

## Original Research

### Demographic and Clinicopathological profile of Oral Squamous Cell Carcinoma Patients : A Retrospective Study

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#### ABSTRACT:

**Background:** Oral squamous cell carcinoma (OSCC) is the most common oral malignancy. The common clinical feature of OSCC is an ulcerated lesion with a central necrotic area and rolled up margins. Hence; the present study was planned for assessing and analysing the clinic-pathological features of OSCC. **Materials & methods:** Data records of a total of 100 OSCC cases were obtained from the archives of the department of oral pathology. A master chart was framed for summarizing the clinical profile of the OSCC patients. Habit history was also obtained from data records of all the patients. All the cases were classified on histopathological basis into Well-differentiated, moderately-differentiated and poorly differentiated OSCC. All the results were recorded in Microsoft excel sheet and were analyzed by SPSS software. **Results:** Significant results were obtained while comparing the age-wise, gender-wise and tumor differentiation-wise distribution of OSCC cases. 28 percent of the cases were of OSCC of tongue, while 25 percent of the cases were of OSCC of floor of the mouth. Among the tongue carcinomas, 12 cases were of well-differentiated, 10 cases were of moderately differentiated and 6 cases were of poorly differentiated OSCC. Significant results were obtained while assessing the clinic-pathologic distribution of OSCC cases. **Conclusion:** OSCC comprises of a varied clinical and histopathologic spectrum. Hence; early detection is necessary for improving the prognosis.

**Key words:** Clinico-pathologic, Oral squamous cell carcinoma

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#### INTRODUCTION

Oral squamous cell carcinoma (OSCC) is the most common oral malignancy. OSCC shows geographical variation with respect to the age, sex, site and habits of the population so the incidence of oral cancers parallels the longevity, multiplicity, and intensity of carcinogenic exposure.<sup>1,2</sup> Globally, about 275,000 new cases of oral SCC (OSCC) are diagnosed each year, but the incidence of OSCC show large geographical variations. The acquired knowledge about the impact of human papilloma virus (HPV) infection in oropharyngeal tumours highlights the importance of distinguishing oropharyngeal tumours from tumours in the oral cavity. An increasing number of the tumours arising in the oropharynx are thought to be HPV-driven.<sup>3,4</sup> The common clinical feature of OSCC is an ulcerated lesion with a central necrotic area and rolled up margins. Common sites for OSCC are stratified squamous epithelial lining of the buccal mucosa (BM), tongue, floor of the mouth, palate, and lip. Tobacco consumption in various forms including betel

quid, tobacco with lime, beedi, and hookah is an important etiological factor for developing OSCC.<sup>5-7</sup> Hence; under the light of above mentioned data, the present study was planned for assessing and analysing the clinic-pathological features of OSCC.

#### MATERIALS & METHODS

Ethical approval was obtained from institutional ethical committee for the present retrospective study. Data records of a total of 100 OSCC cases were obtained from the archives. A master chart was framed for summarizing the clinical profile of the OSCC patients. Habit history was also obtained from data records of all the patients. All the cases were classified on histopathological basis into Well-differentiated, moderately-differentiated and poorly differentiated OSCC. 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. P-value of less than 0.05 was taken as significant.

**RESULTS**

In the present study, a total of 100 patient’s data was analyzed. Mean age of the patients of the present study was 49.2 years. Among the 100 patients, 62 were males while the remaining 38 were females. 55 percent of the cases were of well-differentiated OSCC. 28 and 17 cases were of moderately and poorly differentiated OSCC. Significant results were obtained while comparing the age-wise, gender-wise and tumor differentiation-wise

distribution of OSCC cases. 28 percent of the cases were of OSCC of tongue, while 25 percent of the cases were of OSCC of floor of the mouth. Among the tongue carcinomas, 12 cases were of well-differentiated, 10 cases were of moderately differentiated and 6 cases were of poorly differentiated OSCC. Significant results were obtained while assessing the clinic-pathologic distribution of OSCC cases.

