



CLINICOPATHOLOGICAL PROFILE OF SQUAMOUS CELL CARCINOMA PRESENTING IN TERTIARY CARE HOSPITAL, KARACHI.

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INTRODUCTION

The profile of Squamous Cell carcinoma has changed drastically during recent decades. With the growing incidence of cases reported for Squamous cell carcinoma (SCC), it is now considered as one of the ten most common cancers in the world.^{1,2} In Pakistan, Oral SCC is considered as the second most common cancer diagnosed in both male and female, constituting 15% of estimated new cases compared to 3% found worldwide.³

In developing countries, the prevalence of intraoral cancer appears to be rising, especially in men due to habit of eating tobacco, betel quid and areca nut.⁴ These ingredients along with other factors such as alcohol consumption, low socioeconomic status, poor hygiene, poor diet,

ABSTRACT... Objectives: Oral Squamous cell carcinoma (OSCC) is the most common malignant tumor of the oral cavity. The study was done with the aim to determine the clinical pattern of OSCC seen in tertiary care hospital of Karachi, Pakistan. The frequency of neck metastasis in different staging of squamous cell carcinoma was also recorded. **Study Design:** Retrospective study. **Setting:** Department of Oral & Maxillofacial Surgery Liaquat College of Medicine and Dentistry. **Period:** June 2013- July 2016. **Material & Methods:** It included 35 males and 25 females which presented with different sites and stage of squamous cell carcinoma. Clinically patients were staged as stage I, stage II, stage III and stage IV and comprised of 3, 8, 30 & 19 patients respectively. Patients presented with cancer of buccal mucosa (31 patients), retromolar region (12 patients), maxillary alveolus (8 patients), tongue (2 patients), floor of mouth (4 patients) & lip (3 patients). Right side was most common, 48 patients as compare to left side, 12 patients while lip cancers was in upper lip in all patients including commissure. **Results:** Total 60 patients were included in the study with the male to female ratio of 1.4:1. No significant association was seen between age and gender of the patient (p-value 0.933). Majority of patients were male involving buccal mucosa (51.67%) as the most frequently involved site followed by retromolar area (20%) and tongue (13.3%). Mean age of patients included in the study was 50.87 ± 5.53 . **Conclusion:** Most of the cases of OSCC were seen in older patients with increased number of cases involving buccal mucosa as their primary site. Majority of the tumors were classified as stage III followed by Stage IV, Stage II and stage 1 respectively.

Key words: Malignant, Oral Squamous Cell Carcinoma, Risk Factors, Tumor Staging.

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and viral infections, chronic irritation from ill-fitting dentures, rough, or fractured teeth.^{5,6} The most common sites of occurrence of oral squamous cell carcinoma (OSCC) are buccal mucosa and tongue.⁷ Altogether, they serve as strong risk factors for development of Oral SCC and other potentially malignant disorders.⁸

Recently oncogenic human papillomavirus (HPV) is suspected to be the pre-cursor of increased number of cases of Oro-pharyngeal SCC reported worldwide.⁹ In UK, 51.8% of the cases of OSCC diagnosed between 2002 and 2011 were HPV-positive. Thorough examination and evaluation of possible contenders is therefore necessary to rule out the cause of malignancy.¹⁰⁻¹²

This retrospective institutional study was

conducted with the aim of describing the demographic and Clinicopathological profile of cases of OSCC reported at the Oral & Maxillofacial Surgery Department in Liaquat College of Medicine & Dentistry, Karachi, during a 4-year period, to highlight the magnitude of problem and find the trends of the occurrence of OSCC in Pakistan.

MATERIAL & METHODS

The study carried out in Tertiary care hospital and included 60 patients from the year June 2013- July 2016. Patients presenting with recurrence or metastasis were not included in the study. It included 35 males and 25 females which presented with different sites and stage of squamous cell carcinoma. Clinically patients were staged as stage I, stage II, stage III and stage IV and comprised of 3, 8, 30 & 19 patients respectively. Patients included in the study were aged between 40-60 years. Analysis was done using SPSS version 23. Patients presenting with recurrence or metastasis were excluded from the study.

All the patients included in the study underwent modified radical neck dissection along with excision of primary tumor with 1cm safe margin. The excised tissue was sent for histopathological analysis and results obtained.

RESULTS

The clinicopathological profile of all the subjects under study was analyzed in detail. Total numbers of patients included in the study were 60. The parameters assessed in the study were site and staging of the disease. Age and gender distribution was also considered but no significant association was seen between age group and gender.

Among the patients 35 were male and 25 patients were female. Thus the sex ratio was 1.4:1. The mean age for male sample was 51.14 ± 5.61 and for female sample it was 50.6 ± 5.53 (Table-I) p-value obtained using Pearson chi square test, showed that, there was no significant association between age group and gender.

