Edge of Mystery, From Overgrowth to Diagnosis: Unveiling Oral Verrucous Hyperplasia

Baride Preeti S.[1], Dr. Kadam Vishwas D.[2], Dr. Lata Kale[3], Dr. Shivani Tawade[4]
[1]Department of Oral Medicine and Radiology, Chhatrapati Shahu Maharaj Shikshan Santha's Dental College and Hospital, Chhatrapati Sambhajinagar (Aurangabad), Maharashtra, India

Corresponding
Baride Preeti S
Email: dr.preetibaride@gmail.com

Submission: 30.10.2024 Acceptance: 01.12.2024 Publication: 31.12.2024

Abstract

Background

Verrucous hyperplasia (VH) is a rare and potentially malignant exophytic oral mucosal lesion with a verrucous or papillary surface. OVH (Oral Verrucous Hyperplasia) is an elementary step towards OVC (Oral Verrucous Carcinoma), which then transforms to SCC (Squamous Cell Carcinoma) in a later stage which is clinically indistinguishable, yet histologically variable. It can be recognized by the absence of intrusive development in Verrucous Hyperplasia (VH).

Case presentation

A 51-year-old male patient reported to the department of oral medicine and radiology with a chief complaint of an overgrowth on lateral aspect of tongue. On thorough clinical examination and proper histological investigations, the final diagnosis was made of verrucous hyperplasia.

Conclusion

Early detection and treatment of VH, a rare premalignant lesion, is crucial for a positive outcome. Our case report found dysplasia in VH, but no endophytic growth pattern. Thus, biopsies of verrucous lesions should include the neighbouring normal epithelium to ensure a proper diagnosis. Follow-up following treatment helps assess recurrence and clinical behaviour.

Key words - verrucous hyperplasia, verrucous carcinoma, squamous cell carcinoma.

Introduction

Verrucous hyperplasia (VH) is a rare, exophytic lesion of the oral mucosa that presents as a whitish or pinkish elevated growth. First described by Ackerman and McGavran in 1985, and later detailed by Shear and Pindborg in 1980, VH is often clinically and histologically similar to verrucous carcinoma, making differentiation challenging. The key distinguishing feature is the location of hyperplastic epithelium, which remains superficial to the adjacent normal epithelium in VH, unlike the invasive nature seen in verrucous carcinoma.[(1)] VH is considered a potentially precancerous lesion, with the potential to transform into verrucous carcinoma or Squamous Cell Carcinoma Over Time.

Case Report

This case report discusses a patient presenting with VH in the lateral border of tongue, highlighting the clinical presentation, histopathological findings.

This case report presents a 51-year-old male patient with an overgrowth on tongue. On thorough clinical examination and proper histological investigations, the final diagnosis was made of verrucous hyperplasia.

Case Description

A 51-year-old male patient reported to the department of oral medicine and radiology with a chief complaint of an overgrowth on left lateral border of tongue since 3 months. Patient gave history of habit of tobacco chewing along with lime and areca nut over the past 10 years. There was no report of local trauma and the patient presented no parafunctional habits. The patient's medical, family and social history was non-contributory.

On clinical examination a whitish pink solitary, multiple nodular, sessile, exophytic, well circumscribed overgrowth with numerous fingers like papillary projection, roughened surface of approximately 4.5cm X 4cm in size extending mediolaterally at occlusal level of 33 to 37 and supero-inferiorly from dorsal aspect of tongue to 2cm above lingual vestibule along with a hyperkeratotic patch of approx. 1cm X 1.5 cm on lateral border of tongue [Figure 1]. On palpation overgrowth was firm in consistency, non-tender, without any discharge. Surrounding mucosa is normal. A provisional diagnosis of proliferative verrucous leukoplakia was made.

