

Original Article



Clinical Patterns of Oral Squamous Cell Carcinoma Patients Attending the Department of Oral and Maxillofacial Surgery of Rajshahi Medical College Hospital

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Abstract

Background: Oral cancer is one of the most prevalent cancers and a significant public health issue. Squamous cell carcinoma of the mouth is thought to account for more than 90% of all cases of oral cancer.

Objectives: This study set out to gather baseline information on the prevalence of squamous cell carcinoma of the mouth (SCC) in Bangladesh.

Materials and Methods: This study was cross-sectional in nature. The Rajshahi Medical College Hospital's Department of Oral and Maxillofacial Surgery assessed patients with oral squamous cell carcinoma from January 2019 to December 2021. The required information on age, sex, and residency were retrieved from all registries when they had all been gathered. Clinical evaluation and pre-diagnosis were performed on each patient. Tissues were preserved in 10% buffered formalin after being removed from lesions and submitted for histological confirmation.

Results: Squamous cell carcinoma was found in 52.17 % of men and 47.83 % of women. The 41–50 age range has the highest percentage, which is 39.13%. Oral, buccal mucosa (39.13%) was the initial location of oral squamous cell carcinoma incidence.

Conclusion: Most cases of SCC, which account for the bulk of oral malignancies, occur in older people. It is important to take prevention and early detection seriously.

Key words: Clinical picture, Biopsies, and Squamous cell carcinoma of the mouth.

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Introduction

Oral cancer is the leading cause of death in adults.¹ Oral cancer is a malignant tumor of the lips, the floor of the mouth, cheeks, gums, palate, or tongue. Oropharyngeal cancer is more common in developing than in developed countries.^{2,3} The incidence of oral cancer is particularly high in men, the eighth most common type of cancer worldwide.^{3,4} The incidence of oral cancer in men ranges from 1% to 10% per 100,000 in many countries.^{2,3} Oral cancer is one of the three most common types of cancer in Central and South Asia.^{2,3} In Bangladesh, approximately 200,000 new cases of whole-body cancer are reported each year, of which approximately 20% are oral cancer. . 40,000 new cases

of oral cancer are diagnosed each year.⁴ Smoking, chewing tobacco, and alcohol consumption are generally recognized as important and avoidable risk factors. Knowledge of the various symptoms and a trained eye can go a long way in preventing the high morbidity and mortality associated with oral cancer.⁵ Oral cancer is a squamous cell carcinoma whose histology is estimated to range from 90-95% to 88.72%.⁶ The oral mucosa is the most common site of squamous cell carcinoma, followed by the front 2/3 of the tongue, lower gums, lips, hard palate, the floor of the mouth, and upper gums.⁷ Squamous cell carcinoma (SCC) is a malignant tumor of squamous cells characterized by keratin and the presence of intercellular bridges.⁸ Oral keratinocytes cause oral squamous cell carcinoma.⁹ The intracellular cause of

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oral squamous cell carcinoma is a DNA mutation that is often spontaneous but is exacerbated by chemical, physical, or microbial mutagens.⁹ Histologically, oral squamous cell carcinoma has several types ranging from fusiform, papillary, verrucous, mucoepidermoid, adenomatous, acantholytic, and cuniculatum.¹⁰ The purpose of this study was to provide data based on the Rajshahi model of squamous cell carcinoma. Secondly, this knowledge aims to determine the extent of the problem and thus improve its diagnosis, treatment, and prevention.

Materials and Methods

This is a cross-sectional study. Patients with squamous cell carcinoma of the mouth were examined at the Department of Oral and Maxillofacial Surgery of Rajshahi Medical College Hospital from January 2019 to December 2021. All required data as well as data on age, gender, and location were collected. Characteristics that were important when selecting a subject, the subject must be able to understand instructions, consent to a biopsy, and not be mentally or physically disabled. The study involved 69 patients with squamous cell carcinoma of the mouth who presented to the Department of Oral and Maxillofacial Surgery at Rajshahi Medical College Hospital. All cases were clinically examined and pre-diagnosed. Lesions were biopsied and tissues were fixed in 10% buffered formalin and subjected to histological confirmation. All biopsy specimens were routinely stained with H/E. The stained slides were carefully examined by an experienced pathologist for histological diagnosis.

Results

The distribution of squamous cell carcinoma patients by age is shown in table 1. 37.68% were in the age group of;51-60 years old. The majority of the respondents, 39.13% were observed in the age group of; 41-50 years old. The mean age was 53.47 years. 52.17% of males and 47.83% of females were diagnosed with squamous cell carcinoma. (Table -2) The highest site of occurrence was 27(39.13%) on buccal mucosa. And other sites of distribution of SCC are shown in Figure 1.

