



## Verrucous Hyperplasia – A Case Report

[PP: 12-15]

**Dr. Uma Dabla**Department of Oral Pathology & Microbiology, Surendera Dental College & Research Institute  
Rajasthan, India**Dr. Karthikeyan Ramalingam**Department of Oral Pathology & Microbiology, Surendera Dental College & Research Institute  
Rajasthan, India**Dr. Gurveen Chawla**Department of Oral Pathology & Microbiology, Surendera Dental College & Research Institute  
Rajasthan, India**Dr. Suddhasatva Bose**Department of Oral Pathology & Microbiology, Surendera Dental College & Research Institute  
Rajasthan, India

### Abstract:

Verrucous hyperplasia is a relatively challenging entity that may resemble verrucous carcinoma clinically and histologically. Clinical differentiation is almost impossible and final diagnosis is based on histopathological confirmation. In this case report, we present such a lesion of verrucous hyperplasia in the buccal mucosa region in a 26-year old male.

**Keywords:** *Verrucous Hyperplasia, Buccal Mucosa, Exophytic, Tobacco Smoking, Male*

**ARTICLE INFO** The paper received on: **18/7/2019** Accepted after review on: **12/8/2019** Published on: **4/12/2019**

### Cite this article as:

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](http://www.casereportsinodontology.org)

### 1. Introduction

Verrucous hyperplasia was first referred briefly by Ackerman and McGavran in 1958 and then best described by Shear and Pindborg in 1980 as a relatively unrecognized entity that may resemble verrucous carcinoma clinically and histologically.<sup>[1]</sup> The characteristic feature in differentiating verrucous hyperplasia from verrucous carcinoma is the location of the hyperplastic epithelium with respect to adjacent normal epithelium. The hyperplastic epithelium is superficial to the adjacent normal epithelium in verrucous hyperplasia; however, in verrucous carcinoma, there is a pushing-border invasion of the hyperplastic epithelium into

the underlying connective tissue.<sup>[2 & 3]</sup> Shear and Pindborg regarded it as a potentially precancerous lesion which can turn into verrucous carcinoma or squamous carcinoma with time however, it has not been listed so by the WHO.<sup>[1, 4]</sup>

### 2. Case Report

A 26-year-old male patient reported to the outpatient department for pain in right lower first and second molar; mild burning sensation in right buccal mucosa for 6 months and oral fissures. He gave a history of smoking for 20 years along with chewing supari.

His past medical, surgical and dental history was non-contributory.

Initial intraoral examination showed white patches on the right buccal mucosa



(Figure 1). The lesion extended from the second premolar area to the retromolar pad region. Clinical diagnosis of leukoplakia was made and the lesion was treated with wide surgical excision. The excisional biopsy of the lesion was sent to the Department of Oral Pathology & Microbiology, Surendera Dental College and Research Institute, Sriganaganagar, Rajasthan for confirmation.

H & E stained section showed hyperparakeratinised stratified squamous epithelium with broad and elongated rete ridges. Focal areas showed keratin plugging and basal cell hyperplasia. In another section, the epithelium was hyperorthokeratinised with broader rete ridges, basal cell hyperplasia and mild dysplastic features in focal areas. Koilocytosis were also present. The connective tissue stroma was moderately collagenous and contained endothelial cell lined blood vessels small capillaries, mild lymphocytic infiltration, adipose tissue and muscle tissue (Figure 2).

Correlating the clinical and histopathological findings, a final diagnosis of verrucous hyperplasia was made.

The patient was advised regular follow-up and motivated to quit his deleterious habits.

### 3. Discussion

Shear & Pindborg described two histological patterns of verrucous hyperplasia, including the “sharp” variety (long, narrow, heavily keratinized verrucous processes) and the “blunt” variety (verrucous processes that are broader and flatter and not heavily keratinized and authors further reported that sharp variety has probably been referred as verrucous leukoplakia by a number of researchers due to white color of the lesion. <sup>[1]</sup>

However, Wang et al. reclassified verrucous hyperplasia into plaque-type and mass-type based on epithelial hyperplasia with parakeratosis or hyperkeratosis and verrucous surface, and absence of invasion by the hyperplastic epithelium into the lamina propria as compared with adjacent normal mucosal epithelium. The plaque-typed verrucous hyperplasia lesions demonstrated horizontally spreading epithelial hyperplasia forming a slightly elevated plaque-like lesion with the verrucous surface whereas the mass-typed verrucous hyperplasia lesions showed as single or multiple protruding masses of epithelial growth with minimal connective core tissues and verrucous surface. Clinically, the plaque-type lesions appeared as whitish verrucous plaques whereas the mass-type lesions present as whitish-pink. <sup>[5]</sup>

Histopathologically observed findings which include keratin plugging, broad rete ridges, epithelial hyperplasia, epithelial dysplasia, lymphocytic cell infiltration and hyperorthokeratinization in the present case are in agreement with other studies. <sup>[1, 2 & 6]</sup>