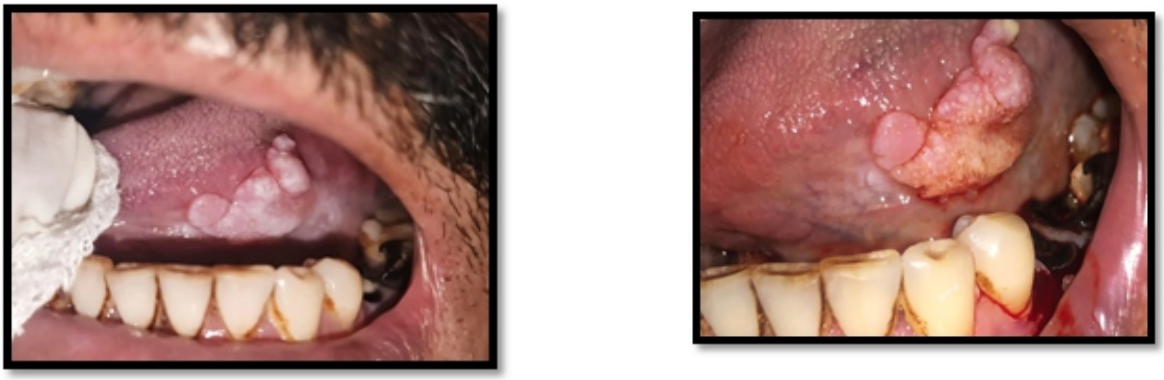

Figure. 1.

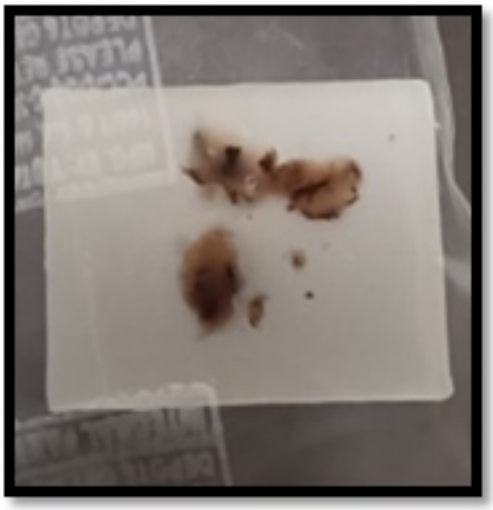

Figure. 2.

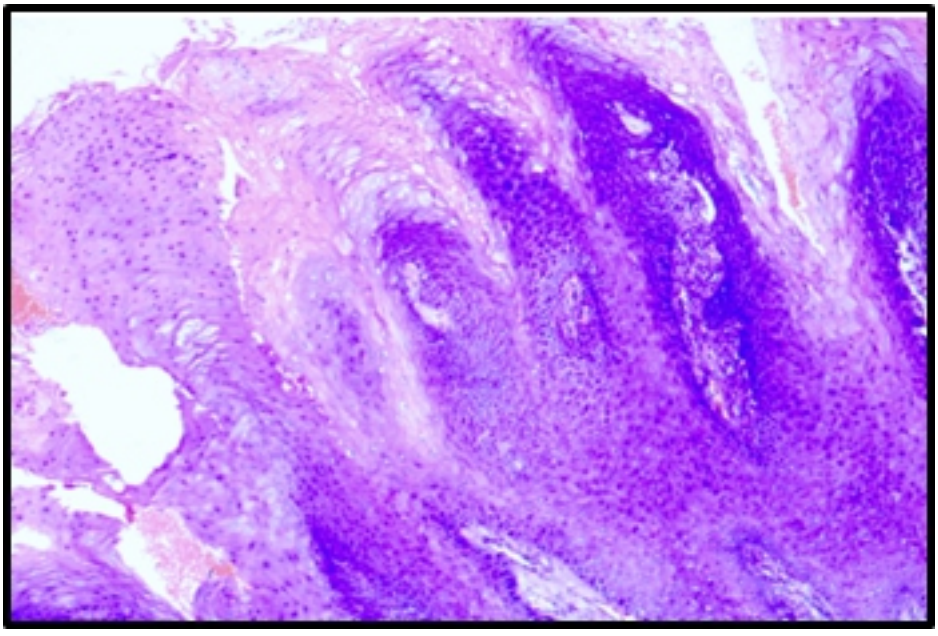

Figure. 3.

The lesion was treated with wide surgical excision [Figure 2]. Histopathological examination of biopsy lesion [Figure 3] was done which present as acanthotic, hyper and parakeratotic squamous mucosa with papillomatosis. Focally rete ridges are irregular. Changes of mild dysplasia noted. Underlying stroma is fibrovascular with dense mononuclear cell infiltrates. No definitive evidence of invasive malignancy in section examined. The impression suggestive of verrucous hyperplasia with focal changes of mild dysplasia.

