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`Verruciform Growth Of The Buccal Muccosa – A Case Report

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Abstract:

Squamous cell carcinoma is the most common epithelial malignancy of the oral cavity and verrucous carcinoma is its subtype with a lowgrade malignant potential with specific morphologic, cytokinetic and clinical features. Oral verrucous carcinoma is a rare, non-metastasizing, warty- variant of squamous cell carcinoma with a multifactorial etiology. The most frequently affected site is buccal mucosa,alveolar mucosa and tongue. This article highlights the paramount importance of histopathologic examination.,hereby a case of a 59 year old male patient with a verrucous carcinoma is discussed.

Keywords: Verrucous growth, exophytic, buccal mucosa, Histopathology.

Introduction:

In literature various synonyms used to depict verrucous carcinoma, as carcinoma cuniculatum, Ackerman's tumor, Buschke Lowentein tumor, florid oral papillomatosis, and epithelioma cuniculatum.[1]Oral verrucous carcinoma as also known as the distinct variant of squamous cell carcinoma was first described in 1948 by Ackerman, but first evident based documented case of verrucous carcinoma described in 1941 by Fridell and Rosenthal.[2,3]] Tobacco, alcohol and opportunist viral infections are the most associated etiologies with verrucous carcinoma.[4] It presents predominantly as an exophytic growth with a pebbly, micronodular surface, a slow growing rate and become locally invasive if not treated properly.[5]It usually appears as a painless, white, warty, exophytic plaque attached by a broad base resembling a cauliflower. The most common site of occurrence is oral cavity involving buccal mucosa, mandibular alveolar crest, gingiva, and tongue with glottic larynx being the most frequent non-oral site. It develops at sites of chronic irritation and inflammation. It enlarges slowly but penetrates deeply into the skin, facia and even bone. Various treatment modalities include surgery, chemotherapy, radiation or combination of these, and photodynamic therapy have been recently reported. [6]

Case report:

A 59-year-old male patient reported to dental out patient department of our college with a chief complaint of ulcer in the right cheek region for past 2 years. Patient was apparently normal before 2 years then he developed a painful ulcer which was slowly growing to attain present size. Patient medical history revealed that the patient was known diabetic for the past 15 years and under medication for the same. Patient had a history of pan chewing for a past 25 years and withdraw the habit before 15 years. On past dental history, patient underwent prosthesis placement before 2 years and patient was already diagnosed with same condition in same region and underwent surgery for the same twice before 10 years. On general examination, he had normal gait and posture and was well oriented, conscious and moderately built. Restricted mouth opening (14 mm) was seen. On hard tissue examination the patient's both upper and lower jaw was edentulous. On intraoral soft tissue examination, on inspection, there was presence of an ulceroproliferative lesion of size approximately

4x3cm evident on right buccal mucosa extending from right maxillary tuberosity superiorly, laterally involving retromolar trigone from commissure of lip medially.

On palpation, all inspectory findings were confirmed with respect to number, site, size, shape and extent. The ulcer was tender on palpation, single in number with everted edges and irregular margin with erythematous floor and indurated base. There was no pus discharge evident on palpation. It also revealed that the patient had palpable fibrotic band on right buccal mucosa. Tongue movement was normal and able to perform all movements. With these clinical findings the provisional diagnosis was attained to be verrucous carcinoma of right buccal mucosa and the patient was sent to the surgery department for Incisional Biopsy of the lesion.

Figure 1: Intra oral lesion

For investigatory purposes, under local anesthesia, an incisional biopsy was performed, and histopathological evaluation was conducted. With these clinical findings and on histopathology report, the provisional diagnosis was attained to be verrucous carcinoma of right buccal mucosa. buccal mucosa.

The patient was advised for blood investigations. On biochemical investigations, complete hemogram, blood glucose, liver and kidney function tests were performed, of which his complete blood count (CBC), hepatitis B surface antigen (HBsAg) and hemoglobin A1c(HbA1c) levels were within normal limits, except that of glucose-156 mg/dl (fasting) and the HIV test was nonreactive.

The patient was advised for surgical management. Wide local excision with selective neck dissection was done and the tumor was excised. The excised tumor was sent for a histopathological examination.

