

Case Report

ORAL SQUAMOUS CELL CARCINOMA OF BUCCAL MUCOSA IN A YOUNG PATIENT- A CASE REPORT

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Abstract:

Oral squamous cell carcinoma is a crucial oncological problem in the areas of the world where tobacco habits in the form of chewing and/or smoking with or without alcohol intake are common. It is rarely seen in young people and typically occurs in the elderly men during the fifth through eighth decade of life. The importance of this case report lies on the rarity of a squamous cell carcinoma in a young patient aged 23 years.

Keywords: Oral Squamous Cell Carcinoma, ulceroproliferative growth, tobacco.

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This article may be cited as: Reddy RK, Dasara MR. Oral Squamous Cell Carcinoma of Buccal Mucosa in A Young Patient- A Case Report. J Adv Med Dent Scie Res 2015;3(1):165-168.

INTRODUCTION

Worldwide oral cancer is regarded as sixth most common cancer and more than 90% of all cases comprises of squamous cell carcinoma (SCC).¹ Squamous cell carcinoma (SCC) of the buccal mucosa is a common malignant tumor in Southeast Asia i.e. India, Taiwan and China; however, it is rarely encountered in Europe and North America. Risk factors associated with SCC include betel quid chewing, tobacco and alcohol consumption.² Buccal mucosa squamous cell carcinoma is rare but is considered as aggressive form of oral cavity cancer and is also associated with a high rate of local regional recurrence.³

It is a major oncological problem in the areas of the world where people are habitual tobacco habits in the form of chewing and/or smoking with or without alcohol intake. It typically occurs in the elderly men during the fifth through eighth decade of life and is rarely seen in young people.⁴ The

importance of this case report lies on the rarity of a squamous cell carcinoma in a young patient aged 23 years.

CASE REPORT

A 23 year old male reported to the hospital with a 3 x 5 cm ulcero-proliferative growth in left buccal mucosa (Figure 1) and swelling in neck since six months. Patient had a habit of smoking, alcohol consumption and betel nut chewing for over 17 years. Clinical examination revealed a cervical lymph node on the left side, fix and painful. Patient was recommended CT face and neck and chest radiograph. CT scan revealed mass involving left buccal mucosa and necrosed lymph node with size less than 3 cm. No significant findings were present in chest radiograph and clinical staging T3N2aM0 was assigned. Surgery was carried out with radical resection of the tumor site with simultaneous unilateral neck dissection (Figure 2). Surgical approach was a wide excision via a cheek flap.

Complete resection of the tumor with negative margins confirmed by frozen section histopathology was done. After surgery, treatment was completed with 30 cycles of chemotherapy. Histopathological analysis (Figure 3) of biopsy specimen revealed a malignant neoplasia of epithelial origin characterized by invasive proliferation of nests and cords of neoplastic epithelial cells.



Figure 1: Clinical picture showing ulceroproliferative growth in left buccal mucosa

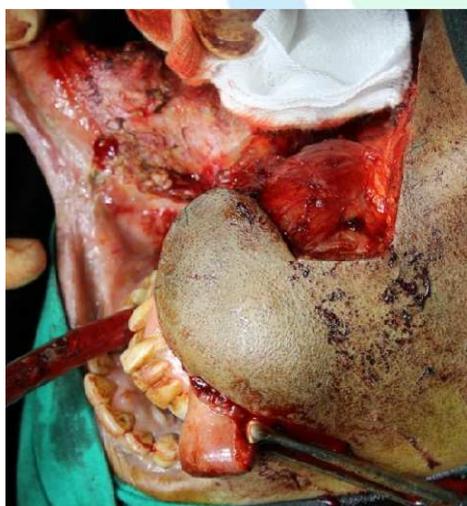


Figure 2: Radical resection of the tumor site with simultaneous unilateral neck dissection

These cells exhibited intense cellular and nuclear pleomorphism, loss of cells cohesion, multiple and clearly visible nucleoli, nuclear hyperchromatism, individual cell keratinization, atypical mitoses and formation of keratin pearls.