Hazarey et al reported 4th decade of life as the common age of presentation of lesion with males predominance over females (2:1). However, Shear & Pindborg reported that the majority of cases occurs in the sixth, seventh, and eighth decades with a slight preponderance of female patients (56%) over males (44%). The age of the patient in the present case was 26 years and presence of lesion at such an early age may be due to early acquisition of habits of smoking and supari, frequency and nature of habits and genetic susceptibility as stated by Hazarey and coworkers. <sup>[1,2]</sup>

The most common site of the verrucous hyperplasia lesion in various studies has been observed to be buccal vestibular mucosa, gingiva and alveolar



mucosa followed by cheek, tongue, floor of the mouth, lip, palate and buccal mucosa; and in the present case also lesion was observed on buccal mucosa. <sup>[1, 2 & 3]</sup>

The level of expression of p53 (tumour suppressor gene) and EGFR (epidermal growth factor receptor) can be used as markers for differentiating verrucous hyperplasia from verrucous carcinoma and squamous cell carcinoma. <sup>[7]</sup> The microsatellite analysis also might be a useful diagnostic method to differentiate between reactive hyperplasia and verrucous hyperplasia / verrucous carcinoma as sharp differences in loss of heterozygosity has been observed between reactive hyperplasia and verrucous hyperplasia / verrucous carcinoma. <sup>[8]</sup>

The total surgical excision has remained the conventional treatment of oral verrucous hyperplasia, however, chemotherapy, radiation or combinations of these; buccal fat pad and photodynamic therapy also have been reported for treatment of verrucous hyperplasia in the literature. <sup>[4,9]</sup>

#### **4. Conclusion**

We present a case of verrucous hyperplasia in this case report. The differentiation between verrucous carcinoma and verrucous hyperplasia lesions can only be made histologically on the basis of the location of the hyperplastic epithelium with respect to adjacent normal epithelium. The patient should be treated promptly as verrucous hyperplasia has the potential for malignant transformation.

#### **References**

1. Shear, M., & Pindborg, J. Verrucous hyperplasia of the oral mucosa. *Cancer*, 1980; 46(8), 1855–1862.
2. Hazarey, V. K., Ganvir, S. M., & Bodhade, A. S. (2011). Verrucous hyperplasia: A clinico-pathological study. *JOMFP*, 2011; 15(2), 187–191.
3. Sharma, P., Wadhwan, V., Aggarwal, P., & Sharma, A. (2016). Oral verrucous hyperplasia versus oral verrucous carcinoma: A clinicopathologic dilemma revisited using p53 as immunohistochemical marker. *Journal of oral and maxillofacial pathology JOMFP*, 20(3), 362–368. doi:10.4103/0973-029X.190902.
4. Kallarakkal, T. G., Ramanathan, A., & Zain, R. B. Verrucous papillary lesions: dilemmas in diagnosis and terminology. *International journal of dentistry*, 2013; 298249.
5. Wang, Y.-P., Chen, H.-M., Kuo, R.-C., Yu, C.-H., Sun, A., Liu, B.-Y., Kuo, Y.-S. and Chiang, C.-P. Oral verrucous hyperplasia: histologic classification, prognosis, and clinical implications. *Journal of Oral Pathology & Medicine*, 2009; 38: 651-656.
6. Binti Zain, R., George Kallarakkal, T., Ramanathan, A., Kim, J., Tilakaratne, W., Takata, T., Warnakulasuriya, S., Kumar Hazarey, V., Rich, A., Mohd Hussaini, H., Jalil, A. Exophytic Verrucous Hyperplasia of the Oral Cavity –Application of Standardized Criteria for Diagnosis from a Consensus Report. *Asian Pacific Journal of Cancer Prevention*, 2016;17(9), 4491-4501.
7. Wu M, Putti TC, Bhuiya TA. Comparative study in the expression



of p53, EGFR, TFG-[alpha], and cyclin D1 in verrucous carcinoma, verrucous hyperplasia, and squamous cell carcinoma of head and neck region. *Appl Immunohistochem Mol Morphol.* 2002; 10:351–6.

8. Poh, C., Zhang, L., Lam, W. et al. A High Frequency of Allelic Loss in Oral Verrucous Lesions May Explain Malignant Risk. *Lab Invest* 2001; 81, 629–634
9. Navaneetham, A., Dayanand Saraswathi, M.C. & Santosh, B.S. Oral Verrucous Hyperplasia: A case report. *J. Maxillofac. Oral Surg.* 2014; 13: 3: 346-348.

#### Figures & Legends:



*Figure 1:* the clinical picture showing the white lesion involving the right buccal mucosa



*Figure 2:* photomicrograph depicting verrucous hyperplasia (H & E 20x)