Verrucous carcinoma: “The deadly projections” - A series of three cases

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Abstract

Among the numerous variants of squamous cell carcinoma (SCC) are the one which is called as verrucous carcinoma (VC). It is also called as Snuff dipper’s cancer, the name derived from this cancer occurring in patients who chew tobacco or snuff orally. VC is a malignant, highly differentiated, papillary growth which is diffused appearance and non-metastasizing in nature. Various subtypes of VC have been described in literature. Although surgery is considered the main treatment modality, the extent of margins and adjuvant radiotherapy are still controversial. Prognosis is mostly good, however, local recurrence is common. Prognosis is usually worse in cases of second oral SCCs which is always a risk in patients with VC.

Keywords: Exophytic, papillary, prognosis, snuff dipper, verrucous

Introduction

Lauren V. Ackerman was the first in 1988 to describe a rare variant of oral squamous cell carcinoma (SCC) called verrucous carcinoma (VC). It is also called Ackerman’s tumor. Buschke–Loewenstein description of a penile lesion which although appeared benign cytologically behaved like a malignancy was the highlight of literature in 1925, thus also known as Buschke–Loewenstein tumor. Among the etiological agents, tobacco chewing forms the first line with lesions developing at the site of placement. This case series of ours highlights few classic presentations of VC with exophytic cauliflower like growth and pedunculated finger-shaped projections which are considered the hallmarks of this type of carcinoma.

Case Reports

Case 1

A 71-year-old female patient [Figure 1] reported to the Department of Oral Medicine and Radiology complaining of severe pain, burning sensation and difficulty in eating for the past 2-3 months. She also complained of a painful growth in her left cheek since 2 months. History of presenting illness revealed severe pain in her left buccal mucosa which was sudden in onset, gradual in progression, continuous in nature, aggravated on eating, and on opening the mouth. Although it initiated about 2-3 years back, it had reached the present state for the past 2-3 months. It was also accompanied by a painful growth in the left buccal mucosa. The patient was a chronic paan chewer (added with supari about 5-6 times/day) for the past 30-35 years placing the quid in her left buccal mucosa. She had, however, quit the habit for the past 6-7 months.

On general physical examination, she was found to be moderately built with normal gait and posture and was well oriented to time, person and place. All her vital signs and...
parameters were within the normal limits. On extra oral examination, no gross facial asymmetry was detected. The mouth opening was reduced to 32 mm. The regional lymph nodes were non-tender and non-palpable, and the salivary flow was adequate.

On intraoral examination, the soft tissues such as lips, labial mucosa, palate, tonsils, oropharynx, and the floor of the mouth were apparently normal. The tongue was found to be thickly coated, dry and fissured. On examining the buccal mucosa, an exophytic plaque like growth with finger-like projections was seen on the left buccal mucosa, irregular in shape and measuring approximately 5 cm × 6 cm extending anteroposteriorly from the retrocomissures involving the lower labial mucosa to the retromolar pad area and superioinferiorly from the upper gingivobuccal sulcus (GBS) to the lower GBS. The exophytic growth was more pronounced in the anterior region from the retrocomissures to the canine region, however, the latter part of the lesion manifested as white plaque. The surface appeared wrinkled with no signs of sloughing, bleeding or discharge of any kind. Margins of the lesion appeared raised and everted with irregular borders. The laterotrusive tongue movement was restricted toward the left side, but the protrusive movement was normal. On palpation, the lesion was tender and soft to firm in consistency. Surface over the lesion appeared rough, granular, wrinkled and indurated with no signs of bleeding or discharge of any kind [Figure 2].

On hard tissue examination, all complements of teeth were present in all the four quadrants with generalized attrition and a thick band of local deposits of plaque and calculus. Mobility was present with respect to few teeth viz., 15, 16, 24 (Grade I); 31, 41 (Grade II); 25, 36, 37 (Grade III).

Based on the patient’s history and clinical findings, the lesion was provisionally diagnosed as VC on the left buccal mucosa.

Differential diagnosis for this lesion: Verrucous hyperplasia and squamous papilloma are few of the malignant conditions mimicking this lesion clinically. Following investigations were carried out:
1. Panoramic radiograph [Figure 3]
2. Incisional biopsy [Figure 4].

The panoramic radiograph showed no intraosseous involvement.

The histopathological examination [Figure 4] showed the presence of various characteristic dysplastic features revealed these cases to be VCs based on examination of the biopsied tissues. Eosin and hematoxylin stained sections showed connective tissue and epithelium which was parakeratinized and hyperplastic stratified squamous type in nature. The section also showed broad rete ridges with blunt margins and intact basement membrane. A dense inflammatory infiltrate consisting of lymphocytes and plasma cells were also seen.

On analyzing the investigation results, final diagnosis of VC of the left buccal mucosa (Stage IV [T4N0Mx]) was given.

