CASE REPORT

A Diagnostic dilemma: Verrucous hyperplasia or Verrucous carcinoma of oral cavity: A Case Report

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ABSTRACT

Verrucous hyperplasia and verrucous carcinoma are rare exophytic growths of oral cavity. Verrucous hyperplasia is forerunner of verrucous carcinoma, and the translation is so consistent that hyperplasia once diagnosed should be treated like verrucous carcinoma.[1]The purpose of this article is to report a case of soft tissue exophytic mass present on the gingival region which was clinically diagnosed as verrucous carcinoma and histopathologically as verrucous hyperplasia. The patient was treated with wide surgical excision of the lesion and a diagnosis of Verrucous hyperplasia was made based on histopathological features. There was no evidence of recurrence at a three-year follow-up.

KEY WORDS

Verrucous hyperplasia , verrucous carcinoma ,exophytic mass, histopathological,

INTRODUCTION

Verrucous hyperplasia is a verrucopapillary lesion of oral cavity.It occurs in two forms first as an exophytic,fleshy verrucopapillary outgrowth with a white/pink surface color and other as a white plaque like exophytic verrucous lesion (mimics verrucous leukoplakia).[1]It may occur at any site of oral cavity usually more than 1 cm.[1]Verrucous carcinoma ,an exophytic overgrowth of well differenciated keratinized epithelium having minimal atypia and with locally destructive pushing margins at its interface with underlying connective tissue.[1] The buccal mucosa is the location for more than half of cases,with gingiva involved in nearly in one third of cases.[2] A male predomince over 50 years has been noted.Verrucous hyperplasia is seperated from verrucous carcinoma due to lack of invasive growth that is entirely superficial to adjacent normal epithelium[6]

We report a rare case of oral verrucous hyperplasia in the buccal gingival mucosa of a 60-year-old male patient with a history of tobacco chewing in the last 7-8 years

Figure 1

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Figure 2

Case Report

A 60 year old male patient (fig1,2)reported to opd of Kothiwal dental college and Research centre, Moradabad,with a chief complaint of white growth in left side of cheek region since 5 years. He had history of extraction in same region.The general and medical history of patient was non suggestive but history of tobacco chewing from the last 7–8 years. There was no evidence of discharge and no ulcerations were observed on the surface of the lesion, nor in the surrounding mucosa which appeared normal. On examination swelling was apperared as papillary growth on lower left alveolar region, soft in consistency, immovable, corrugated surface, non tender, white in colour in relation to extracted 34, measuring about 9 mm L, 5 mm W and 4 mm in height. No bony expansion of mandible is reported. Radiographically OPG was done. Based on clinical and radiographical feature provisional diagnosis of verrucous carcinoma was given.

The study was done in department of Oral and Maxillofacial Pathology and Microbiology, incisional biopsy was taken for further diagnosis. Tissue was fixed in 10% formalin. On grossing, the specimen was creamy greyish white in color, firm to leathery in consistency and was measuring about 9mm x 5mm x 4 mm in length, width and height respectively Whole tissue was taken for processing(fig3).

Figure 4

Histopathologic features:

The submitted Haematoxylin & Eosin stained soft tissue sections revealed exophytic verruciform hyperplastic orthokeratinized stratified squamous epithelium overlying fibrovascular connective tissue stroma. The basal epithelial cells exhibit mild dysplastic features like cellular and nuclear pleomorphism, mitosis and loss of stratification. The epithelium connective tissue junction is intact with broad and drop shaped rete ridges. The underlying connective tissue stroma revealed dense chronic inflammatory cell infiltrate predominantly consisting of lymphocytes along with fibroblasts, collagen fibers, blood capillaries et Histopathologic features are suggestive of **"Verrucous Hyperplasia with mild epithelial dysplasia".** (fig 4,5)

