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Research Article

Frequency of Oral Squamous Cell Carcinoma of Tongue in Patients Presenting to Ayub Teaching Hospital Abbottabad

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ABSTRACT
Objective: To determine the frequency of oral squamous cell carcinoma of tongue in patients presenting at Ayub Teaching Hospital Abbottabad.
Study Design: Cross- Sectional (Descriptive) Study.
Place and Duration of Study: Department of Dentistry, MTI-ATH Abbottabad from 24th December 2020 to 25th June 2021.
Methodology: One hundred and sixty-six patients of oral squamous cell carcinoma of oral cavity were enrolled. Patients of age 20-80 years of age, both genders, confirmed after histopathological examination (biopsies) were included. Patients not confirmed by biopsy and squamous cell carcinoma of other intra oral sites were excluded.
Results: There were 126 (75.9%) males and 40 (24.1%) females with mean age 56.61±9.50 years and mean duration of disease 3.64±1.56 years. 22(13.3%) patients had oral squamous cell carcinoma of tongue.
Conclusion: Oral squamous cell carcinoma is prevalent among males and people of higher age group with only 13.3% having tongue as primary site.

Keywords: Oral Squamous Cell Carcinoma, Tongue, Buccal Mucosa.

INTRODUCTION

Oral squamous cell carcinoma is one of the fastest growing cancer across the globe. Approximately about 300 new cases of oral-squamous-cell-carcinoma (OSCC) arise every year, making it the 6th most common type of cancer in the world. Adult population (with age greater than 50 years) are more vulnerable towards this disease. However, recent studies also reveal that frequencies among younger patients are also on a surge.[1]

Oral squamous cell carcinoma in oral cavity is the most common type of malignancy, with tongue being the most affected site. Usually this disease has affected males preferentially more than the females, but now cases in females are increasing. The causative factors for oral squamous cell carcinoma commonly include alcohol, tobacco, poor oral hygiene, human papillomavirus, genetic factors, exposure to sunrays and betel nut chewing.[2]

For the diagnosis of this disease, tissue biopsy is used. Prognostic features, like the tumor depth, is determined from resection specimens, but are seldom studied in biopsy.[3]

The targeted site for OSCC is gingivobuccal mucosa (38.21%), followed by buccal mucosa (30.90%), tongue (12.29%), alveolar mucosa (8.64%), lip (3.99%), floor of mouth and hard palate. In the Western world tongue and floor of mouth carcinomas are more common due consumption of alcohol and smoking.[4,5] Frequency of OSCC differs in different regions of world, depending upon the mode of intake and placement trend of tobacco at different intra oral sites e.g. in Pakistan mostly snuff is placed into gingivobuccal sulcus and buccal mucosa. Thereby, making buccal mucosa the most common site followed by lips, tongue and gingiva.[7]Similarly, in Sri Lanka the buccal mucosa is the common site.[6]

The recognition of squamous cell carcinoma of tongue is increasing around the world. As no such study has been done before in our general population, therefore I have planned to determine the frequency of squamous cell carcinoma of tongue in patients presenting to Ayub Teaching Hospital, Abbottabad. The

results of my study will estimate the real burden of this morbidity in our general population.

MATERIALS AND METHODS

This cross-sectional study was conducted at Department of Dentistry, MTI-ATH Abbottabad from 24th December 2020 to 24th June 2021 and 166 patients of oral squamous cell carcinoma were enrolled. Patients of age 20-80 years, both genders, confirmed after histopathological examination (biopsy) and new cases as well as with recurrence were included. Patients not confirmed by biopsy, squamous cell carcinoma of other intra oral sites and biopsy report from untrusted sources were excluded. Biopsy was performed under supervision of consultant maxillofacial surgeon. Specimen were sent to pathology laboratory Ayub Medical College Abbottabad and was examined by consultant pathologist of Ayub Medical College and results were recorded in Annexure Performa. Data was entered and analyzed with SPSS-22.

RESULTS

There were 43 (25.9%) patients ≤50 years of age while 123 (74.1%) patients >50 years of age. 126(75.9%) patients were males and 40 (24.1%) patients were females (Table 1).The mean age was 56.61±9.50 years and mean duration of disease was 3.64±1.569 years (Table 2). 22(13.3%) patients had oral squamous cell carcinoma of the tongue (Table 3).

Table 1: Demographic information of the patients (n=166)

Variable	No.	%
Age (years)		
≤ 50	43	25.9
> 50	123	74.1
Gender		
Male	126	75.9
Female	40	24.1

Table 2: Descriptive statistics of the patients (n=166)

Variable	Mean ± SD
Age (years	56.61±9.50
Duration of disease (years)	3.64±1.56

Table 3: Frequency of Oral squamous cell carcinoma of tongue (n=166)

Variables	No.	%
Yes	22	13.3
No	144	86.7

DISCUSSION

Oral squamous cell carcinoma is one of the most prevalent malignancies that affect people of different age groups. Staging of cancer is crucial for planning and also for treatment planning. Late presentation, lack of awareness and diagnostic markers are the key main hurdles for treating and combating this disease. Present study was designed to determine the frequency of OSCC of tongue in patients presenting to Ayub Teaching Hospital, Abbottabad.

In this study, mean age was 56.61±9.50 years and duration of disease was 3.64±1.56 years (Table 1). 43(25.9%) patients were recorded in ≤50 years of age group while 123 (74.1%) patients were recorded in >50 years of age group. 126 (75.9%) male patients and 40 (24.1%) female patients (Table 2). Various studies conducted in different regions of the world presented with similar presentation.[7-9] A study conducted in Japan also highlights that people of>50years of age are more vulnerable towards this disease and male were more commonly affected.[8] Another study conducted in China also showed the similar pattern of male to female ratio and age group.[9]

The frequency of oral squamous cell carcinoma differs in different regions of world, depending upon the mode of intake and placement trend of tobacco at different intra oral sites.[10]In the Western world tongue and floor of mouth carcinomas are more common due consumption of alcohol and smoking.[5,14,15] In our study only 22 (13.3%) patients had oral squamous cell carcinoma of the tongue (Table 3) as in Pakistan snuff is most commonly placed in the gingivobuccal sulcus and the buccal mucosa. Similarly, a study conducted in

Sri Lanka showed buccal mucosa being the most favoured site for OSCC.[6] This study also demonstrated that highest proportion of patients 14 (11.4%) were recorded in >50 years' age group in our local population and risk of OSCC also get increased with the passage of age and time.

Timely diagnosis, mass awareness, proper management plan and follow-up studies need to be conducted at national level for estimating the disease burden of this malignancy. Extensive studies highlighting the importance of genetic studies can play a pivotal role for understanding the genetic difference between different age groups. This will allow us better delineation and understanding of the associated risk factors.

CONCLUSION

Squamous cell carcinoma is a very common malignancy of the oral cavity which is more prevalent in males and people of higher age group. Compared to the Western world, tongue was not as frequently involved in our region according to this study. However, multicentre studies are required to estimate the frequency of involvement of different intraoral sites and the disease burden of OSCC.

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