

## CASE REPORT



# The squamous cell papilloma of gingiva with mild dysplasia: A case report

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**Abstract**

Squamous papillomas are benign proliferating lesions caused by human papillomavirus. Periodontitis is a multifactorial disease affecting the oral cavity with main etiologic factor as a microbial biofilm. Recently, viruses have shown association with periodontitis. Periodontal pockets and gingival sulcus of patients with periodontal diseases exhibit the presence of human papillomaviruses (HPV). This could link periodontitis to HPV associated squamous cell carcinoma. HPV most commonly affects the oral cavity with a predilection for the tongue, hard and soft palate, gingiva, buccal mucosa, and uvula. Hence, we present a case report of chronic periodontitis patient with squamous cell papilloma of gingiva with mild dysplasia.

**Keywords:** Gingiva, human papillomaviruses virus, mild dysplasia, periodontitis, squamous papilloma

**Introduction**

Periodontitis is a multifactorial disease affecting the oral cavity with main etiologic factor as a microbial biofilm. Recently, viruses have shown association with periodontitis. Possible role of periodontitis on various organ systems investigated and evidence shows that periodontitis is one of the risk factor for coronary heart disease, diabetes mellitus, preterm labor low-birth weight, and chronic obstructive pulmonary disease [Figure 1]. Squamous papillomas are benign, asymptomatic exophytic proliferations which can occur in the oral cavity and perioral region.<sup>[1]</sup> The most common site of occurrence of papillomas is hard and soft palate mucosa, dorsum and lateral borders of tongue, uvula, gingival, lower lip, and buccal mucosa.<sup>[2]</sup> Human papillomaviruses (HPV) viruses are epitheliotropic DNA viruses that are involved in the causation of benign lesions such as squamous papillomas and premalignant lesion such as leukoplakia, verrucous carcinoma, condyloma acuminatum, and cervical cancer. Whenever, the epithelial involvement of <1/3, <1/3 to <2/3, and >2/3 shows architectural and cytologic atypia, it is referred as mild, moderate, and severe dysplasia, respectively.<sup>[3]</sup> Researchers suggested that the development of a squamous papilloma due to the presence of HPV is an unrelated incidental finding. Recently, head and neck squamous cell cancer (HNSCC) studies showed the link between periodontitis, oral HPV and head and neck cancer.

Here, we are presenting a case of oral squamous cell papilloma of gingiva with mild dysplastic changes in chronic periodontitis patient.

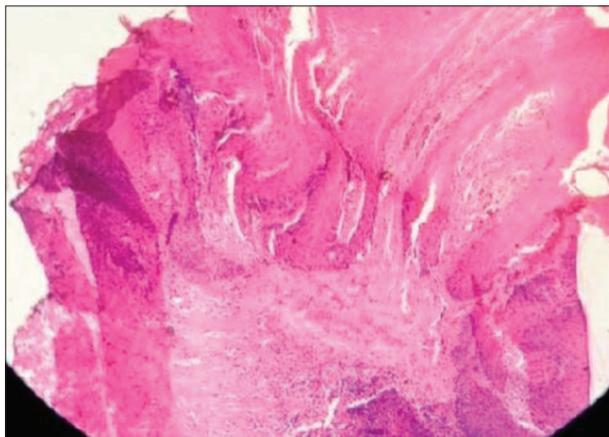
**Case Report**

A 62-year-old married female patient referred to the Department of Periodontics A.C.P.M. Dental College and Hospital, Dhule. Her chief complaint was painless growth on the left lingual side of the gingiva since 8 months. She noticed the growth which started as a small, slow-growing, and non-tender mass. The growth attained the present size of 0.6 × 0.4 cm in a period of 8 months. There was no similar lesion present elsewhere in the oral cavity and any other region of the body. She had habit of pan chewing once a day for 7 years but now quitting of the habit since 1 year. No significant family, medical, and dental history. Clinical examination revealed mild clinical attachment loss of 2–3 mm, and radiographic examination revealed horizontal bone loss. Intraoral periapical showed no hard tissue changes at 36–37 regions.

