

## ORAL SQUAMOUS CELL CARCINOMA OF THE FLOOR OF MOUTH – A CASE REPORT

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### ABSTRACT

Oral squamous cell carcinoma (OSCC) is the most common malignancy of oral cavity. The risk factors are multifactorial it includes tobacco chewing, smoking and alcohol consumption. More than 90% of the oral cancers occur in patients over the age of 45, with a peak at the age of 60 years and rarely occurs in the young patients under the age of 40. The most common sites are the tongue and floor of the mouth. The clinical presentation is ulcerating type, such as

leukoplakia, erythroplakia or a combination of both. Early diagnosis and prompt treatment decides the success of the intervention; diagnosis is often made at a late stage and misdiagnosis usually lead to inappropriate treatment and delayed definitive treatment with lesions of considerable size and invasive in depth. The present report describes a case of oral squamous cell carcinoma involving floor of mouth in a male patient.

**KEYWORDS:** Cigarette smoking, Floor of mouth malignancy, Oral Squamous Cell Carcinoma, Tobacco chewing.

## INTRODUCTION

Oral cancer is the sixth most common cancer worldwide and oral squamous cell carcinoma (OSCC) accounts for 90% of these cases.<sup>[1]</sup> The highest incidence and prevalence of OSCC is found in the Indian subcontinent where the risk of developing cancer is increased due to deleterious habits.<sup>[2,3]</sup> It usually occurs in the elderly men during the fifth-eighth decade of life and occasionally occurs in the young patients under the age of 40.<sup>[4]</sup> The etiological agents for oral cancer comprises tobacco use such as cigarette smoking, smokeless tobacco, alcohol consumption, areca nut, poor dietary habits, a nutrition comprising of inadequate fresh fruits, vegetables and a compromised immune system as well as less established factors such as infection with certain types of human papilloma viruses.<sup>[5]</sup> The most common sites of OSCC are the tongue, floor of the mouth, gingiva, oropharynx, lips, hard palate and buccal mucosa.<sup>[6]</sup> OSCC cannot be diagnosed clinically only, it should be accompanied with histologically as well. Early detection of potentially malignant and malignant lesions of OSCC is definitely a preventable condition. Majority of the cases are diagnosed in advanced stage leading to poor prognosis and low survival rate of the patients due to unawareness or unavailability of therapeutic facilities. The important factors associated to carcinoma with a poor prognosis include large size of the tumor at the time of diagnosis, the presence of metastases in regional lymph nodes and a deep invasive front of the tumor.<sup>[1]</sup> Therefore, in this case report an adult male patient having a chronic non-healing ulcer which turned out to be an OSCC is discussed.

## CASE REPORT

A 68 years old male patient reported to the department with the chief complaint of a non healing ulcer in his floor of mouth since 8 -10 months and a history of pain in the left side mandibular back tooth region since two months. Patient revealed that during a eighth-month period, he had been taken palliative treatment such as the use of mouthwash and antibiotic therapy. Because of the late diagnosis, the lesion was quite enlarged. His medical history shown that he had no systemic health problems, he was chronic smoker and pan chewer for past 10 years. The patient had a habit of cigarrate smoking and tobacco chewing 10-15/day for 20 years. Patient informed that he was apparently alright one year back when he noticed an ulcer on floor of mouth which progressively increased in size. Extraorally there was presence of a single submental and submandibular lymph node which was enlarged, tender and mobile on palpation. Intraoral examination showed ulceroprolifeartive growth present in the floor of mouth and left side of lingual frenum measuring 2 x 3 cm having irregular

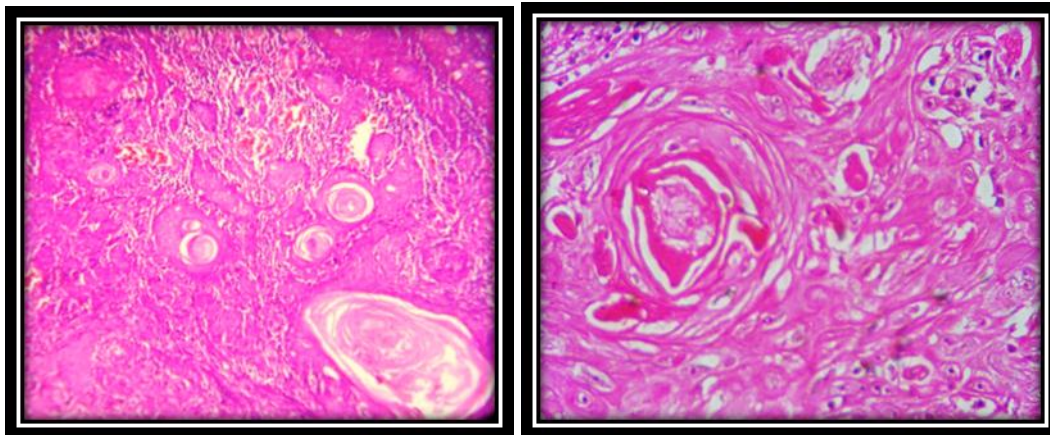
borders [Figure 1]. Extent of lesion is start from mesial aspect of 31 to mesial aspect of 35. Surrounding mucosa appears to be normal. The margins of the ulcer were irregular, indurated and the ulcer was covered with a fibrinous exudates. Erythematous lesion is extended from the floor of the mouth to the left side of lingual frenum. On palpation, the base was non-indurated and there was no bleeding associated with the lesion. A panoramic radiological evaluation revealed a radiolucent area and bone loss with irregular borders in the 31 to 35 region of mandibular left side teeth [Figure 2]. The patient was advised to undergo incisional biopsy of floor of mouth. Histological reports revealed, H and E stained section shows hyperparakeratinized stratified squamous epithelium with dysplastic features. The epithelium shows break in the continuity of the basement membrane with invasion in the underlying connective tissue stroma in the form of sheets and islands. The invaded epithelium shows dysplastic features such as nuclear hyperchromatism, altered N/C ratio, cellular and nuclear pleomorphism, few cells shows vesicular nuclei with multiple prominent nucleoli are seen. Individual cell keratinization is seen and 2-3 mitotic figures are seen. Keratin pearls are seen. Moderate infiltration of chronic inflammatory cell infiltrate chiefly lymphocytes and plasma cells are noted and result was well differentiated squamous cell carcinoma[Figure 3].