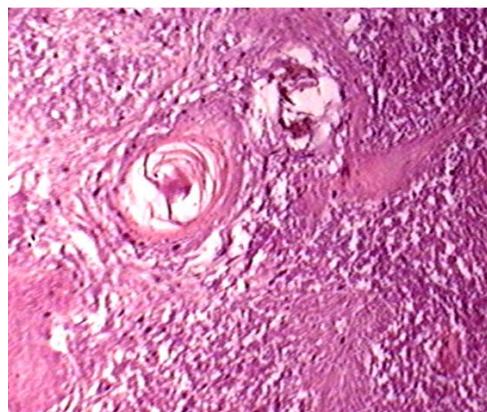


Figure 3: Histopathological photograph showing dysplasia and keratin pearl.

An intense and diffuse mononuclear inflammatory infiltrate, numerous blood vessels and areas of hemorrhage and edema were observed in the fibrous connective tissue stroma. The patient is under regular follow up from around two years and no recurrence is reported.

DISCUSSION

The incidence of oral cancer in young adults is uncommon before the age of 35 years. Even though tobacco and alcohol abuse are regarded as main aetiological factors, but in many cases lack of these significant habits in young patients had provoked many authors to postulate factors like genetic factors, immune deficiency, dietary factors, viruses like herpes simplex virus and human papilloma to consider in aetiology of these cancers.⁴ Buccal squamous cell carcinoma commonly occurs in people aged 50-80 years.² The prevalence of oral cancer in young adults ranges between 0.4% and 5.5%.^{4,5} The patient in the present case was a young patient aged 23 years and however he had a habit of smoking, alcohol consumption and betel nut chewing for over 17 years. The peer pressure can be regarded as the factor for indulging into such habits at such a younger age.

The incidence and prevalence of oral squamous cell carcinoma is found to be increasing in the Indian subcontinent due to prevalent habits of chewing tobacco, betel quid and areca-nut. The mutagenic effects

of tobacco, alcohol, betel quid or areca-nut are dependent upon dose, upon frequency and upon duration of use, and are accelerated and exaggerated by the concurrent use of two or more of these agents. Moreover, as not all persons who practice these high-risk habits develop oral SCC, thus research should be directed to find person-specific genetic characteristics and environmental factors which either afford protection against the development of oral SCC, or may predispose to or even promote the development of oral SCC.¹

Also as the time of exposure in the young patient is short as compared to older group of patients to establish cause-effect relation, other factors should be investigated in order to explain SCC etiology in young patients, among which are included: genetic predisposition, previous viral infection, feeding habits, states immunodeficiency, occupational exposure to the carcinogenic factor, socioeconomic condition and oral hygiene.⁶

Buccal mucosa squamous cell carcinoma is the most common oral cancer in men and the third most common oral cancer in women in India; and accounts for up to one-third of all tobacco-related cancers. This higher rate in India is likely related to the widespread practice of betel nut chewing, in addition to tobacco and alcohol.³ Betel nut chewing has long been a social habit Asian and tropical countries. It can be chewed alone but is most commonly used with other ingredients known as the quid. A betel nut quid typically consists of 3 ingredients: the areca nut, leaf of the betel pepper, and slaked lime paste obtained from shells, coral, or limestone. This combination of ingredients is more carcinogenic than betel nut used alone. As for alcohol, it can act as a solvent for carcinogens. It also has the ability to irritate the mucosa. So alcohol consumption is considered to play a role in cancer development.⁷

The clinical characteristics of SCC vary from case to case and include the exophytic (verrucous or papillary), endophytic, ulcerated, leukoplasic, erythroplastic or

erythro-leukoplasic forms. Depending on their extent and/or location, these lesions may cause painful symptoms and resorption of adjacent bone seen as a “moth-eaten” appearance on radiographs.⁸ About 90% of recurrences occur within the first 1.5 years after treatment. The present patient is under observation and follow up from around two years and no recurrence is reported. Local recurrence is more common than regional recurrence, and has been reported between 23 to 32%.³

CONCLUSION: Oral Squamous Cell Carcinoma is rare in young patients and observation of such cases requires attention of clinician along with an analysis of etiologic factors associated with the disease so that early detection could help in identifying the disease at early stage, to ensure good prognosis.

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Source of support: Nil

Conflict of interest: None declared

