

VERRUCOUS CARCINOMA: A CASE REPORT

Dr. Madhurima Manna*	Post Graduate Trainee. Oral Medicine & Radiology. Haldia Institute Of Dental Sciences And Research. Haldia, West Bengal *Corresponding Author
Dr. Medha Mukherjee	Post Graduate Trainee. Oral Medicine & Radiology. Haldia Institute Of Dental Sciences And Research. Haldia, West Bengal
Dr. Soumyabrata Sarkar	Professor & Hod. Oral Medicine & Radiology. Haldia Institute Of Dental Sciences And Research. Haldia, West Bengal
Dr. Subhadeep Maity	Associate Professor.oral Medicine & Radiology. Haldia Institute Of Dental Sciences And Research, Haldia, West Bengal
Dr. Satarupa Debnath	Assistant Professor.oral Medicine & Radiology. Haldia Institute Of Dental Sciences And Research, Haldia, West Bengal
Dr. Sayantani Maji	Assistant Professor. Oral Medicine & Radiology. Haldia Institute Of Dental Sciences And Research, Haldia, West Bengal

ABSTRACT

Verrucous Carcinoma (VC) is a low-grade form of squamous cell carcinoma, caused mainly by chewing tobacco and Human Papilloma Virus strain 16 and 18. In clinical terms, VC appears as a proliferative or cauliflower like-lesion on the buccal mucosa, followed by other sites like the gingiva, tongue etc. Here we present a classic case of VC along with histopathology supported by immunohistochemistry considered valuable for the diagnosis of VC followed by surgical excision.

KEYWORDS : Human Papilloma Virus, Proliferative, Verrucous

INTRODUCTION

Verrucous carcinoma (VC) presents predominantly as an exophytic, pebbly, micronodular surface, slow growing and locally invasive growth. In 1941, Fridell and Rosenthal reported a case of well-differentiated squamous cell carcinoma (SCC) of the oral cavity as "papillary verrucous carcinoma," which is the earliest known evidence of a verrucous carcinoma⁽¹⁾. In the early stages, these growths are frequently misdiagnosed as non-neoplastic lesions because they can be mistaken for other pathological entities⁽²⁾. The best chance of long-term survival is achieved by early detection, investigations to narrow the diagnosis. In this report, we present a classic case of VC.

Case Study

A 60-year-old male patient reported to our department of Oral Medicine and Radiology with a chief complaint of a lesion in the right cheek region since past 2 years. The lesion initially was small in size and gradually grew to attain the current size. No history of pain, bleeding, or difficulty in swallowing was reported. Patient was addicted to betel quid chewing for past 40 years. The right submandibular lymph nodes were palpable which were around 1 cm diameters soft and movable.

Intraorally, an exophytic, warty, proliferative growth with white keratotic projections on the surface of size approximately 3 cm × 3 cm, roughly oval in shape and well-defined borders extending antero-posteriorly from buccal mucosa with respect to 45 to 47 edentulous area to retromolar region and superoinferiorly from 1 cm above line of occlusion on the right buccal mucosa up to the depth of vestibule was seen (Fig. 1).

On palpation, all inspeactory findings are confirmed and the growth was nontender, no bleeding on touch, and nonindurated. Based on history and clinical examination a provisional diagnosis of ulcero-proliferative growth on the right buccal mucosa suggestive of malignancy was given, with differential diagnosis of verrucous carcinoma and

proliferative verrucous leukoplakia, after which incisional biopsy specimen histopathologically revealed the lesion as verrucous carcinoma.



Fig. 1: Intra-oral Picture

After complete hematological evaluation of the patient along with kidney function test, a contrast enhanced computed tomography (CECT) of face and neck was advised which revealed few sub-centimetric cervical group of lymph nodes noted involving level IB, II, IV on right side (Fig. 2).

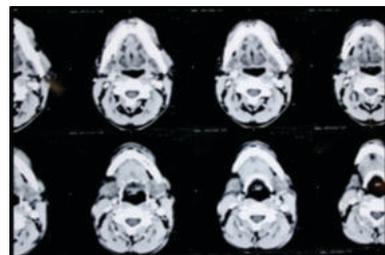


Fig. 2: CECT Of Face And Neck

Following which surgical excision under general anesthesia was performed (Fig. 3 and 4) and the specimen was sent for histopathological examination.

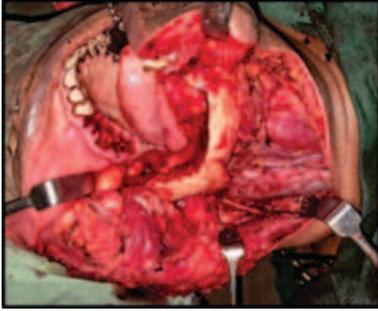


Fig. 3: Intra-operation Picture



Fig. 4: Post-operation Picture

The histopathology report revealed filiform projections and voluminous spinous cells lacking cellular atypia which invaded the underlying stroma with a well-defined, typical pushing margins and characteristic para keratin plugging (Fig. 5).

