CASE REPORT

ORAL SQUAMOUS CELL CARCINOMA : A CLINICAL CASE REPORT & REVIEW

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ABSTRACT

Oral squamous cell carcinoma (OSCC) is one of the most prevalent forms of oral cancer, typically affecting individuals over 50 years old. It primarily arises from the squamous epithelial cells that line the oral cavity. Although less common in those under 40, OSCC can still occur in this age group. Known risk factors for developing OSCC include tobacco use (both smoking and chewing), excessive alcohol consumption, chronic irritation (such as from ill-fitting dentures), human papillomavirus (HPV) infection, and certain dietary habits. Early detection and intervention are critical to improving prognosis and reducing mortality associated with this cancer. This report presents a case of OSCC, involving the left lower alveolus of a 48-year-old male. The report highlights the early diagnosis and a brief review of the literature on squamous cell carcinoma.

KEY WORDS

Early diagnosis, tobacco, carcinoma, oral squamous cell carcinoma

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INTRODUCTION

Oral squamous cell carcinoma (OSCC) is the most prevalent type of oral cancer worldwide.[1] Cultural practices and various risk factors, including tobacco and alcohol use, play a significant role in the varying incidence of oral squamous cell carcinoma (OSCC) across different regions. Although there are several treatment options available, the five-year survival rate for OSCC remains relatively low, hovering around 50%. This highlights the critical need for early detection, as survival rates can substantially increase when the cancer is diagnosed and treated in its early stages, potentially reaching as high as 80%.[2].

Diagnosing oral squamous cell carcinoma (OSCC) early can be difficult due to its diverse clinical presentations. While persistent ulcerated lesions are a common sign, other clinical manifestationsmay also be present, making early detection more complex. Primary prevention mainly focuses on raising awareness about risk factors, such as tobacco and alcohol consumption. However, insufficient knowledge of early signs and delays in referring patients for specialized evaluation and biopsy result in many OSCC cases being diagnosed at more advanced stages. There is a critical need to enhance awareness among healthcare professionals and the general public about the signs and symptoms of oral squamous cell carcinoma (OSCC), as well as the importance of prompt referral and biopsy for suspicious lesions. Such efforts can facilitate earlier diagnosis, better treatment outcomes, and ultimately, improved survival rates for individuals diagnosed with OSCC.[3]

CASE REPORT

A 48-year-old male patient reported to the Department of Oral Medicine and Radiology with the chief complaint of a growth on the left side of the cheek region for the past 20 days. The history of the presenting illness revealed that the patient initially developed a small ulcer on the left side of the inner cheek region 20 days ago. 15 days back he suddenly noticed loosening of single tooth which came out by its own from its socket after 2 days. The ulcer was

FIG 1: Intraoral clinical picture

FIG 2: Orthopantomogram

initially small in size, which gradually increased to attain the present size. His medical history revealed sudden loss of body weight, loss of appetite & disturbed sleep since last few days. The patient has been a tobacco chewer (1 packet of pan masala per day for 2 years). He used to chew the pan masala from left side only. On extra-oral examination, it was noted that the patient had a symmetrical face with normal eyes, ears, and nose, competent lips, and no scars, sinuses, or tenderness in the left side of face.

On intra-oral examination, a localized growth (fig1) was seen in the left lower alveolar ridge with relation to 36, measuring 4x2 cm approximately having irregular borders extending from 34 to 37 region. On palpation, the growth was firm in consistency with indurated margins, tender on palpation which bleeds on probing with obliteration of vestibule & gingivo-buccal sulcus.

Based on the chief complaint and clinical examination, a provisional diagnosis of chronic non-healing ulcer on the left lower alveolus was made.

The patient was further advised to go for an orthopantomogram, blood investigations and an incisional biopsy for a confirmatory diagnosis. In the blood investigations all the parameters werewithin normal limits. Panoramic radiograph (fig2) revealed localized, ill-defined angular bone invasion with irregular bony erosion involving the left side body of mandible, with missing tooth i.r.t 36 with mesially tilted 37. A chairside investigation was carried out by applying toluidine blue staining which showed the presence of dysplastic cells which followed an incisional biopsy under all asepsis procedures with local anesthesia, and the specimen was submitted for histopathology.

The histopathology report revealed, Para keratinized stratified dysplastic atrophic surface epithelium overlying a fibro cellular C.T stroma. The epithelium-C. T junction was appearing to be breached & the C.T was consisting loosely arranged collagen fibre in association with fibroblast. Dysplastic epithelial cells showed vesicular nuclei with prominent nucleoli & appear to invade into the underlying C.T in sheets demonstrating cellular pleomorphism, nuclear pleomorphism & altered nuclear-cytoplasmic ratio. The C.T also showed dense & diffuse infiltration of inflammatory cells exudates predominantly consisting of lymphocytes. And histopathologically it was diagnosed as "Moderately differentiated Squamous cell Carcinoma." Then the patient was further sent for complete excision of the lesion to Cancer Hospital.

DISCUSSION

Oral squamous cell carcinoma is the most common form of oral cancer, representing about 95% of all cases.[4,5]

Oral squamous cell carcinoma (OSCC) can present in different forms, such as red, white, mixed red-white, exophytic, or ulcerative lesions within the oral cavity. These lesions may often be painless, which can result in delayed detection as patients may not notice them until they have significantly advanced. The buccal mucosa is the most common site for OSCC, accounting for 40% of cases. Other frequently affected areas include the lower lip, floor of the mouth, and the ventral and lateral borders of the tongue. Although OSCC lesions are typically solitary, cases with multiple lesions are uncommon.[6]

Several factors elevate the risk of developing OSCC, including being male, over the age of 40 & heavy smoking or alcohol use.[7]

The typical presentation of OSCC involves a persistent, painful ulcer with hardening and deeper tissue invasion in the oral cavity. However, in some cases, the lesions are more superficial and appear to grow outward instead of penetrating deeper into the tissues. Early and precise diagnosis of OSCC is vital for enhancing patient prognosis and survival, as the ulcerative form of SCC tends to be locally aggressive. Treatment approaches for OSCC can include surgery, radiation therapy,chemotherapy, or a combination of these options. Customizing treatment for each patient is crucial to achieve the best possible outcomes in those with OSCC.[5,8]

In our case report, a 48-year-old male patient initially presented with a small growth, which aggressively developed into a large irregular mass with sudden mobility & loss of tooth. He had a deleterious habit of chewing pan masala. Considering the history & findings, immediate incisional biopsy was done, and the patient was diagnosed with

squamous cell carcinoma. Further, we referred the patient to a cancer institute, where the patient underwent surgical. The patient is currently stable after one year of surgical excision.

CONCLUSION

Oral squamous cell carcinoma (OSCC) remains a significant clinical concern due to its high incidence and potential for local and systemic spread if not detected early. Early diagnosis plays a crucial role in improving prognosis and survival rates, as OSCC is often asymptomatic in its early stages, leading to delayed detection. Treatment options, including surgery, radiotherapy, chemotherapy, or a combination, should be tailored to each individual case to ensure optimal outcomes. With prompt intervention and appropriate management, the prognosis for patients with OSCC can be significantly improved, highlighting the importance of awareness, early detection, and personalized care in the successful treatment of this condition.

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