In histopathological findings, the macroscopic features showed mucosal surface showing a proliferative grey, white lesion measuring 2.8x2x0.8 cm and the anterior and posterior margins are 0.1 cm from the growth. Cut surface of the growth appeared yellow to grey in color with no infiltration. The lateral surface was 0.2 cm from the growth. On Microscopic examination, stratified squamous epithelium exhibiting hyperkeratosis, parakeratosis and irregular acanthosis with broad bulbous downward protrusions into the underlying stroma exhibiting dense band like lymphoplasmacytic infiltrate at the epithelial-stromal interface. The individual tumor cells are polygonal in shape with abundant eosinophilic keratinized cytoplasm and fairly uniform nuclei along with intraepithelial keratin pearls. There was no evidence of stromal invasion. Lymphovascular and perineural invasion not made out. The deep margins were free of tumor. With the pathological stage classification (ptnm, ajcc 8th edition) of pT2NxMx (GRADE 1) Well differentiated grade. With these clinicopathological findings a final diagnosis of verrucous carcinoma of the right buccal mucosa was given.

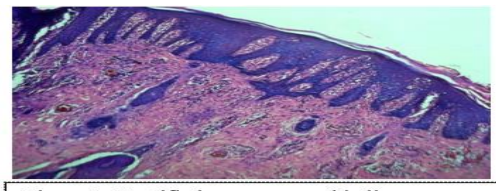

Figure 2: Stratified squamous epithelium exhibiting hyper and parakeratosis with broad bulbous retepegs

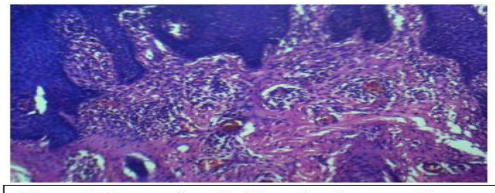

Figure 3: Dense band of lymphoplasmacytic infiltration at epithelial stromal interface

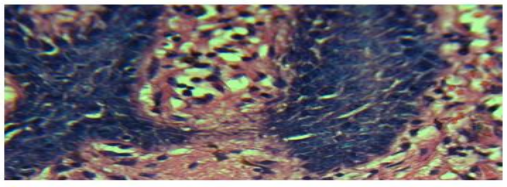

Figure 4: polygonal cells with eosinophilic keratinized cytoplasm with uniform nuclei

Discussion:

Oral verrucous carcinoma most commonly affects elderly males with adverse habits of tobacco and alcohol. [7] Chemical carcinogens have long been implicated in the etiology of this lesion but identification of a specific etiological factor is often difficult because of incidence of multiple habits. The habitual chewing of “paan” a mixture of betel leaf,lime, betel nuts and tobacco ,have been extensively implicated for the high incidence of verrucous type of oral cancers in India.[8]. The most common oral sites of occurrence for verrucous carcinoma are buccal mucosa, vestibular mucosa, retrocommissural area, gingiva, alveolar mucosa and lower lip. The sites are attributed to the site of quid placement [9,10] Histopathological features of verrucous carcinoma show tissue lined by stratified squamous epithelium showing hyperkeratosis and parakeratosis. Tumor arises from overlying epithelium and goes downwards into dermis with bullous margins. Individual tumor cells are round to polygonal having mild hyperchromatic nuclei with prominent nucleoli.[11] More recently studies have confirmed the association between Human papilloma virus(HPV) and verrucous carcinoma by detecting HPV-DNA types 6,11,16 and 18 by polymerase chain reaction, restriction fragment analysis and DNA slot-blot Hybridization.[12] Verrucous carcinoma presents predominantly as an exophytic growth with a pebbly, micronodular surface ,a slow growing rate, and becomes locally invasive if not treated properly.[13] Histopathological diagnosis sometimes may be tricky, hence it is very important to rule out other exophytic lesions. Classically it presents as hyperplastic parakeratinized stratified squamous epithelium oraganised into bulbous "elephant foot shaped" rete pegs and minimal cellular atypia. Deep surface invaginations are present which are filled with keratin. The underlying stroma demonstrates chronic inflammatory cell infiltrate consisting chiefly of lymphocytes and plasma cells. Verrucous carcinomas have a high recurrence rate upto 40% have been reported. Surgery is usually considered as the chief mode of treatment and the prognosis is much better as compared to conventional carcinomas. [14].In this case as mentioned earlier the development of the lesion was mainly due to pan chewing which led to the exophytic growth clinically and with the characteristic histopathological features of verrucous carcinoma was seen in the histological findings of this case which came to the confirmatory diagnosis of verrucous carcinoma in the right buccal mucosa.

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Conclusion:

The presence of malignant foci has been reported in oral verrucous carcinoma cases. Many times it is difficult to the dentist to differentiate clinically.Verrucous carcinoma,Verrucous keratosis and Verrucous hyperplasia,hence exophytic lesions should always be diagnosed and biopsy performed as soon as possible for the sake of early and prompt treatment.

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