**Table 1:** Demographic data

| Parameter                |              | Number | p- value           |
|--------------------------|--------------|--------|--------------------|
| Age-wise distribution    | Less than 40 | 15     | 0.02 (Significant) |
|                          | 40 to 60     | 65     |                    |
|                          | More than 60 | 20     |                    |
| Gender-wise distribution | Males        | 62     | 0.04 (Significant) |
|                          | Females      | 38     |                    |

**Table 2:** Tumor differentiation

| Grading                   | Number | p- value           |
|---------------------------|--------|--------------------|
| Well-differentiated       | 55     | 0.03 (Significant) |
| Moderately differentiated | 28     |                    |
| Poorly differentiated     | 17     |                    |

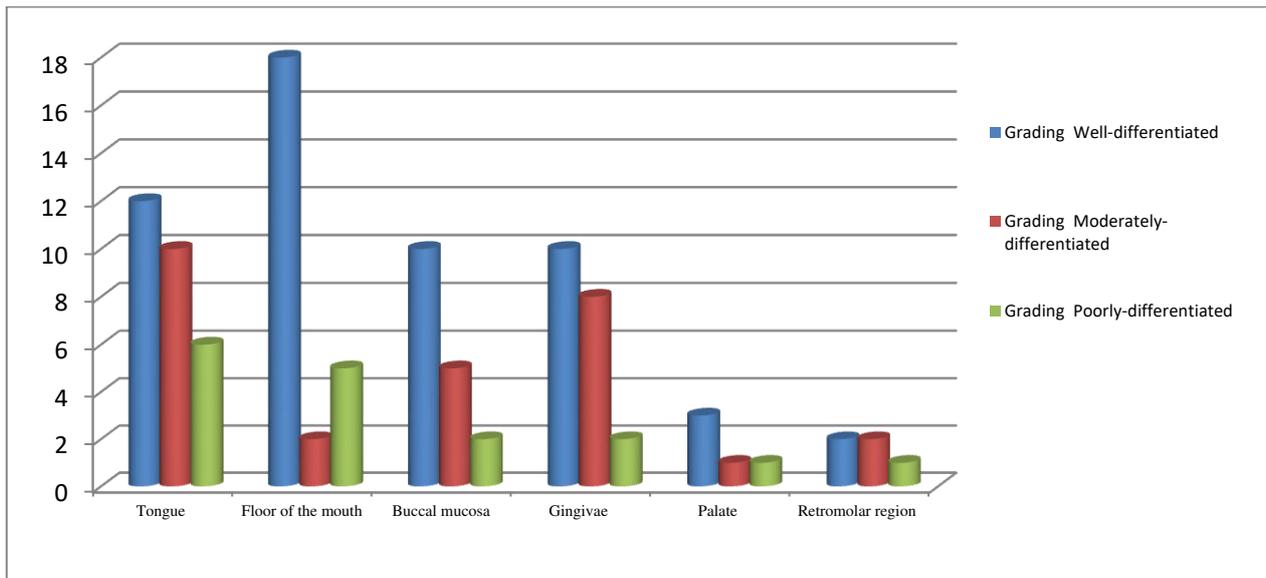
**Table 3:** Clinical location

| Location           | Number | p- value               |
|--------------------|--------|------------------------|
| Tongue             | 28     | 0.85 (Non-Significant) |
| Floor of the mouth | 25     |                        |
| Buccal mucosa      | 17     |                        |
| Gingivae           | 20     |                        |
| Palate             | 5      |                        |
| Retromolar region  | 5      |                        |