**Figure 1: Ulceroproliferative growth on the floor of mouth.**



**Figure 2: Horizontal bone loss with severe bone loss in relation to the 31 and 35 regions with widening of the PDL space.**



**Figure 3: H and E stained section shows few eosinophilic acellular areas seen in the form of keratin pearl and chronic inflammatory cell infiltrate.**

## DISCUSSION

It is generally recognized that OSCC development is a multifactorial process involving many genetic features which alter the normal function of oncogenes and tumor suppressive genes.<sup>[7]</sup> Oral cancer represents 48% from all malignant tumors of head and neck, and 90% of them are squamous cell carcinomas.<sup>[6]</sup> This case report described floor of mouth OSCC of 68 years old male patient who has previously reported with a small ulcer which gradually increased to present size. In our case, the patient had a habit of cigarrate smoking, tobacco chewing and when intraoral examination was done, the lesion was found in contact with the sharps cusps of dentition have contributed to the initiation of abnormal changes in the epithelial cells leading to neoplasm.

OSCC may arise from potentially malignant lesions such as oral leukoplakia, erythroplakia, sub-mucous fibrosis and lichenoid dysplastic lesions, or can arise de novo.<sup>[8]</sup>

Patient visited here had a large non healing ulcer like lesion on the floor of mouth. Since the patient previously visited various dental clinics and the line of treatment in those clinics was focused on diagnosis made as a precancerous lesion which was resulting in delaying the treatment. The most common sites being involved are border, posterior and ventral surfaces of the tongue followed by floor of the mouth. Less common sites are the gingiva, labial mucosa, buccal mucosa and hard palate.<sup>[9]</sup> In our case irregular shaped, single ulcer was seen on the floor of mouth with uneven margins and undermined edges. The base and borders were firm on palpation. The floor of the ulcer was erythematous and tender on palpation. Oral ulcerative lesions are common findings, although often of similar clinical appearance, their aetiologies can have a wide range such as immunological, traumatic, neoplastic or oral manifestations of systemic and dermatologic disease. Clinically, almost all the oral cancers, barring the early forms, have characteristic presentation in the form of a persistent ulcer with indurated margins.<sup>[10]</sup> The report of incisional biopsy in the current case confirmed a diagnosis of well differentiated squamous cell carcinoma. Final diagnosis is confirmed with both the clinical and the histological evaluation. The overall 5-year survival rate for an OSCC has remained at approximately 50% or less over the past three decades. An early diagnosis is the most important factor for improving the patient survival rates to as high as 80%–90%, and this also minimizes the extent of the surgery required.<sup>[11]</sup> Some studies have revealed that regular dental visits facilitate earlier findings for this disease. Increased regularity of dental visits is associated with earlier stage at analysis for oral and pharyngeal cancer. Addressing the issue of infrequent dental care through expansion of dental coverage and improvement of public education efforts could have a major impact on public health, certain the higher degree of mortality, morbidity, and economic costs that are associated with advanced stage disease. Efforts intended at improving education and awareness by dental practitioners may make further contributions to increasing early detection and achieving the oral cancer goals.<sup>[12]</sup>

## CONCLUSION

OSCC is the most frequent malignancy affecting the oral cavity characterized by a chronic non healing ulcer which has a range of provisional diagnosis. This case report discussed here is in elderly male and the analysis was based on the clinical and histopathological examination. The presentation with individual cell keratinization and keratin pearl formation,

confirmed its resemblance to the parent tissue which validated its grading as a well differentiated squamous cell carcinoma. This report provides information for clinicians about the significance of doing a careful and thorough examination of the oral cavity. An immediate conclusion was made to do a biopsy with a histopathological examination based on the presence of induration of the lesion.

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