

Case Report

Clinical Insight into Verrucous Carcinoma: A Case Report

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Abstract

Oral Verrucous Carcinoma (OVC) is a distinct, well-differentiated, milder form of oral squamous cell carcinoma (OSCC) that grows outwards. It's often linked to long-term tobacco use, areca nut chewing, human papillomavirus, and alcohol consumption. OVC is characterized by its slow growth and local invasiveness, though it rarely metastasizes. Clinicians should maintain a high index of suspicion for oral lesions, regardless of age or apparent risk factors. This case report highlights a rare presentation of verrucous carcinoma (VC) of the left buccal mucosa in a relatively young 48-year-old male, emphasizing the importance of early diagnosis and appropriate management.

Keywords: Verrucous; Tobacco; Carcinoma; Case report

Introduction

First characterized by Ackerman in 1948 [1] as a distinct variant of oral carcinoma, verrucous carcinoma (VC) has subsequently been identified in diverse anatomical locations, including the genitalia, respiratory mucosa, and other cutaneous sites. Oral Verrucous Carcinoma (OVC) was historically documented under a plethora of names in the medical literature. These included florid papillomatosis, oral florid verrucosis, verruca acuminata, verrucous squamous cell carcinoma, papillomatosis mucosae carcinoides, Buschke-Loewenstein tumor, epithelioma cuniculatum, carcinoma cuniculatum, and even "snuff dipper's cancer." However, by the 1970s, the terms "verrucous carcinoma" or "Ackerman's tumor" gained widespread acceptance and became the standard nomenclature [2,3].

Case Presentation

A 48-year-old male patient reported to our department with a chief complaint of abnormal growth in the left cheek area since 3 years. The patient had also noticed a burning sensation in the left cheek, which had progressively worsened over the past year, particularly when consuming spicy foods.

The patient had a habit of chewing tobacco(gutka) for the past five years, 4-5 packets/day. His medical, dental, and drug history was non-contributory.

Intraorally, a well-defined exophytic warty proliferative growth was present, measuring approximately 4 cm × 6 cm in diameter, extending from the left buccal commissure to the retromolar area anteroposteriorly. The surface appeared irregular and corrugated with

warty projections and folds (Figure 1). On palpation, all inspectory findings were confirmed, the growth was non-scrapable, non-tender, no bleeding on touch, and firm in consistency. Based on the clinical findings, a provisional diagnosis of Verrucous carcinoma was given.

Incisional biopsy was advised. Histopathological examination revealed a characteristic exophytic and endophytic growth with broad pushing rete ridges and marked hyperkeratosis, without overt cellular atypia or invasion (Figure 2). These features are highly consistent with verrucous carcinoma, a well-differentiated squamous cell carcinoma with low metastatic potential.



Figure 1: Well-defined exophytic warty proliferative growth on the left buccal mucosa.

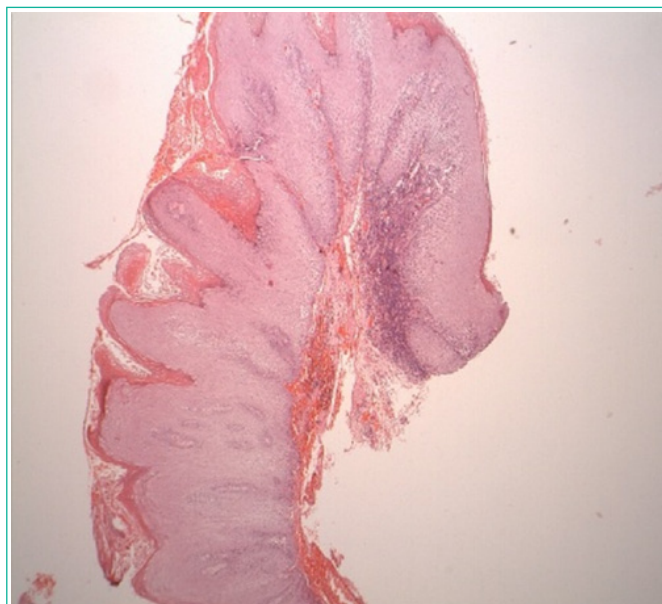


Figure 2: Exophytic and endophytic growth with broad pushing rete ridges and marked hyperkeratosis, without overt cellular atypia or invasion.

