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Review Article

Excision of Oral Verrucous Hyperplasia With Long Term Follow Up: A Case Report

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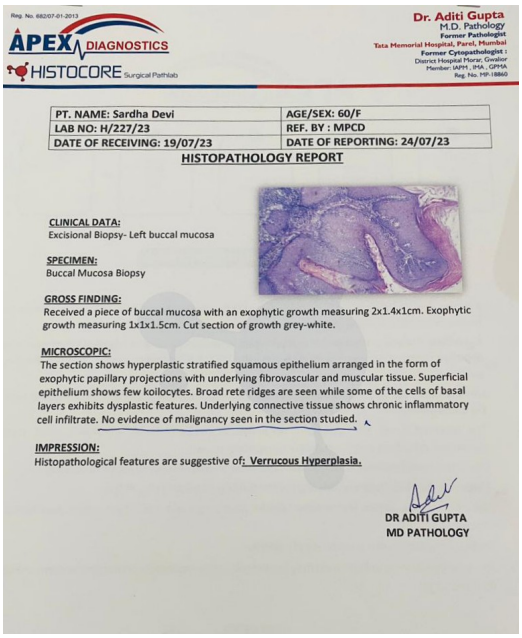
Abstract
Oral verrucous hyperplasia (OVH) is a benign but a potentially premalignant exophytic epithelial lesion, often it is considered as a precursor to verrucous carcinoma. Clinically, it presents as a white, warty, or cauliflower-like growth, commonly seen on the buccal mucosa, gingiva, or alveolar ridge. It is frequently associated with chronic tobacco or betel quid use. Accurate diagnosis and complete excision are crucial. Both clinically and histologically Oral verrucous hyperplasia may mimic verrucous carcinoma.

INTRODUCTION

Oral verrucous hyperplasia (OVH) is a distinct exophytic epithelial proliferation that was first described by Shear and Pindborg in 1980 as a potentially malignant disorder of the oral mucosa. It is regarded as the precursor or early counterpart of verrucous carcinoma (VC) and represents a histopathological continuum between benign hyperplasia and carcinoma [1,2]. Clinically, OVH presents as a white, warty, or cauliflower-like growth that can occur on any oral mucosal surface, but the buccal mucosa, alveolar ridge, and gingiva are the most frequently affected sites. It commonly arises in individuals with chronic exposure to carcinogenic agents such as tobacco, betel quid, and areca nut, and is often associated with poor oral hygiene and chronic irritation [3,4]. The OVH has an etiopathogenesis that is multifactorial. Long-term tobacco use remains the most established risk factor, while other potential contributors such as alcohol, human papillomavirus (HPV) infection, and genetic susceptibility have also been implicated [5]. The lesion is more prevalent among males in the fifth to seventh decades of life and is often asymptomatic in its early stages, leading to delayed clinical presentation and diagnosis. The major diagnostic challenge lies in differentiating OVH from verrucous carcinoma and other verruca-papillary lesions such as proliferative verrucous leukoplakia, papillary squamous cell carcinoma, and chronic hyperplastic candidiasis [6]. Histopathologically, OVH is characterized by a thickened stratified squamous epithelium with hyperparakeratosis and acanthosis, showing broad, blunt rete ridges that project outward rather than downward. The key differentiating feature from verrucous carcinoma is the absence of epithelial invasion beyond the basement membrane or into the underlying connective tissue [7]. Despite being non-invasive, OVH is regarded as a premalignant lesion with the potential to transform into verrucous carcinoma or conventional squamous cell carcinoma if not treated promptly [8]. Several management options have been proposed, including conventional surgical excision, laser ablation, cryosurgery, and photodynamic therapy. Among these, wide local excision with adequate margins remains the most accepted and effective treatment modality. Surgical excision not only ensures complete removal of the lesion but also provides tissue for definitive histopathological evaluation, which is essential for ruling out early malignant transformation [9]. Conservative but complete excision followed by regular follow-up is therefore the recommended approach for optimal patient outcomes. The present article reports a case of oral verrucous hyperplasia managed surgically, with emphasis on clinical presentation, histopathological features, and the importance of clinicopathological correlation. The case highlights the role of surgical excision in ensuring disease control and preventing malignant transformation.

