

**PROLIFERATIVE VERRUCOUS LEUKOPLAKIA – A CASE REPORT**

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<p><sup>1</sup>Post graduate student  <sup>2</sup>Professor  <sup>3</sup>Professor and Head                  Department of Oral and                  Maxillofacial Surgery,                  Rajas Dental College and                  Hospital.</p>	<p><b>ABSTRACT</b>                  Proliferative verrucous leukoplakia (PVL) is a rare oral white premalignant lesion. PVL behaves more aggressively than other forms of leukoplakia. It has a high recurrence rate after surgical excision, and relentless progression to verrucous hyperplasia and to verrucous or squamous cell carcinomas. Careful examination of whole mouth is essential when a hyperplastic white patch is seen to check for proliferative verrucous leukoplakia. The treatment of PVL is usually by surgery and long-term review is necessary.  <b>Keywords:</b> Proliferative verrucous leukoplakia, Human papillomavirus.</p>
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**INTRODUCTION**

Proliferative verrucous leukoplakia (PVL) is a rare and unique lethal form of leukoplakia first described in 1985 by Hansen et al. PVL is a simple hyperkeratotic, slow-growing, persistent, and irreversible lesion. It tends to spread and becomes multifocal and areas become exophytic and wart-like. [1] PVL is mostly bilateral and predominantly affects the mandibular alveolar and buccal mucosa. It is most commonly resistant to all forms of therapy and has a high recurrence rate. [1]

Patients affected by PVL are often middle-aged non-smokers and nonalcoholic. [2] Human papillomavirus (HPV) may play a role. PVL is more aggressive than other forms of oral leukoplakia. There is a high recurrence rate after surgical excision and high level of progression to extensive oral disease and to verrucous hyperplasia (VH), varying degrees of dysplasia, and to verrucous or squamous cell carcinomas.

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**CASE HISTORY**

A 45 years old male patient reported to our department with the chief complaint of discoloration in the lower left front cheek region for over 6 months. He gave a history of placing papaya milk in that region for tooth ache. No history of alcohol and tobacco use. On intraoral examination, a localized whitish plaque present in the lower left buccal vestibule in relation to 34, 35, measuring 3 x 3.5cm in size, irregular in shape extending buccolingually, 1.5cm below the corner of mouth till the gingival margin of 34, 35, 36 , mesiodistally from distal surface of 33 to distal aspect of 37[Figure 1].On palpation, it was non tender, leathery in consistency, and there was no induration in the base. We provisionally diagnosed it as Proliferative Verrucous Leukoplakia. All his blood investigations were within the normal limits. Incisional biopsy was done and the histopathological report suggested moderate dysplasia. Hence, excision of the lesion using electrocautery was planned.



**Fig 1** – White lesion present on the buccal mucosa



**Fig 2-** Excision using electrocautery



**Fig 3-** After excising the lesion



**Fig 4** – Placement of collagen membrane

Under General Anesthesia, local infiltration given with 6ml of 2% lignocaine with 1:80000 adrenaline in 34 and 36 regions. Wide excision of the pathologic lesion was done with electrocautery [Figure 2]. Bleeding points were identified and

cauterized [Figure 3]. 5x5cm collagen sheet was taken and multiple slits were made and the collagen sheet was placed on the defect and circumferential suturing was done [Figure 4]. The excised lesion was sent for histopathological examination. He was under antibiotic therapy –Tab. Cefixime 200mg BID, Tab.Metronidazole 400mg TID, Tab.Aceclofenac 100mg+Paracetamol 325mg+Seratiopeptitase 10mg BID, for 1 week.

### HISTOPATHOLOGICAL FEATURES

It revealed hyperplastic stratified squamous epithelium, bulbous rete ridges and hyperorthokeratosis. Dysplastic changes such as altered nuclear cytoplasmic ratio, enlarged nuclei with prominent nucleoli extending upto the middle third of the epithelium. Mild chronic inflammatory cells predominantly of lymphocytes were seen in the underlying connective tissue. Hence, reported as moderate dysplasia. At 3 months follow-up, the area was completely healed.

### DISCUSSION

Nearly 0.13%–17.5% of leukoplakic lesions transform into cancers, whereas PVL lesions progress to malignancies very frequently, indicating very high potential for uncontrolled growth.[7] Also known for high recurrence rate than conventional leukoplakia, the lesions of PVL do not respond to simple surgical excision and tend to recur, therefore early recognition

and aggressive treatment is recommended to control the lesion and to prevent malignant change.[8] Proliferative verrucous leukoplakia is described as a recurrent progressive condition. Initially, it presents as a benign-appearing solitary white lesion that may have a flat, papillary, or verrucal architecture. PVL is usually slow-growing, and it typically takes months to years to become histologically atypical. Progression to verrucous or squamous cell carcinoma is a significant risk for affected patients. The cause of PVL is undetermined. Microscopically, unimpressive hyperkeratosis, psoriasiform hyperplasia, or verrucous hyperplasia can be seen in the initial disease phase, and carcinoma may be the ultimate outcome. The lesions are typically under diagnosed, and the seriousness of the condition may not be suspected until the lesion becomes recurrent or begins to show atypical histological features. Microscopic interpretation is subjective and should be correlated with clinical behavior.

Treatment for PVL depends on specific Histopathological features, particularly given the frequent discrepancy between clinical and Histopathological diagnosis. [5] As a general rule, areas of benign tissue or minimally dysplastic lesions can be managed with periodic biopsy or excision. Premalignant lesions or moderate dysplastic areas requires complete removal

with scalpel excision, [6] laser ablation, electrocautery, cryoablation or photodynamic therapy. Of these modalities, scalpel excision is preferred as it allows for microscopic evaluation. Surgical excision followed by radiation and laser therapy is the most common treatment. Recurrence and progression is very common with PVL. Ultimately, 63.9% of patients with PVL progressed to invasive Squamous cell carcinoma. Sex, age, and tobacco use did not seem to be associated with cancer progression. The high malignant transformation rate of PVL highlights the need for vigilant monitoring and thorough treatment of these lesions beyond that which is given to traditional plaques of leukoplakia. Pentenero et al published a PVL review reporting a 56.2% rate of malignant transformation. Hence, vigilant follow-up is necessary. [3]

#### CONCLUSION

Proliferative verrucous leukoplakia is an aggressive form of leukoplakia with frequent recurrence and progression to invasive carcinoma. Early diagnosis, aggressive intervention, and close surveillance with frequent biopsies are important in the successful management of PVL.

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