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Squamous Cell Carcinoma Affecting Oral Mucosa: A Clinical Case Report

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Abstract :
The most common carcinoma affecting the oral mucosa is oral squamous cell carcinoma, with prevalence seen in the age groups above 50 years in males and with rare occurrence below 30 years. Mandibular alveolus is the second most common site for oral cancers. In early stages, it shares a clinical similarity with various forms of inflammatory gingival lesions and is very commonly misdiagnosed in our routine dental practice. The dentist should have precise knowledge regarding the clinical manifestation of this deadly disease as early diagnosis and prompt treatment can reduce morbidity & mortality of the disease.

Key Word*: Oral squamous cell carcinoma, mandibular alveolus, neoplasm.*

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I. Introduction

Oral cancer accounts for the eleventh most common cancer worldwide.[1] Oral squamous cell carcinoma (OSCS) is the most familiar malignant mucosal neoplasm of the head and neck accounting for over 90% of all malignant neoplasms.[2] Oral squamous cell carcinoma typically affects the older age groups throughout the fifth – eighth span of life with less occurrence reported in the younger age groups below 40 years, and male patients are affected more than females.[3] Squamous cell carcinomas can occur in all parts of the body, but they are most common in the skin and oral cavity. The mandibular alveolus is the second most common site for oral carcinomas, with the first being carcinoma of the tongue as per site specificity.[4] According to the local recurrence rate by site, mandibular alveolus carcinoma has the highest local recurrence rate, the second being the carcinoma of the tongue.[4] The maximum prevalent threat in the occurrence of oral squamous cell carcinoma is seen in the person who has a habit of tobacco & betel nut chewing, intoxicating drinks, and contamination with oncogenic viruses (HPV and EBV), environmental and occupational factors, genetic predisposition, immunosuppression having high-risk factors.[3]

The present paper describe a case of oral squamous cell carcinoma in a 60 years old male with clinical, radiological, histopathological features and increase awareness of this condition.

II. Case Report

A male aged 60 years old was reported in a private dental hospital with clinical findings of growth in the right posterior mandibular region since 2 months. The growth developed 2 months earlier and gradually increased to the present size, with a throbbing type of pain present since past 15 days. Past dental history revealed extraction of upper left third molar, 2 years back. The patient is a known case of vitiligo & hypothyroidism. He had a history of coronary artery disease & underwent CABG 10 years back.

Habit history: The patient has a habit of pan chewing (areca nut and tobacco in the form of Zarda) since 30 years, 8 to 10 times a day. He kept the pan quid in the right buccal vestibule of mouth for 10-15 minutes then he spit it out.

A] Clinical findings:

General examination revealed patient has moderately built (figure:1) with a steady gait and normal vital signs. There were no signs of pallor in the conjunctiva, cyanosis, and icterus in the sclera were noted. Skin shows a vitiligo appearance and nails show no sign of koilonychias, beading, clubbing, cyanosis, or pallor. Extraoral examination revealed extraoral swelling seen on the right side of the jaw region and a single ovoid lymph node palpable in the right submandibular region, measuring approximately 2x3 cm, which was firm in

consistency, tender, and was freely mobile in all planes. Intraorally an ulcero-proliferative growth (figure: 2) was seen on the posterior aspect of left buccal mucosa involving gingiva, alveolus from 44 to 48 tooth region with irregular in shape, size approximately measured 3x5 cm. The surface of the lesion appeared mixed keratotic and erythematous with a granular appearance was noted. The surface of the mucosa adjacent to the growth appeared erythematous and the teeth 45, 46, and 47 associated with growth were mobile, and tooth 45 displaced lingually.

On palpation, the growth was tender firm in consistency, non-pedunculated, and fixed to the underlying structure, with bleeding on mild provocation was evident.

On correlating the chief complaint, history of habit, and clinical examination, a provisional diagnosis was made as malignancy of oral right buccal mucosa and TNM staging was T3N1M0 (Stage- III).

B] Radiographical Findings:

Orthopantomogram (OPG) was taken for evaluation of any bony involvement, which revealed (figure:4) destruction of the interdental bone with furcation involvement and loss of periodontal ligament space of mesial and distal roots associated with tooth 46, missing teeth 28 noted.

Figure: 1 Extraoral profile of the patient

Figure: 2 Intraoral view of the patient with ulcero- proliferative growth seen on the lower right buccal vestibule

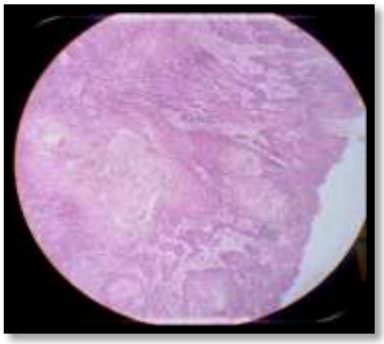

Figure: 3 Histopathological Picture

Figure: 4 Orthopantomogram (OPG), revealed destruction of the interdental bone with furcation involvement and loss of periodontal ligament space of mesial and distal roots associated with tooth 46, missing teeth 28 noted.

C] Histopathological findings:

To confirm the diagnosis incisional biopsy of the lesion was done under local anesthesia and was submitted for histopathological examination and which revealed (figure: 3) overlying epithelial cells which are thick atropic parakeratinized stratified squamous in nature with evidence of ulceration can be seen. The basement membrane is breached. The underlying connective tissue shows infiltration by malignant epithelial cells in the form of cords and islands. Neoplastic cells exhibit features of cellular atypia like nuclear and cellular pleomorphism, prominent nucleoli loss of cohesion, and increased abnormal mitosis. The rest of the connective tissue shows dense chronic inflammatory cell infiltrate, and minor salivary gland acini.