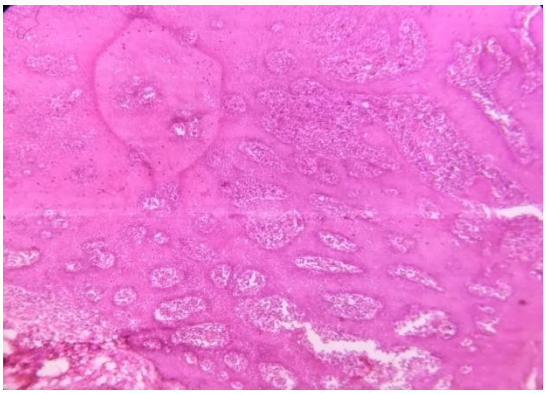

Figure 5

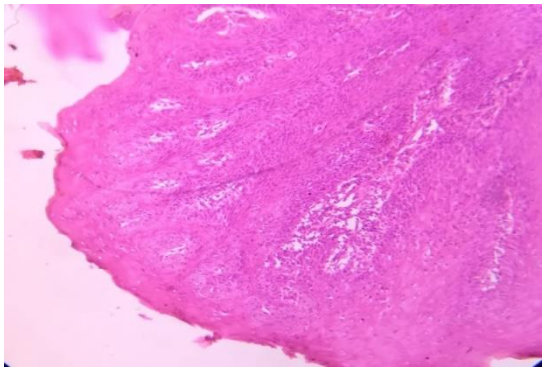

Figure 6

Discussion:

Verrucous hyperplasia (VH) is clinically characterized by a warty or papillary, fungating mucosal mass that can sometimes ulcerate. The lesion is predominantly pink, with a partly whitish surface[4]. It commonly presents in individuals aged 30–60 years.[4,5] Research has traditionally identified the buccal mucosa as the most common site for VH, potentially linked to the placement of quid—clumps of chewing tobacco—in this area.[5,6] However, Shear et al. found the gingiva and alveolar mucosa to be more common sites among their 68 cases of VH.[3] Hazarey et al. reported that the use of tobacco-betel-lime quid in the buccal vestibule was the most common habit associated with VH, while Wang et al. observed that 91% of patients with VH chewed areca nut quid. Smoking was noted as the second most common aetiological factor in these studies.[5,6]

Shear et al. classified verrucous hyperplasia (VH) into two histological patterns: the "sharp" variety and the "blunt" variety. The sharp variety is characterized by heavily keratinized, long, and narrow verrucous processes, which may be referred to as verrucous leukoplakia due to their predominantly white color from heavy keratinization.[3] The blunt variety features less heavily keratinized, broader, and flatter verrucous processes.[3] Despite these histological distinctions, no differences in prognosis have been reported between these two patterns.

On the other hand, Wang et al. classified VH into plaque-type and mass-type lesions and noted significant differences in their rates of malignant transformation.[5] Plaque-type VH is defined by horizontally proliferating epithelial hyperplasia, leading to an elevated, plaque-like lesion with a verrucous surface. Mass-type VH, however, is characterized by single or multiple protuberant masses of epithelium hyperplasia.[5] Histopathologically, all variants of verrucous hyperplasia (VH) exhibit verrucous projections of the hyperplastic epithelium that extend superficially relative to the adjacent epithelium.[3,5] These projections are prominent across different histological patterns of VH.

Verrucous carcinoma (VC) shares considerable similarities with VH. VC is characterized by a warty, papillary, or fungating exophytic lesion with broad, intact intrusions of rete ridges into the stroma.[3] A distinguishing histological feature of VC is the presence of keratin plugging within the central epithelial invaginations, although Slootweg et al. have indicated that keratin plugging is not obligatory for diagnosing VC.[4]

While dysplasia is rarely observed in VC, mitotic figures are more frequently present.[4] This distinction helps differentiate VC from VH, despite their overlapping histological features. The distinction between verrucous hyperplasia (VH) and verrucous carcinoma (VC) is primarily histological, based on how the hyperplastic epithelium relates to the adjacent normal epithelium. In VH, the hyperplastic epithelium forms broad, verrucous projections that extend superficially above the adjacent normal epithelium. In contrast, VC exhibits an endophytic growth pattern where the rete ridges penetrate inward into the connective tissue rather than projecting outward.[6]

Additionally, in VC, the verrucous processes often extend with a margin of normal epithelium into the underlying connective tissue, a feature that aids in differentiating it from VH.[3]

Surgical excision was done and excisional biopsy revealed few areas with dysplastic features. As a result of these features, the diagnosis was made of Verrucous Hyperplasia with Mild to Moderate Focal Dysplasia. A 3 years follow-up revealed no recurrence of the lesion. Wide surgical excision of the lesion with adequate soft tissue margins so as to avoid recurrence is the most common management of both VC and VH and then prognosis is good.

Conclusion

between VC and VH lesions can be Di8agnosed only by histologically, by comparing the level of the rete ridges of the epithelium of the lesion with that of the adjacent normal epithelium. In addition, VH cases may also be confused with verrucous leukoplakia. Thus, biopsies of verrucous lesions should include the adjacent normal epithelium in order to ensure correct diagnosis. As VH has the potential for malignant transformation, patients should be treated in a similar manner to those with VC.

References:

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