CASE PRESENTATION

A 60 year old female reported with a swelling in the left lower back region. On intra oral examination the swelling was seen on the left buccal mucosa found to be painless, warty, pinkish lesion.(Fig .1) The gross findings of the lesion showed exophytic growth measuring 2x1.4x1 cm. The exophytic growth for examination measured 1x1x1.5 cm. The grey- white section of growth on histopathological examination of excisional biopsy of left buccal mucosa the features were suggestive of Verrucous Hyperplasia.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DATE OF RECEIVING: 19/07/23	DATE OF REPORTING: 24/07/23

HISTOPATHOLOGY REPORT

CLINICAL DATA:
Excisional Biopsy- Left buccal mucosa

SPECIMEN:
Buccal Mucosa Biopsy

GROSS FINDING:
Received a piece of buccal mucosa with an exophytic growth measuring 2x1.4x1cm. Exophytic growth measuring 1x1x1.5cm. Cut section of growth grey-white.

MICROSCOPIC:
The section shows hyperplastic stratified squamous epithelium arranged in the form of exophytic papillary projections with underlying fibrovascular and muscular tissue. Superficial epithelium shows few koilocytes. Broad rete ridges are seen while some of the cells of basal layers exhibits dysplastic features. Underlying connective tissue shows chronic inflammatory cell infiltrate. No evidence of malignancy seen in the section studied.

IMPRESSION:
Histopathological features are suggestive of: Verrucous Hyperplasia.

DR ADITI GUPTA
MD PATHOLOGY

Figure 1. Pre- op

Microscopic examination showed hyperplastic stratified squamous epithelium arranged in the form of exophytic papillary projections with underlying fibrovascular and muscular tissue. Superficial epithelium showed few koilocytes. Broad rete ridges are seen while some of the cells of basal layers exhibits dysplastic features. Underlying connective tissue shows chronic inflammatory cell infiltrate. No evidence of malignancy was seen in the section examined. (Fig. 2)

The lesion and a clinical margin of 3–5 mm of adjacent normal mucosa was outlined to ensure complete excision. A No. 15 scalpel blade was used to make an incision along the marked outline. (Fig. 3) The incision was placed at an angle (approximately 45°) to the mucosal surface to achieve a three-dimensional excision and to maximise depth centrally. Sharp dissection was performed, separating the lesion from underlying

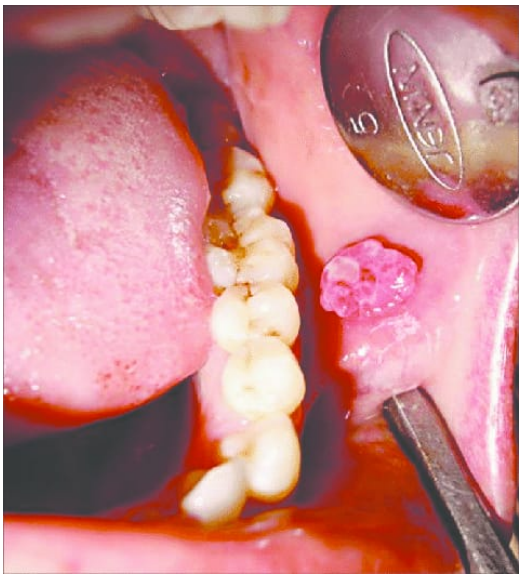

Figure 2. Histopathology Report

submucosa and periosteum where applicable .(Fig. 4) The surgeon ensures removal of all clinically involved tissue and an adequate depth is maintained to achieve clear histological margins. Haemostasis is achieved using pressure pack, electrocautery, or chemical agents as needed. The excised specimen is oriented and submitted for histopathological evaluation to confirm OVH and assess margin status. The surgical defect is managed depending on size. (Fig. 5 6) Small mucosal defects can be closed primarily. Larger defects may require reconstructive options such as buccal fat pad advancement or local soft-tissue flaps to ensure optimal healing and functional outcomes. A periodontal pack (e.g., Coe-Pak) may be placed to protect the surgical site.