D] Management:

On the basis of clinical, radiographical, and histopathological findings the present case was diagnosed as infiltrating well-differentiated squamous cell carcinoma. The patient was referred to a Government cancer hospital and advised to undergo a surgical procedure involving excision of the lesion with a wide clearance, hemimandibulectomy, and radical neck dissection. Surgical removal of the lesion was performed under general anesthesia and the resected specimen (figure: 5a & b) was sent for histopathologic evaluation. Histopathologic examination revealed well-differentiated squamous cell carcinoma.

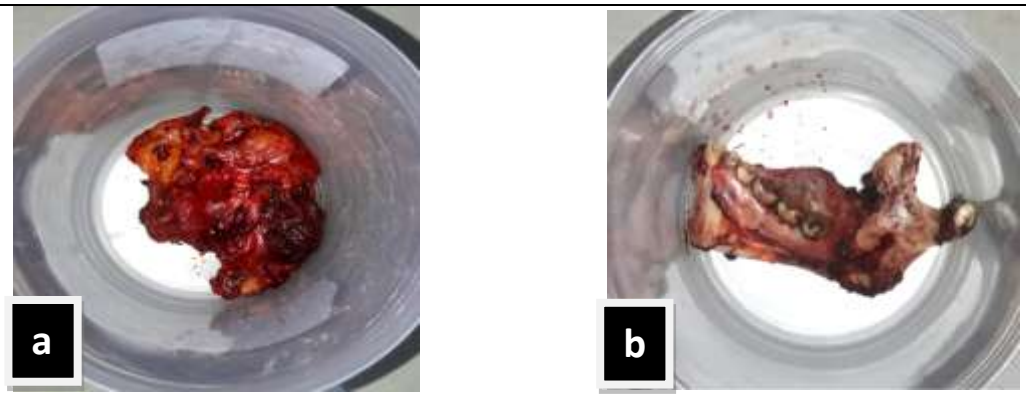

Figure: 5 (a&b) Resected Specimen

III. Discussion

Squamous cell carcinoma is considered as the most common malignant epithelial neoplasm of the oral cavity which exhibits squamous differentiation characterized by the formation of keratin and or the presence of intercellular bridges.[5] Commonly affecting sites for oral squamous cell carcinoma are the tongue, oropharynx, and floor of the mouth, and squamous cell carcinoma of the gingiva and lips are rarely seen.[4] Carcinoma of the gingival region often mimics other inflammatory gingival lesions. The mandibular alveolus is the second most common site for oral carcinomas.[6]

OSSC is more often seen among men compared to women as men are more exposed to high-risk habits such as smoking and tobacco chewing,[6] but in the area where our dental hospital is, women are equally habitual to tobacco chewing as men. Age is another critical factor in the occurrence of OSSC, as age advances, pronounced genetic and epigenetic changes take place.[6] The case presented here is a male patient of age 60 years with a habit of pan chewing with areca nut and tobacco in the form of zarda since 30 years, 8 to 10 times a day.

In the case of squamous cell carcinoma of the lower alveolus, there is a strong predilection of regional lymph node metastasis, which is another feature of OSCC in which cervical lymph nodes of the submandibular triangle and upper jugular region nodes show a stronger predilection in the case of squamous cell carcinoma of the lower alveolus.[6] In the present report, a single ovoid lymph node palpable in the right submandibular region, measuring approximately 2x3 cm, which was firm in consistency, tender, and freely mobile in all planes.

The radiologically detected bone defects in squamous cell carcinoma were classified as follows: (1) erosive- well-defined margins of the absorbed bone and (2) moth-eaten appearance- irregular, ill-defined margins of absorbed bone.[6] In this case radiologically detected bone defects show diffuse, ill-defined

radiolucency in relation with 45 and 46 extending up to the mesial root of 47 with no evidence of root resorption noted.

In oral squamous cell carcinoma, surgery is considered the first line of treatment. Always a multidisciplinary approach should be made including chemotherapy, radiotherapy, surgery, or a combination of all of these for better prognosis of OSCC.[3]

Treatment adopted for this case followed the recommended standards for head and neck squamous cell carcinoma which include hemimandibulectomy with mandibular reconstruction followed by radiation and chemotherapy. The patient is still under periodic monitoring at the Government cancer hospital where treatment was carried out and also receiving follow-up by speech therapy and nutrition.

The purpose of this article is to emphasize that early detection of OSCC is vital as the prognosis is directly related to the size of the lesion. Many times we are too quick to dismiss persistent lesions without further investigations. Thus, it is prudent to biopsy for any unexplained lesion which remains after 2 weeks following the removal of any suspected etiologic factors to avoid unnecessary delay in diagnosing such conditions.

IV. Conclusion:

In the present reported case patient had a history of chronic pan chewing along with areca nut and tobacco (in the form of zarda), which contains harmful ingredients which had led to the development of oral cancers which causes significant mortality and morbidity. It has a good prognosis when detected at an early stage, but almost two-thirds of oral cancer patients are diagnosed at a late stage, which leads to extensive treatment and low survival rates. Therefore, oral health care professionals should have a basic awareness and adequate knowledge of such types of potentially malignant conditions and oral cancers.

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