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Verrucous Carcinoma Oral Cavity: A Case Report.

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Case Report

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ABSTRACT

Verrucous carcinoma (VC) is a variant of well differentiated squamous cell carcinoma with low malignant potential. Verrucous carcinoma comprises 2-12% of all oral carcinomas. Here we report a case of verrucous carcinoma (VC) arising from the floor of the mouth. A 50 year-old man was presented with complaining of oral discomfort. Oral examination revealed a verrucous tumor measuring 5 x 5 cm in the floor of the mouth. A biopsy revealed verrucous carcinoma. Resection of the lesion with wide margins was performed.

INTRODUCTION

Verrucous carcinoma (VC) (Ackermann's tumor) is a rare variant of low-grade, well differentiated squamous cell carcinoma. In 1948, Lauren V. Ackermann first described this neoplasm of the oral mucous membrane, which is now also known as "Verrucous carcinoma of Ackermann" or "Ackermann's tumor" [1]. The oral cavity is the most common site of occurrence. In addition, it is known to occur in the larynx, pyriform sinus, esophagus, nasal cavity and paranasal sinuses, external auditory meatus, lacrimal duct, skin, scrotum, penis, vulva, vagina, uterine cervix, perineum, and the leg [2]. This tumor is predominantly seen in males over the sixth decade. The pathogenesis of VC of the oral cavity is still obscure, but is thought to be associated with human papilloma virus (HPV), poor oral hygiene, chewing of tobacco, and use of snuff. The tumor grows slowly and locally invasive in nature and unlikely to metastasize. If the tumour is completely excised, prognosis is excellent. Here we report a case of verrucous carcinoma of oral cavity due to the large size of the lesion and its clinical diagnostic difficulty in excluding other verrucous lesions of oral cavity.

Case Report

A 50 year-old man complained of swelling and discomfort in the oral cavity for about three years. He was a smoker and had history of chewing tobacco and betel nuts. On oral examination there was a warty exophytic growth on the left side below the tongue arising from the floor of the mouth (Fig.1). There was no cervical lymphadenopathy. A punch biopsy was performed and the biopsy specimen was reported as Verrucous Carcinoma. Histopathological examination with hematoxylin and eosin stain (H & E) (Fig.2& 3) revealed thickened club-shaped papillae and blunt stromal invagination of well-differentiated squamous epithelium with marked keratinization. Tumour cells exhibit only minimal atypia and very low mitotic activity. The basement membrane is intact and the dermis shows diffuse inflammatory infiltrates with predominant lymphocytes. Preoperative TNM classification was T3N0M0. The patient underwent wide local excision of the growth. He made a satisfactory recovery. The patient was followed up for 6 months which was uneventful and we subsequently lost the patient to follow up.



Figure 1: Clinical photograph showing warty exophytic growth on the left side below the tongue arising from the floor of the mouth

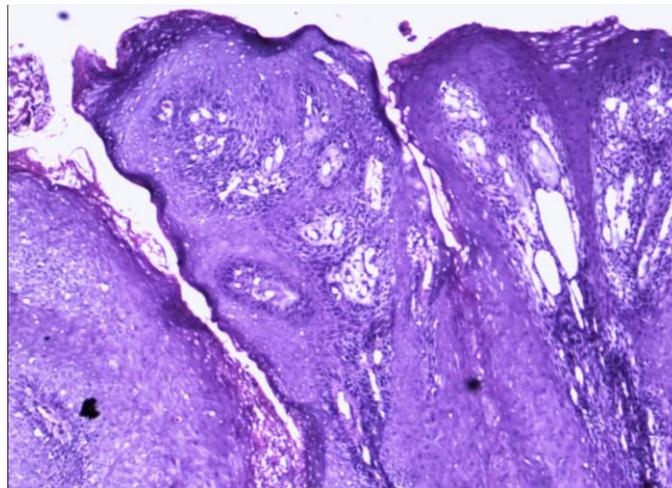


Figure 2: Photomicrograph showing thickened club-shaped papillae of well-differentiated squamous epithelium with marked keratinization. (H&E; 40X)