**Case 2**

A case of 56-year-old female patient [Figure 5] reported to the department with a complaint of painful extraoral swelling associated with a growth intraorally. The patient was a known diabetic, hypertensive for the past 20 years and had undergone cardiac bypass surgery 2 years back. Local examination of the patient’s chief complaint revealed a diffuse extraoral swelling [Figure 6] measuring approximately 1.5 cm × 2 cm on left lower third of the face extending anteroposteriorly from 1 cm behind the corner of the mouth to 2 cm in front of the angle of the mandible and superioinferiorly from 1.5 cm below the ala tragal line to 0.5 cm above the inferior border of the mandible. Surface over the swelling appears smooth with no signs of any discharge and color resembling that of adjacent normal structures. On palpation, there was no local rise in temperature and was tender. It was firm in consistency. Skin
over the swelling was pinchable and there was no alteration in sensory findings like paresthesia or numbness. On palpation, the inspectory findings were confirmed. The intraoral lesion [Figure 7] presented as an exophytic growth with finger-like projections on the left buccal mucosa, irregular in shape and measuring approximately 4 cm × 3 cm with a wrinkled surface and a characteristic “cauliflower” appearance. After the histopathological investigations were carried out, it was diagnosed as VC of the left buccal mucosa (Stage IV \([T_4N_0M_0]\)). No evidence of intraosseous involvement was elicited from the panoramic radiograph [Figure 8].

**Case 3**

A 75-year-old male patient [Figure 9] presented with an extensive intraoral growth on his left buccal mucosa associated with an extraoral swelling with a sinus opening and lymph node involvement which is unique for a VC. The extraoral swelling (measuring approximately 1.2 cm × 2.5 cm) with the sinus opening [Figure 10] was seen in the middle third of the face measuring approximately 1.5 cm × 2.5 cm. There were signs of pus discharge. The extensive intraoral growth [Figure 11] measured 4 cm × 5 cm and extended anteroposteriorly from the retrocommissures to the retromolar pad region on the left buccal mucosa and superioinferiorly from the upper to the lower GBS on the left side. Left submandibular lymph nodes (Level IA) and the upper jugular lymph nodes (Level II) were tender and palpable (solitary, soft to firm in consistency, measuring <2 cm, mobile and superficial). After investigations (panoramic radiograph [Figure 12], chest X-ray and incisional biopsy) were carried out, final diagnosis of VC of the left buccal mucosa (Stage IV \([T_4N_2M_0]\)) was given. This case, however, was quite unique in its presentation with lymph node involvement which was highly unlikely for a VC where normally the regional lymph nodes are not involved. Chest X-rays were also taken to rule out metastasis which showed no such signs of metastasis.

Thus, this series of three cases of VC projects three varying presentations of the same lesion.

**Discussion and Review of Literature**

Is believed to have the same biological potential. About 4:1 female/male ratio has been shown in Hansen et al.’s study and an approximately equal sex distribution in other studies.
with respect to this carcinoma. VC refers to the group of exophytic lesions or tumors (mucosal/cutaneous) that appear pedunculated or above the epithelial surface with micronodular surface and blunt margins of pushing kind. Synonyms for oral VC (OVC) include epithelioma cuniculatum, carcinoma cuniculatum, and florid oral papillomatosis. Various factors determining its macroscopic appearance include degree of keratinization, changes in surrounding mucosa and duration of the lesion. White, warty appearance clinically is the presence of keratin or irregular moist mucosal surfaces. Lesions show well defined lower border and blunt rete ridges. A variant named “verrucous hyperplasia” was coined by Shear and Pindborg, in 1980, which is now considered as an early or antecedent stage of VC. 10 histological stages of VC have been described by Walvekar et al.[6] starting from slow growing persistent benign unifocal lesion to poorly or less differentiated SCCs. These stages were later modified and reduced to four by Batsakis et al. which included:

- Clinically flat leukoplakia without dysplasia
- Verrucous hyperplasia
- VC
- Conventional SCC.[7,8]

Inflammatory infiltrates in histopathological sections from the biopsied tissues consist of histiocytes, lymphocytes, and plasma cells.[5] Batsakis et al.[6] proposed another terminology called “hybrid VC” which is a non-verrucous SCC arising synchronously with VC in the same macroscopic field. Various treatment modalities have been tried, but surgical management is the treatment of choice until date.[9,11] When the tumor extends to the retromolar area, combined therapy is useful. Cytostatic drugs such as 5-Fu and colchicine form the main line of treatment in medical management where surgery is not indicated.[1,12]

**Conclusion**

Surgical management has brought about excellent prognosis in various cases of OVC. Positive margins require surgical resection. Following up of the patients becomes mandatory owing to enhanced incidence of local recurrences reported in literature.
associated with propensity to developing second primary cancers. Most common sites include the GBS followed by hard palate and maxillary alveolus. The presence of other potentially malignant disorders in association with OVC predisposes it for multicentricity and strengthens the argument for a close follow-up.

References