**Table 4:** Clinico-pathologic correlation

| Location           | Grading             |                           |                       | Total | p- value               |
|--------------------|---------------------|---------------------------|-----------------------|-------|------------------------|
|                    | Well-differentiated | Moderately-differentiated | Poorly-differentiated |       |                        |
| Tongue             | 12                  | 10                        | 6                     | 28    | 0.81 (non-significant) |
| Floor of the mouth | 18                  | 2                         | 5                     | 25    |                        |
| Buccal mucosa      | 10                  | 5                         | 2                     | 17    |                        |
| Gingivae           | 10                  | 8                         | 2                     | 20    |                        |
| Palate             | 3                   | 1                         | 1                     | 5     |                        |
| Retromolar region  | 2                   | 2                         | 1                     | 5     |                        |
| Total              | 55                  | 28                        | 17                    | 100   |                        |

**Graph 1:** Clinico-pathologic correlation



**DISCUSSION**

Oral squamous cell carcinoma (OSCC) is the most common form of carcinoma of oral cavity and ranks as the 12th most common cancer in the world. Oral cancer is one of the major health problems in India and Indian subcontinent countries. Tobacco is the main etiological factor for oral carcinoma. Tobacco is used in various forms in these countries including betel quid, tobacco with lime, bidi, hookah, etc. Human papilloma virus and dietary deficiencies and poor oral hygiene are minor etiological factors of oral carcinoma. People of lower socio-economic strata of society are more commonly affected by oral cancer because of higher prevalence of life style risk factors.<sup>8,9</sup> Hence; under the light of above mentioned data, the present study was planned for assessing and analysing the clinic-pathological features of OSCC.

In the present study, a total of 100 patient’s data was analyzed. Mean age of the patients of the present study was 49.2 years. Among the 100 patients, 62 were males while the remaining 38 were females. 55 percent of the cases were of well-differentiated OSCC. 28 and 17 cases were of moderately and poorly differentiated OSCC. In a previous study, conducted by Rai HC et al<sup>1</sup>, authors established the prevalence of OSCC in relation to patient sex, age, habits and sites of lesions. A total of 130 cases of histopathologically diagnosed OSCC were selected for the study, out of which 66, 38 and 26 were well (WD), moderately (MD) and poorly differentiated (PD), respectively. Sections were stained with haematoxylin and eosin and graded according to a modified Borders’s system. In their study the majority cases of OSCC were found in the 5th to 7th decades of life, males accounting for 53%. The most common site was the buccal mucosa and most cases had habit of tobacco use either in the form of chewing or smoking or both. When the different grades of OSCC were compared with different sites a statistically significant value was observed (P=0.029).

The incidence of high grade PD is very much less in female patients but in males such lesions were common.<sup>10</sup> In the present study, significant results were obtained while comparing the age-wise, gender-wise and tumor differentiation-wise distribution of OSCC cases. 28 percent of the cases were of OSCC of tongue, while 25 percent of the cases were of OSCC of floor of the mouth. Among the tongue carcinomas, 12 cases were of well-differentiated, 10 cases were of moderately differentiated and 6 cases were of poorly differentiated OSCC. Significant results were obtained while assessing the clinic-pathologic distribution of OSCC cases. Krishna A et al<sup>2</sup> determined associations of oral squamous cell carcinoma (OSCC) with respect to gender, age group, socioeconomic status and risk habits. Total of 471 confirmed OSCC patients and 556 control subjects were enrolled. Data on socio-demography, risk habits with duration and medical history were recorded. Cases with both habits of tobacco chewing and smoking were at a higher risk for OSCC than tobacco chewing alone (unadjusted OR=0.52, 95%CI=0.38-0.72, p=0.0001), duration of risk habits also emerged as a responsible factor for the development of carcinoma. The majority of patients were presented in well-differentiated carcinomas (39.9%). Prevalence of advance stages (TNM stage III, IV) was 23.4% and 18.3% respectively. The buccal mucosa was the most common (35.5%) affected oral site. In most Asian countries, especially India, there is an important need to initiate the national level public awareness programs to control and prevent oral cancer by screening for early diagnosis and support a tobacco free environment.<sup>11</sup>

**CONCLUSION**

Under the light of above obtained data, the authors conclude that OSCC comprises of a varied clinical and histopathologic spectrum. Hence; early detection is necessary for improving the prognosis.

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