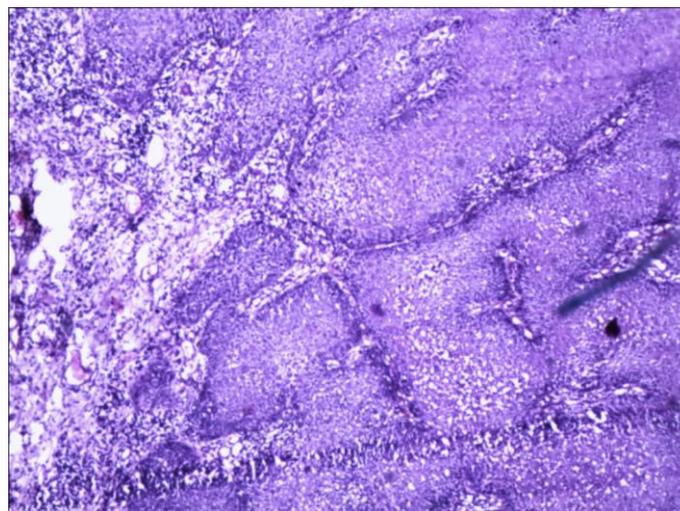


Figure 3: Photomicrograph showing blunt stromal invaginations of well-differentiated squamous epithelium and subepithelial inflammatory infiltrates with predominant lymphocytes. (H&E; 40X)

DISCUSSION

Verrucous carcinoma (VC) is a variant of well differentiated squamous cell carcinoma [1]. Schrader et al and Jordan have reported that verrucous carcinomas were slow-growing, exophytic, well-demarcated hyperkeratotic lesions [3,4]. The oral cavity is one of the predilection sites for VC. This carcinoma has also been reported in the nasal cavity, larynx and esophagus. Mandibular, posterior alveolar crest, and retromolar trigone were the most affected sites (41.6%), followed by the buccal mucosa (16.6%), the palate (16.6%), the floor of the mouth (16.6%), and the lip (8.3%).

Oral verrucous carcinoma (OVC) traditionally occurs more commonly in older males, above the sixth decade [5]. Most patients have smoking history [1]. Tobacco chewing is a significant etiologic factor for the development of OVC [2]. Lesions often develop at the site where the tobacco was placed habitually [7]. In Ackerman's study, 11 out of 18 patients (61%) with buccal cancers were tobacco chewers. OVC are known to be associated with poor dental hygiene, ill-fitting dentures, low socioeconomic status, tobacco chewing, snuff and alcohol use, and smoking [5]. Our case also had history of smoking. The etiology of verrucous carcinoma is not well defined. Human papillomavirus (HPV) has been considered one of the causative factors. In the oral cavity, several HPV subtypes were detected [4,8]. However HPV's role in the etiology of VC has not been confirmed. Further studies must be needed to explicate the etiology of VC.

OVC has a characteristic gross appearance. These typically present as extensive, white, wart lesions [4]. In general, OVC are locally aggressive, but have a low propensity for regional as well as distant metastasis [5]. Regional lymph node metastases are exceedingly rare, and distant metastases have not been reported. The pathological diagnosis of typical VC is not so difficult. But in some cases, superficial biopsies will show only hyperkeratosis, acanthosis and benign papillomatosis. Deeper adequate biopsies must be needed. The most important pathological difference with squamous cell carcinoma is the good cytological differentiation throughout the tumor. VC can also be mistaken as a benign lesion histologically. The close discussion between the clinicians and pathologists is necessary.

Verrucous carcinoma typically has a heavily keratinized, or parakeratinized, irregular clefted surface with parakeratin extending deeply into the clefts. The prickle cell layers show bulbous hyperplasia, but, for a considerable time at least, the tumor has a well-defined lower border and basal lamina. Atypia is minimal, and there is usually a subepithelial inflammatory infiltrate [9,10]. Our case presented histopathological findings are typical of Verrucous Carcinoma.

Generally, ultrasonography is very effective to detect lymph node metastases. But, especially in submandibular region; inflammatory lymph node swellings are fluent, so, it is difficult to distinguish lymph node metastases from inflammatory lymph node swellings. In case of cervical lymph node swellings detected, an ultrasound-guided fine needle aspiration biopsy is absolutely recommended to avoid redundant neck dissection of the VC patient. In our case, there was no regional lymph node enlargement and fortunately the tumor was not so invasive and curable resection with sufficient safety margin could be performed. Complete resection of the tumor is the best treatment for VC. In almost all cases of VC, neck dissection is not necessary because lymph node metastases are extremely rare [11]. The prognosis of verrucous carcinoma is better than that of other kinds of life-threatening malignant tumors. Surgery is considered the primary mode of treatment for verrucous carcinoma. In all cases of VC, surgery should be used if the procedure has acceptable morbidity.

CONCLUSION

Both clinicians and pathologists must be careful about warty and exophytic lesions in the oral cavity. An accurate pathological diagnosis is challenging and is facilitated by an adequate tumor sample for study and more importantly, a close collaboration between the clinician and the pathologist. OVC have an excellent prognosis with surgical management.

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