Age	Male (n)	Male %	Female (n)	Female %	P-Value
40-45	12	34.29	10	40	0.933
45-50	10	28.57	6	24	
50-55	06	17.14	5	20	
55-60	07	20	4	16	

Table-I. Age and gender distribution

Out of 60 patients, buccal mucosa was seen as the most common site for occurrence of Oral squamous cell carcinoma seen in 31 patients (51.67%), followed by Retromolar region 12(20%), Floor of the mouth 04(6.67%), tongue 8 (13.34%), lip 3(5%) and maxillary alveolus 2(3.34%) respectively. (Table-II)

Regarding staging of the tumor, majority of the patients reported had stage 3 seen in 30(50%) patients followed by Stage 4 in 19(31.67%), stage 2 in 8(13.33%) and stage 1 in 3(5%) patients respectively. (Table-III)

Site	Number of Patients (n=60)	Percentage
Buccal Mucosa	31	51.67
Retromolar region	12	20
Floor of Mouth	04	6.67
Lip	03	5
Tongue	08	13.34
Maxillary Alveolus	02	3.34

Table-II. Site involvement in patients with SCC

Clinical Stage	Number of Patients (n=60)	%
Stage I	3	5
Stage II	8	13.33
Stage III	30	50
Stage IV	19	31.67

Table-III. Clinical Staging of the disease

DISCUSSION

OSCC is widely recognized as the most common malignant tumor occurring in the oral cavity. More than 90% of the cancers reported in oral cavity are squamous cell carcinomas with relatively high mortality and survival rate of 50%.^{2,13}

The study was carried out to highlight the

trends associated with OSCC and to assess clinicopathological profile of patients which may help in formulating therapeutic treatment plan. A total of 60 patients were included in the study after histological confirmation of the disease. The mean age range was 50.87 ± 5.53 . The age ranges of patients were 40-60 years indicating the occurrence of disease in 5th and 6th decades of life. These findings were consistent with the studies conducted in Karachi¹⁴ and Lahore³ demonstrating the occurrence of disease in 5th decade of life. Rahman et al¹⁵ reported 50.46 ± 3.78 years mean age which is consistent with our study.

The male to female ratio in the study was 1.4:1 showing male predilection. The high chances of occurrence of disease in male population are confirmed by various local¹⁶ and international researches^{17,18} conducted on the subject. This gender distribution is attributed to the increase consumption of betel nut, tobacco and smoking as seen higher in male population compared to female. In this study also majority of patient reported were males. However, the current study did not revealed any significant association between age group and gender.

Regarding the site of OSCC, buccal mucosa was identified as the most frequently involved site followed by retromolar region and tongue respectively. This finding was similar to the study conducted by Jayasooriya et al which states that 43% of patient reported with OSCC involving buccal mucosa.¹⁹ Bhurgri²⁰ in her report from South Karachi demonstrated that among oral malignancy, the buccal mucosa was most frequently involved (55.9%) as concurrently seen in our study.

This increase in the incidence of OSCC of buccal mucosa preferably in our part of the world is due to habit of keeping betel nut and gutka in the buccal pouch for longer duration of time which significantly produce a sense of well-being and increased capacity to work by stimulation of parasympathetic nervous system²¹ and increases the accumulation of carcinogenic substance into the involved area.^{3,22} In contrary to this,

international literature shows tongue as the most commonly involved site followed by floor of the mouth attributed to increase exposure of carcinogenic substances through smoking.^{23,24} This finding is also consistent with the study conducted by Syamet et al.²⁵

Ebrahimiet al²⁶ have reported that T stage and N stage were important factors affecting regional recurrence in OSCC. In our study, majority of the patients presented with stage 3 and 4 which is in agreement with the findings of studies conducted by Daniel et al²⁷ which states that 66% of the oral carcinomas evaluated was diagnosed at advanced stages.^{28,29} About two-thirds of oral SCC are already of substantial size, and will have clinically detectable metastases to cervical lymphnodes at the time of diagnosis.^{29,30} Early diagnosis of the disease is therefore essential for improvement in the survival rate of the cases diagnosed with OSCC.

The limitations of the current study are small sample size and involvement of one tertiary care facility for evaluating the clinicopathological parameters. Study with involvement of other centres should be conducted to rule out the generalized findings of the disease. Moreover, determination of histological grading and survival rate are important predictors which will be included in future studies.

CONCLUSION

Most of the cases of OSCC reported in the tertiary care hospital are seen in 5th and 6th decades of life with buccal mucosa as the most common site involved owing to the increase consumption of carcinogenic substances. Majority of the cases are diagnosed in advanced stages which affect the prognosis of the tumour and substantially reduces the survival rate. It is therefore essential that frequent oral examination and awareness campaigns should be performed for early detection of the lesion which may impart significant reduction in mortality rate.

CONFLICT OF INTEREST

Authors declare NO conflict of interests


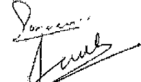

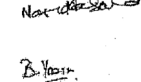
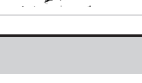
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2	Summera Kanwal	Data collection and analysis.	
3	Tahera Ayub	Critical review of the findings.	
4	Zafar Abbas	Data collection.	
5	Batool Vazir	Critical review, Final approval of the version to be published.	
6	Navid Rashid Qureshi	Data collection.	