Intraoral examination revealed the presence of whitish pink growth of size 0.6 × 0.4 cm. The growth was soft in consistency showing small fingerlike projections on its surface. The growth extends in the attached and alveolar gingiva on lingual side of



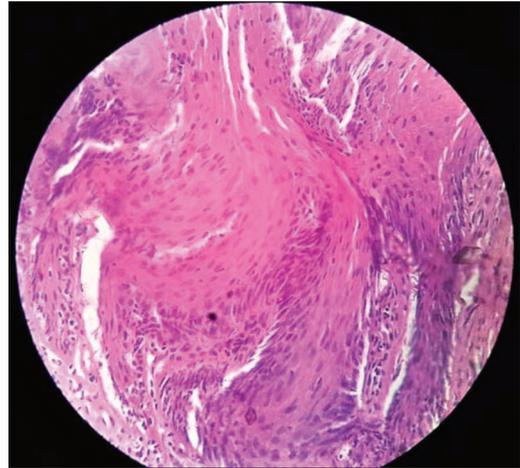
**Figure 1:** Intraoral view of the lesion present on gingiva of left lingual side of the mandible



**Figure 2:** Histopathological picture showing confirmation of squamous papilloma

36 and 37. The provisional diagnosis includes oral wart and squamous papilloma. Blood investigations were within normal limits including tests for HIV which was found negative. Electrocautery was used to excise the growth from its base with 1mm of surrounding normal gingiva and sutures given.

The excised lesion on histopathological evaluation confirmed the diagnosis of squamous cell papilloma with mild dysplasia. The lesion presents as papillary projections lined by stratified squamous epithelium [Figure 2]. Koilocytes are not seen in these sections. Focal areas show pseudoepitheliomatous hyperplasia with superficial zone showing mononuclear inflammatory infiltrate. Focal area shows mild dysplasia in lower 1/3 of squamous epithelium [Figure 3]. Cytological atypia including hyperchromatism and pleomorphism observed in cells of basal layer. Epithelium shows normal architecture and stratification. The blood vessels are dilated and congested. Diagnosis was made at both low and high power magnification under H and E staining. After surgery regular follow-up of 9 months was done, this showed no sign of recurrence [Figure 4].



**Figure 3:** High power view - mild dysplasia noted in lower one-third of squamous epithelium



**Figure 4:** 9 months post-operative view showing no recurrence of the lesion

## Discussion

Squamous papilloma is a painless, exophytic benign lesion that appears in the oral cavity and perioral region. These types of growths appear as pink to white, measuring <1 cm in range and shows characteristic cauliflower-like surface alterations.<sup>[4]</sup> Studies have showed that high-risk HPVs are most commonly found in close proximity to tongue and oropharynx and periodontium of patients with chronic periodontitis.<sup>[5]</sup> In present case report, the site of occurrence is gingiva involving attached gingiva and alveolar mucosa on lingual aspect of the mandibular jaw with respect to 36–37. The lesion is whitish pink showing small finger-like projections on its surface.

Periodontal pockets and gingival sulcus of patients with periodontal diseases exhibit the presence of HPV. This could link periodontitis to HPV associated squamous cell carcinoma. It is found that development of oral carcinomas

shows strong association with high-risk HPV types 16 and 18 and less commonly associated with low-risk HPV types 6 and 11. Parra and Slots (1996) assessed the presence of different kinds of viruses in the gingival fluid of patients with advanced periodontitis, which found HPV in 17% of the samples.<sup>[6]</sup> In this case report, the patient revealed the mild clinical attachment loss of 2–3 mm and horizontal bone loss. Tezal *et al.* found an association with HPV+ status and alveolar bone loss on evaluation of tongue cancer biopsy specimens for HPV+ or HPV– status from 30 participants and determined periodontal status by the panoramic radiographic alveolar bone loss.<sup>[7]</sup>

In the present case report, a final diagnosis of squamous cell papilloma with mild dysplasia was made on the basis of clinical presentation and histopathology of the lesion. On histopathological evaluation lesion present as papillary projections lined by stratified squamous epithelium. Koilocytes are not seen in these sections. Focal areas show pseudoepitheliomatous hyperplasia with superficial zone showing mononuclear inflammatory infiltrate. Focal area shows mild dysplasia in lower 1/3 of squamous epithelium. Cytological atypia including hyperchromatism and pleomorphism observed in cells of basal layer.

Various treatment modalities are available to treat the squamous papillomas that include surgical removal, electrocautery excision, liquid nitrogen cryotherapy, laser ablation, and intralesional interferon injections.<sup>[8]</sup> For this lesion electrocautery was used as a treatment modality to excise the growth. After a follow-up of 9 months, the patient has no signs of recurrence.

## Conclusion

Chronic periodontitis, both independently and by facilitating oral HPV infection, may be an important player in the etiology of HNSCC. Large-scale studies should be carried out to confirm the association between chronic periodontitis, oral HPV

infection, and HNSCC. This will be helpful as a preventive measure and for treatment of such lesions. In the present case report detection of HPV by screening probes could not be done due to unavailability of resources.

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