Discussion

Verrucous carcinoma (VC) represents a distinctive, non-metastatic variant of well-differentiated squamous cell carcinoma (SCC). Clinically, it typically manifests as an exophytic, warty lesion. The oral cavity is the most frequently affected site, with common involvement of the buccal mucosa, tongue, alveolar ridge, and lips. This neoplasm predominantly affects elderly male patients, particularly those in their fourth to sixth decades of life, which holds good in our case. While generally non-metastatic, VC can exhibit local invasiveness if not adequately treated [4].

The etiology of verrucous carcinoma (VC) is considered multifactorial, with implicated factors including human papillomavirus (HPV), smoking, and various forms of smokeless tobacco, particularly chewable preparations. Early observations by Shear and Pindborg [5] highlighted a strong association with tobacco use, reporting that 24 of 28 (86%) patients with verrucous lesions had a history of tobacco consumption, with one also being an arecanut quid user. This underscores tobacco as a significant causative factor in verrucous lesion development. Our present case also aligns with this, involving a chronic tobacco user.

Current data indicate that the prevalence of VC affecting the oral cavity and oropharynx ranges from 2% to 12% of all oral carcinomas [6]. While some studies suggest a male predilection, the male-to-female incidence ratio of VC is generally reported as approximately similar across populations.

Common intraoral sites for VC include the mandibular retromolar and molar areas (41.6%), followed by the buccal mucosa (16.6%), the hard palate (16.6%), the floor of the mouth (16.6%), and the lip mucosa (8.3%) [7]. Although regional lymph nodes in VC cases may be enlarged and tender due to inflammatory involvement, often mimicking metastatic disease, true metastatic involvement is rare [7]. Notably, in the present case, no lymph node involvement was observed.

Diagnostically, Oral Verrucous Carcinoma (OVC) displays a unique set of microscopic features. Its surface is characteristically irregular and heavily keratinized or para-keratinized, marked by deep invaginations or clefts. These clefts are notable for containing para-keratin that extends profoundly, creating a distinctive "elephant foot" pattern of down growth that seemingly compresses the underlying connective tissue. The epithelial prickle cell layers exhibit bulbous hyperplasia with minimal atypia. Furthermore, the tumor maintains a sharp, well-defined lower border with an intact basal lamina, typically accompanied by a subepithelial inflammatory infiltrate, reinforcing its non-invasive growth pattern [7,8].

The efficacy of surgical resection as the optimal treatment for Oral Verrucous Carcinoma (OVC) is well-documented in the literature. Consequently, our patient was advised to undergo a surgical removal of the lesion and follow the prescribed regimen of regular observations. While OVC generally carries an excellent prognosis with minimal risk of distant metastasis and commonly results in only reactive lymphadenopathy, supraomohyoid neck dissection is a surgical consideration in select cases. This approach allows for accurate assessment of the regional lymph nodes, particularly when initial clinical findings suggest a need for further investigation [9].

The application of radiotherapy in the management of Oral Verrucous Carcinoma (OVC) is generally contraindicated, primarily due to the established risk of radiation-induced anaplastic transformation. While the existing literature on this topic can be conflicting, it is broadly understood that radiotherapy's role is restricted to highly select clinical situations where surgical intervention is not a viable option [7,10].

Conclusion

Oral Verrucous Carcinoma (OVC) demands thorough clinical examination for early detection and a precise diagnostic approach. While surgical resection is the primary treatment, achieving clear margins is crucial for preventing local recurrence. Hence, Histopathology remains the golden standard for delineating these lesions. Due to the risk of local recurrence and the susceptibility to developing second primary oral cancers, rigorous and sustained clinical follow-up is an absolute imperative, allowing for timely intervention and ensuring optimal patient outcomes.

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