fruits and vegetables as they do not know the nutritional value of these.[19]

Buccal Mucosa is the commonest site of Oral SCC.[20]. The Incidence of OSCC in young males is on the rise. Some recent studies conducted in United States, South East of England, Spain and Scandinavia have, however, shown that the incidences of oral cancer are increasingly being reported in the young (<40 years of age) also, particularly younger male patients.[21,22]

Our study emphasized the grim scenario with almost matching data throughout India.

CONCLUSION:

This malignancy is more prevalent in the developing world and unfortunately, has not received satisfactory attention as the more prevalent cancers of the developed world, like lung, breast, or colon cancer. Recent advances have yielded novel molecular targets, new signal pathway dominance and advanced early cancer detection methods aiding in diagnosis and treatment.

In Gwalior region, there is rise in number of oral cancers along with presentation at an early age . Long term studies and genetic profile analysis is essential to acquire data and implement preventive and curative measures. Awareness Programmes will help generate knowledge about this dreaded disease.

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