Verrucous Carcinoma in the Oral Cavity - Report of two cases

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ABSTRACT:
Verrucous carcinoma is an uncommon but distinct variety of well differentiated squamous cell carcinoma. Verrucous carcinoma also called as Ackerman's tumor is a subtype of low grade squamous cell carcinoma that can affect cutaneous and mucous surfaces. Two cases of Verrucous carcinoma affecting the labial and buccal mucous membrane are being reported. The tumor is chiefly exophytic and does not metastasize, but it can invade and destroy oral tissues. It occurs in other anatomic sites; most intraoral cases involve buccal mucosa, labial mucosa, alveolar mucosa and gingiva. The recurrence rate after treatment of Verrucous carcinoma is high due to the dysplasia left close to Verrucous carcinoma.

Key words: Verrucous carcinoma (VC), Tumor, Buccal mucosa.

INTRODUCTION
Verrucous carcinoma (VC) is a rare slow-growing oral tumor comprising approximately 3% of all primary invasive carcinomas of the oral mucosa. In 1941 Fridell and Rosenthal1 reported 8 cases of squamous cell carcinoma presenting as a papillary lesion of the buccal mucosa and alveolar ridge. Later in 1948 Ackerman coined the term Verrucous carcinoma to such lesions. Among the features associated with oral Verrucous carcinoma is its predominant occurrence in patients with a positive tobacco history. However, Verrucous carcinoma in patients without tobacco use were reported by McCoy and Waldron. The other etiological agents include HPV-6 and HPV-16 viruses, alteration of P53 tumor suppression gene expression and alteration of the keratinocyte cell cycle. VC is often associated with chronic exposure to Ultra Violet radiation; prolonged use of tobacco, its products and betel nut. The oncogenic viruses HPV16 and 18 are also implicated in the etiology of this condition. VC may occur in several locations in the head and neck, cutaneous surfaces and in the genitals, oral cavity is noted as the most common site of this tumor. This tumor is predominantly seen...
in older individuals, the age range reported in literature is from 50 to 80 years and the median age being 67 years. Because of the finger like structures projecting from the surface of the lesion, the term Verrucous has been used. Mucosal lesions involving the oral cavity present as white fungating plaques and are termed oral florid papillomatosis. This tumor is endowed with enough clinical, pathologic and behavioral peculiarities to justify its being regarded as a specific tumor entity. This tumor may grow through soft tissue, penetrate into mandible or maxilla causing extensive local destruction and invade perineural space if left untreated. Regional lymph node metastasis is seen in rare cases and distant metastasis has not been reported.

**Case Report-1**

A 65 year old female patient presented with an exophytic growth on left buccal mucosa with a rough, and papillomatous surfaces, for a period of 2 years (fig 1&2). Patient revealed history of habits of pawn chewing for 10 years. On inspection well defined cauliflower like growth seen on left buccal mucosa extending from corner of the mouth to retromolar pad. On palpation, the growth was, non-friable, non-tender, with well defined raised margins and with slight induration on superior and posterior aspect, left submandibular lymph nodes were palpable. Surgical excision using laser, under general anaesthesia was done and the defect was measured using impression compound and was closed with full thickness graft harvested from thigh (fig 3,5,6,7,8). Post-operative histopathological examination revealed features of Verrucous carcinoma depicting broad bulbous retepegs extending into deeper tissues with basal cell hyperplasia and mild dysplasia(fig 9).

**Case Report-2**

A 70 year old female patient presented with an exophytic growth on left side of lower labial mucosa with a rough, shaggy and multiple finger like papillary projection, for a period of one year (fig 11). Patient revealed history of habits of pawn chewing with tobacco and slaked lime for 40 years. On inspection well defined cauliflower like growth seen on left labial mucosa of size 1cm X 3cm extending from vermilion border of lip to left lower vestibule (fig 12&13). On palpation, the growth was, non-friable, non-tender, with well defined raised margins and with slight induration on superior and posterior aspect. No lymph nodes were palpable. The patient underwent wide-excision taking safe oncological margin, under local anaesthesia and it was closed primarily using two layers of 2.0 vicryl sutures. The post-operative histopathological examination revealed features of Verrucous carcinoma depicting hyperplastic epithelium associated with inflammed connective tissue. Epithelium is hyperkeratotic showing parakeratin plugging, also exhibiting broad bulbous retepegs and mild dysplasia (fig 14).

**DISCUSSION**

VC of the oral cavity is a different clinicopathological tumor distinguished from the usual squamous cell carcinoma because of its local invasiveness, non metastasizing behavior and special clinical appearance.

VC is a rare tumor, representing only 3-4% of all oral carcinomas which is most common in 6th decade or older with a male predominance. Two of our patients were females they were above 60 years of age.

The etiology and pathogenesis of VC is not well established. Human papilloma virus (HPV) has been considered one of the possible etiologic factors. Long term tobacco usage seems to be highly associated with the development of oral VC of the neck and head, lesions often develop at the site where the tobacco is placed habitually. But cases have also been reported in non-tobacco users. Poor dental hygiene, oral leukoplakic lesions are considered as predisposing factors in the development of oral VC. VC accounts for 5% of all intraoral squamous cell carcinomas. VC most commonly occurs on the buccal mucosa, labial mucosa, the mandibular or maxillary vestibule and the mandibular or maxillary alveolar ridge, retromolar area, gingiva, rare cases involving the tongue have reported in literature. The tumor clinically presents as a thickened plaque or a bulky mass with a rough shaggy warty or papillary surface. These features depend on various factors like duration, degree of keratinization, host inflammatory response and the changes in adjacent mucosa. VC needs to be differentiated from verrucous hyperplasia, well-differentiated squamous cell carcinoma, papillary squamous cell carcinoma and squamous papilloma. Verrucous hyperplasia and VC are indistinguishable clinically. Histopat ns. Controversies exist in literature in regards to considering VC as a distinct clinico-
Verrucous Carcinoma in the Oral Cavity

Venkateswarlu, et al.

pathological entity or as a part of histologic continuum of leukoplakia. Verrucous Carcinoma (VC) presents with characteristic histopathological features. It comprises a heavily keratinized, or parakeratinized, irregular deformed surface with parakeratin typically filling the numerous clefts. Reridges are wide and elongated. No significant cellular atypia is seen routinely and usually a chronic sub epithelial inflammatory infiltrate is noted. Verrucous Carcinoma has excellent metastasizing behavior, and gravity in which it metastasize to regional lymph nodes. Prognosis because of its slow growth and gravity tumor. Chemotherapy with the usage of cytostatic drugs is also preferred in cases where surgery is not indicated, this may only help in reducing in the size of the lesion temporarily.

CONCLUSION

Since VC was first identified as a distinct clinicopathological entity, confusion exists in establishing the proper criteria for diagnosis. It should be distinguished from the usual squamous cell carcinoma because of its local invasiveness, non-metastasizing behavior, and special clinical appearance. Histopathologists and the practitioners together can efficiently achieve the task of prompt diagnosis and timely management of Verrucous carcinoma

References

Verrucous Carcinoma in the Oral Cavity

Fig 1: Pt. profile

Fig 2: Cauliflower like growth

Fig 3: Surgical excision of lesion using Laser

Fig 4: Excised lesion

Fig 5: Defect measuring with impression compound

Fig 6: Measured impression at the graft site

Fig 7: Full thickness graft taken from patient's thigh

Fig 8: Graft placed at defect site

Fig 9: Histopathological picture

Fig 10: Post operative

Fig 11: Pt. profile

Fig 12: Cauliflower like growth

Fig 13: Cauliflower like growth

Fig 14: Histopathological picture