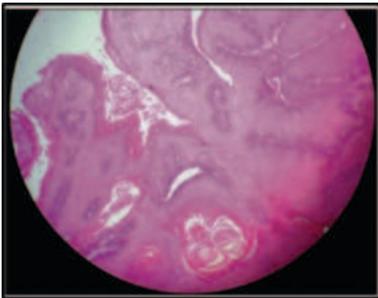


Fig. 5: Histopathological Picture

These findings were consistent with verrucous carcinoma, thereby confirming the case to be one. Immunohistochemistry (IHC) analysis of Ki-67 and p53 revealed a weak positivity supporting the low-grade nature of VC. Furthermore, positive signal for cytokeratin CK 10 in all the layers confirmed the epithelial origin of the tumour. Follow up after 6 months revealed complete healing and no evidence of recurrence.



Fig 6: Follow Up Picture

DISCUSSION

Verrucous carcinoma (VC) is a rare tumor that grows slowly and spreads horizontally as opposed to vertically. It is a low-grade subtype of squamous cell carcinoma that accounts for less than 1–10% of cases and has exophytic, fungating, proliferative, or cauliflower-like growth. Proliferative verrucous leukoplakia (PVL) can develop into carcinoma as VC progresses clinically. Although the precise cause of VC is

unknown, but human papilloma virus, smoking or smokeless tobacco use in the past are major contributing factors, in addition to other risk factors like poor oral hygiene, oral lichenoid reactions, and oral leukoplakia. In our case, the patient's habit of chewing tobacco, betel quid with areca was consistent with the literature⁽³⁾.

Pathophysiology: Carcinogens interfere with the DNA replication and cause DNA single stranded breaks leading to mutations that facilitates tumor growth⁽⁴⁾.

A condition known as verrucous hyperplasia (VH) was described by Shear and Pindborg in 1980. VH has been regarded as an early stage of VC. The most frequently involved mucosal sites are the gingiva, palate, floor of the mouth, mandibular alveolar crest, and buccal mucosa; tongue involvement is uncommon⁽²⁾. Clinically, it manifests as proliferative, fungating, finger-like, or cauliflower-like exophytic growth, in our case the patient presented with exophytic, warty, proliferative growth.

Ferlito et al. (1980) emphasized on the following classic description for the diagnosis of VC⁽⁵⁾

- Fungating warty tumor
- Thickened club-shaped, papillomatous projections which push rather than infiltrate into the underlying tissue
- Deeply projecting cleft-like spaces with degenerating keratin and later cystic degeneration of central portion of the filiform projections
- High degree of cellular differentiation with absence of features of malignancy
- Considerable inflammatory response in invaded tissues
- Rare regional lymph node and distant metastasis

By using a biopsy taken at the edge of the lesions to differentiate it from other verrucous lesions like PVL and VH, a conclusive diagnosis of VC should be made. Under the microscope, verrucous carcinoma (having a deceptively benign microscopic appearance) is distinguished by broad, long rete ridges that seem to "push" into the connective tissue problem at its core. Para keratin typically fills the numerous clefts or crypts (para keratin plugs) between the surface projections⁽³⁾. The definitive diagnosis obviously requires concurrence between the clinician's appreciation of the tumor and the pathologist's identification of the microscopic criteria described by Ackerman⁽⁶⁾. Our case was also diagnosed following these criteria aided by IHC analysis.

With a favorable prognosis, surgery is considered the primary mode of treatment for VC which has a good prognosis with regular long-term follow-up for recurrence.

CONCLUSION

Clinical differentiation is frequently challenging for oral diagnosticians; therefore, both pathologists and clinicians must have extensive clinical knowledge and a detailed microscopic evaluation in order to diagnose this conundrum.

REFERENCES

1. Rao, D. S., Kalappanavar, A. N., Ali, I. M., & Annigeri, R. G. (2016). Verrucous carcinoma-an enigma: Case report and review. *Contemporary clinical dentistry*, 7(3), 391-393.
2. Malhotra, S., Raghavan, V., Kumar, A., & Singh, A. K. (2015). Verrucous carcinoma on pre-existing oral submucous fibrosis. *Journal of Indian Academy of Oral Medicine and Radiology*, 27(4), 593-597.
3. Neville, B. W., Damm, D. D., Allen, C. M., & Chi, A. C. (2015). *Oral and Maxillofacial Pathology-E-Book: Oral and Maxillofacial Pathology-E-Book*. Elsevier Health Sciences.
4. Thomson, P (2018). *Oral cancer: From prevention to intervention*. Cambridge Scholars Publishing.
5. Ferlito, A., & Recher, G. (1980). Ackerman's tumor (verrucous carcinoma) of the larynx. A clinicopathologic study of 77 cases. *Cancer*, 46(7), 1617-1630.
6. Passi, D., Singh, G., Gupta, C., & Patra, D. (2014). Case Report Verrucous Carcinoma-A Diagnostic Dilemma: Case series, Differential Diagnosis, Therapy and Literature Review. *Journal of Advanced Medical and Dental Sciences Research*, 2(2).