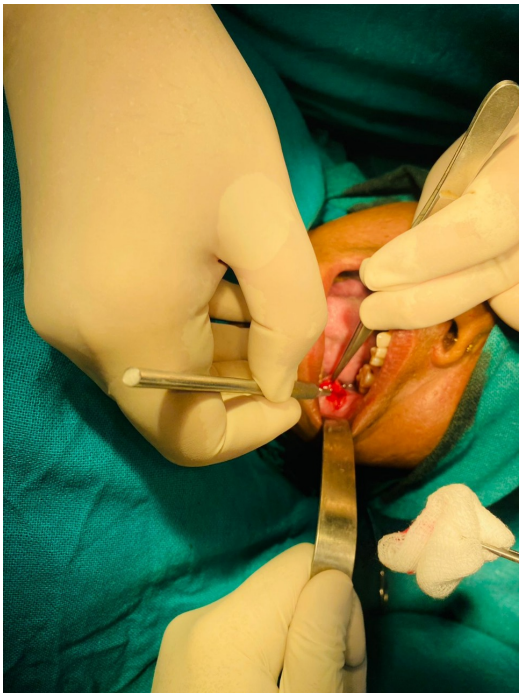

Figure 3. Incision being made to resect the mass

Figure 4. Site after removal of the mass

Postoperative Care included prescription of analgesics and antibiotics. Chlorhexidine mouth rinse was recommended to maintain oral hygiene. Patient was advised to stay on a soft diet and avoidance of trauma to the surgical site. Regular postoperative follow-up is necessary to monitor healing, detect recurrence early, and manage any dysplastic or malignant transformation. Initial follow-up at 1 week assesses wound healing, with periodic reviews at 1, 3, 6, and 12 months thereafter.

Figure 5. Site after suture placement

Figure 6. Excised mass

DISCUSSION

Oral verrucous hyperplasia (OVH) is a distinct exophytic epithelial lesion classified under oral potentially malignant disorders. It is regarded as an early stage in the biological continuum that may progress to verrucous carcinoma or conventional squamous cell carcinoma. [1,2] Early recognition and prompt management are essential to prevent malignant transformation. [8] The present case highlights the classical clinical and histopathological features of OVH and emphasizes the role of surgical excision and long-term surveillance. Clinically, OVH presents as a slow-growing, painless, verrucopapillary lesion with a characteristic warty or cauliflower-like surface. The buccal mucosa, gingiva, and alveolar ridge are the most commonly affected sites. [3,4] In the present case, the lesion involved the left buccal mucosa, which correlates with previously reported site predilection. [4] Although OVH predominantly affects males in the fifth to seventh decades of life, the occurrence in a female patient in the sixth decade underscores the importance of clinical vigilance irrespective of gender. [2,3] The asymptomatic nature and indolent progression of the lesion often contribute to delayed diagnosis. Histopathological examination is crucial for definitive diagnosis and differentiation from verrucous carcinoma. OVH is characterized by hyperplastic stratified squamous epithelium forming exophytic papillary projections, surface hyperkeratosis, broad and blunt rete ridges, and absence of epithelial invasion into the underlying connective tissue. [1,7] In the present case, these classical features were observed along with focal koilocytosis and mild dysplasia, supporting the diagnosis of OVH. [5] Differentiation from verrucous carcinoma is essential, as the latter exhibits pushing margins with downward proliferation beyond the basement membrane, necessitating more aggressive management. [7] The etiopathogenesis of OVH is multifactorial, with tobacco use and betel quid chewing being the most significant contributing factors. [2,3,4] Chronic mucosal irritation leads to epithelial hyperplasia and dysplastic changes, thereby increasing malignant potential. [8] Additional factors such as alcohol consumption, viral infections, nutritional deficiencies, chronic trauma, and genetic predisposition have also been implicated. [5,8] Elimination of etiological habits and patient counseling form an integral part of comprehensive management. Wide local surgical excision remains the treatment of choice for OVH. [6] Complete removal with adequate margins ensures elimination of dysplastic tissue and facilitates thorough histopathological evaluation. [6,9] In the present case, excision with a 3–5 mm clinical margin resulted in satisfactory healing and absence of recurrence during follow-up. Alternative therapeutic modalities such as laser ablation, cryosurgery, and photodynamic therapy have been advocated; however, conventional scalpel excision remains the gold standard due to predictable healing, cost-effectiveness, and reliable histological assessment. [6,9] Long-term follow-up is mandatory owing to the documented risk of recurrence and malignant transformation. [8] Regular clinical surveillance enables early detection of recurrent or progressive lesions, thereby improving prognosis. This case reinforces the importance of an integrated clinicopathological approach, timely surgical intervention, and structured follow-up protocol for optimal patient outcomes.

SUMMARY

Oral verrucous hyperplasia is a potentially malignant exophytic lesion requiring early diagnosis and intervention. This case describes a 60-year-old female with a painless verruca-papillary lesion of the left buccal mucosa managed by complete surgical excision. Histopathological confirmation and regular follow-up ensured optimal healing, absence of recurrence, and prevention of malignant transformation.

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