Table I: Age distribution of the respondents (n=69)

Age	Patients
<= 40 years	6(8.70%)
41 - 50 years	27(39.13%)
51 - 60 years	26(37.68%)
> 60 years	10(14.49%)
Total	69 (100%)

Mean age 53.47 years

Table 1 shows the age distribution of the; oral SCC patients.

Table-II: Sex distribution of the respondents (n=69)

Sex	Patients
Male	36 (52.17%)
Female	33 (47.83%)
Total	69 (100.0%)

Table 2 shows the sex distribution of the respondents.

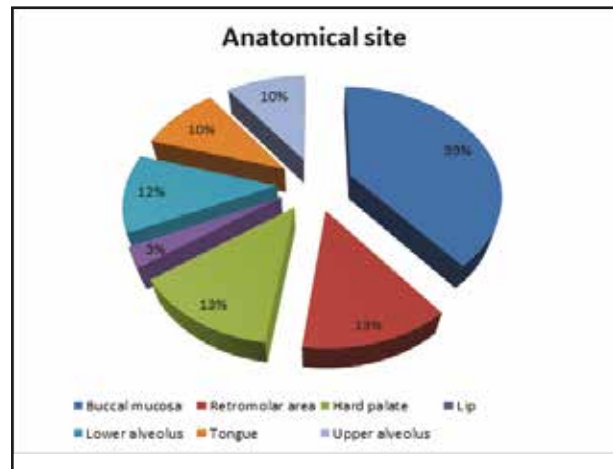


Figure 1: Anatomical site of the lesion (n=69)

The graph illustrates the distribution of SCC patients according to the site of the lesion. The highest site of occurrence was buccal mucosa 27(39.13%).

Discussion

Understanding the epidemiology and risk factors of oral cancer can aid in the early detection and appropriate treatment of patients with oral cancer. Oral cancer is considered the sixth most common cancer in the world, with the highest incidence in the Indo-Pak subcontinent.¹¹ Early diagnosis of oral cancer is important as it allows for early treatment and leads to a better prognosis. In our study, the mean age was 53.47 years. As expected in our study, the most affected age group was 41-50 years old. According to the US National Cancer Institute's SEER program, the median age at which oral cancer is diagnosed is 65 years. Shankaranarayan et al. found that the peak incidence of oral cancer in India was at least ten years earlier than that reported in the Western literature.¹¹ Gupta et al. observed an increased incidence of oral cancer in the younger age group (below 50 years).¹¹ A recent oral cancer epidemiological study showed that oral cancer is more common among young men and women in developing than in rural countries.¹² The immoderate prevalence of chewing tobacco use among more youthful adult women and men also can moreover offer a reason for the strong style inside the superiority of oral maximum cancers in this group. Here we would like to point out that the cases where tobacco and tobacco products are available at very low prices and pan or betel quid; cause this harmful habit to spread in this country.¹³ Regarding gender 52.17% of the cases were male and 47.83% were female. A similar study was conducted in Bangladesh by Rahman¹⁴ where

among population 50% were male and 50% were female. A study conducted by Zulfiqar et al.¹⁵ at Mayo Hospital, Lahore observed equal prevalence of SCC in both gender. In addition, some studies have shown a strong trend among women, possibly due to changing habits in higher socioeconomic groups and cultural habits in some rural areas.¹⁶ Similarly, two studies in India showed that the M: F ratio was higher 2.2 :1 or 4.2:1 respectively.^{16,17} Consistent with a previously published report, the buccal mucosa was the primary site of oral cancer in our study.^{4,18} Although the tongue is considered the most common site of oral cancer in Western literature,¹⁹ despite the widespread use of chewing tobacco, this results in a relatively higher incidence of buccal mucosal involvement in our country.²⁰ Data collected and interpreted by one institution, have obvious limitations. Information on tobacco and alcohol use is very limited in this study. However, the descriptive data presented in this study is important for several reasons, including the scale of the problem and larger and more vulnerable populations. Second, the limited data reflects the specific patient population being treated at a particular hospital rather than the community as a whole.

Conclusion

According to the results of our study, oral squamous cell carcinoma (SCC) is widespread in Bangladesh among both young and older age groups. Consideration should be paid to early detection and prevention. Any ulcer, growth, or white patch found in the oral cavity should be immediately biopsied to confirm the diagnosis by a dentist or doctor. To reach a trustworthy and conclusive conclusion regarding the nature of SCC in young patients, its genesis, and risk factors, further future studies in large populations should be conducted.

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