Discussion

Verrucous Hyperplasia vs. VC In 1980, Shear and Pindborg introduced the concept of "verrucous hyperplasia," describing how this differed from verrucous carcinoma. They described it as a proliferative epithelial lesion with the epithelial hyperplastic folds extending above the margins of the surrounding mucosa, whereas in the folds invade down into the connective tissue and below the surrounding normal mucosal margins. They believed that verrucous hyperplasia may develop into VC or SCC. Other authorities believe that verrucous hyperplasia and VC are really the same lesion. Perhaps the term proliferative verrucous leukoplakia could be used as an umbrella under which the continuum of lesions, such as verrucous hyperplasia. VC, and SCC that arise from a thickened leukoplakia could be included.[2]

Verrucous hyperplasia probably represents a morphological variant of verrucous carcinoma by Slootwage J P and Muller H (1983). Essential features in distinguishing verrucous hyperplasia from verrucous carcinoma is the location of the thickened epithelium with respect to adjacent normal appearing epithelium.[3]

Shear and Pindborg clinically classified Verrucous hyperplasia's into two types, a sharp variety comprising long, narrow, and heavily keratinized verrucous processes which appears white as result of heavy keratinization. his entity may represent the form referred to as verrucous leukoplakia by many authors. The second clinical variant is a blunt variety consisting of verrucous processes that are broader, latter, and not heavily keratinized.[4]

Although buccal mucosa is the most common site followed by tongue for occurrence of such lesions and are 1 cm or more in size like was observed in the present case. Literature also shows male predilection (2:1) with mean age between 30-60 years or 4th decade of life. The present case agrees with literature in terms of age and gender. Placement of tobacco-betel-lime quid in vestibule or chewing areca nut quid and smoking have been reported as associated etiological factors.[5]

The distinction between VC and VH clinically is strenuous and unfeasible. The main differences observed in the histopathological sections were the level of verrucous projections with relation to adjacent epithelium. In VH most of the hyperplastic broadened rete ridges lay above the adjacent normal epithelium while VC, on the contrary, exhibits a downward growth pattern of otherwise similar rete ridges.[3,6]

Total surgical excision has been the conventional mode of treatment for oral verrucous hyperplasia. Transformation and recurrence to either squamous cell carcinoma or verrucous carcinoma have been reported after surgical intervention, but this has been due to non-adherence to strict guidelines and criteria for surgery. To avoid local recurrence, wide surgical excision of the primary verrucous lesion with adequate mucosal and soft tissue margin is necessary.[7]

Conclusion

Early detection and treatment of VH, a rare premalignant lesion, is crucial for a positive outcome. Our case report found dysplasia in VH, but no endophytic growth pattern. Thus, biopsies of verrucous lesions should include the neighbouring normal epithelium to ensure a proper diagnosis. Follow-up following treatment helps assess recurrence and clinical behaviour.

Consent

Written consent was obtained from the patient for the agreed dental treatment and the use of his records or photographs for publication purpose.

Ethical Approval

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

Competing Interests

Authors have declared that no competing interests exist.

References

1) Dabla, U., Ramalingam, K., Chawla, G. Bose, S. (2019). Verrucous Hyperplasia-A Case Report. Case Reports in Odontology. 6(2), 12-15. Retrieved from www.casereportsinodontology.org

2) Wood NK, Goaz PW, Lehnert J Soft Tissue Lesions : white lesions of oral mucosa In: Wood NK, Goaz PW, editors. Differential diagnosis of oral and maxillofacial lesions. Singapore: Harcourt Brace & Company Asia Pvt Ltd; 1998. P. 96-126

3) Hazarey VK, Ganvir SM, Bodhade AS. Verrucous hyperplasia: A clinico-pathological study. J Oral Maxillofac Pathol 2011;15:187-91

4) Shear M, Pindborg JJ. Verrucous hyperplasia of the oral mucosa. Cancer 1980;46:1855-62.

5) Wang YP, Chen HM, Kuo RC et al. Oral verrucous hyperplasia: histologic classification, prognosis, and clinical implications. J Oral Pathol Med 2009;38(8):651-60.

6) Anjali AK, Pereira T, Shetty S, Babu C. Oral verrucous hyperplasia with dysplasia – A Case Report. Oral Maxillofac Pathol J 2022; 13(1): page no. 64-66

7) Kallarakkal TG, Ramanathan A, Zain RB. Verrucous papillary lesions: Dilemmas in diagnosis and terminology. International journal of dentistry. 2013;2013