

Atypical Presentation, Symptomatic Squamous Papillomas Arising from Uvula: Case Report

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Abstract

Background: Squamous papillomas are frequently encountered, as well as lesions within the oral cavity arising from the mucosal epithelium. Characteristically, they manifest as either papillary or verrucous projections. While typically benign and asymptomatic, their most common locations—the tongue and soft palate—can occasionally lead to discomfort. **Aim:** To report the presence of a rare instance of a symptomatic squamous papilloma situated on the uvula. **Case Presentation:** A 32-year-old man experienced recurrent sore throat for five years, along with globus sensation and frequent throat clearing. Examination revealed Grade III bilateral tonsillar enlargement and an incidental finding of a 1.5 cm painless, pedunculated growth on the uvula with finger-like projections. Patients underwent tonsillectomy and partial uvulectomy. The uvular lesion was excised and histopathology confirmed a benign squamous epithelial growth with hyperkeratosis. Postoperative recovery was uneventful, with full healing and no recurrence at the two-month follow-up. **Conclusion:** Although oral squamous papillomas are common, their presence on the uvula is rare and underreported. This case was atypical, as the small uvular papilloma caused noticeable symptoms, unlike the usual asymptomatic course.

Keywords

Squamous Papillomas, Uvular Papilloma, Uvulla

1. Introduction

Oral squamous papillomas are frequent lesions originating from the squamous ep-

ithelium of the oral mucosa. They manifest as papillary or verrucous exophytic masses. Among benign epithelial lesions, they rank fourth in prevalence and are often linked to human papillomavirus (HPV) types 6 and 11. While the tongue and soft palate are the most common sites of occurrence, other areas within the oral cavity may also be affected. [1]

In a comprehensive systematic review and meta-analysis, researchers discovered that the prevalence of oral HPV infection was 7.7%, with an incidence rate of 4.38 cases per 1000 person-months. Notably, oral HPV infection was more common among men than women and exhibited significant geographic variation. [2] Additionally, benign oral HPV lesions are typically asymptomatic and may either persist or regress spontaneously. [3]

2. Case Presentation

A 32-year-old man reported a five-year history of recurrent sore throat episodes. These episodes, characterized by a globus sensation and frequent throat clearing, occurred roughly every other month. He denied any constitutional symptoms, and his personal, medical, dental, and sexual histories were unremarkable. Examination of his oral cavity revealed bilateral tonsillar enlargement to Grade III. Additionally, an incidental finding was noted: an elongated, pale pink pedunculated growth with finger-like projections at the uvula. This painless, approximately 1.5 cm lesion displayed no evidence of bleeding (**Figure 1**).

General examination of the head and neck revealed no abnormalities. Fiberoptic laryngoscopy showed a normal nasal cavity, nasopharynx, and larynx. Due to recurrent tonsillitis, the patient underwent a tonsillectomy with a partial uvulectomy. The pedunculated lesion, measuring approximately 1 cm × 1 cm, was fully excised using electrocautery. Histopathological examination revealed squamous epithelium arranged in finger-like projections, accompanied by hyperkeratosis (**Figure 2**). Two weeks after surgery, the tonsillar beds exhibited normal healing, and the uvula had regained its natural shape. At a two-month follow-up, the patient reported complete healing, no further complaints, and no recurrence of tonsillitis.



Figure 1. Operative view of uvular papilloma.

3. Discussion

Squamous papillomas typically appear as solitary, pedunculated growths with a cauliflower-like surface. However, they can also present as multiple lesions or even diffusely involve broader areas of the oral mucosa. [1] While oral HPV infection is less prevalent and occurs less frequently in healthy individuals compared to cervicogenital HPV infection, a recent systematic review and meta-analysis confirmed this relationship. [2] The most common locations for OSCP are the soft palate, lips, tongue, and gingiva, but any area of the oral cavity, including the larynx, can be affected. [1] [2] [4] Generally, OSCP occurs in patients aged 30 to 50, although it can appear at any age. Notably, there is no clear consensus regarding a gender predilection for this condition. [5]

While squamous papillomas often remain asymptomatic for years, this case presented differently. The solitary pedunculated mass on the patient's uvula, despite its small size, caused recurring episodes of sore throat, accompanied by a constant globus sensation (lump-in-throat feeling) and frequent throat clearing. These symptoms significantly impacted his daily life.

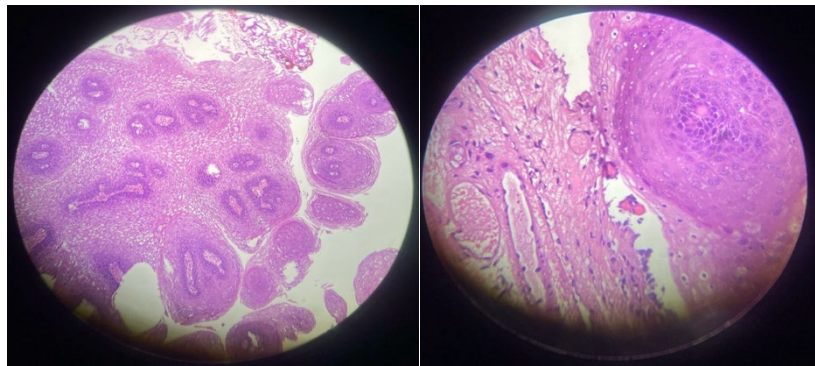


Figure 2. Exophytic lesions with finger-like projection, fibrovascular core and hyperkeratosis.

Mucosal HPVs, those infecting the ano-genital and upper respiratory tracts, encompass various cancer types like head and neck squamous cell carcinoma (HNSCC), oropharyngeal squamous cell carcinoma (OPSCC), and oral cancer. These mucosal HPVs fall into two categories: low-risk and high-risk, based on their potential to cause cancer. HPV 6 and 11 are the most prominent low-risk types, often associated with benign genital warts. Other low-risk types include HPV 40, 42, 43, 44, 54, 61, 70, and 72. HPV 31, 33, 35, 52, 58, and 67 occupy the middle ground with moderate to high-risk potential. Among the high-risk group, HPV 16 and 18 reign supreme, with HPV 16 particularly notorious for its role in various cancers, including cervical cancer.

Our analysis revealed strict adherence to the established histopathologic criteria: finger-like projections of squamous epithelium with preserved maturation, characteristic hyperparakeratosis, and koilocytosis evident as perinuclear vacuolization in the spinous layer, creating pale halos around condensed nuclei. Occa-

sional basilar hyperplasia was also noted, solidifying our diagnosis based on these definitive microscopic features. [1]

This systematic review and meta-analysis demonstrated that oral HPV infection has a lower prevalence and incidence than cervicogenital HPV infection in healthy individuals. Nonetheless, oral HPV is still an important concern, given its oncogenicity and the rising incidence of oropharyngeal cancer. The consistency of methodology will allow for better future comparisons, particularly in terms of infection clearance and persistence. [2]

Unfortunately, no screening is available for OPSCC, and addressing its rising incidence relies solely on prevention of oral HPV infection. The HPV vaccine currently covers nine of the most common types of HPV and is recommended in the United States for girls and boys 11 - 12 years of age. Understanding the impact of the HPV vaccine on OPSCC incidence requires a better understanding of the oncogenic process from oral HPV infection to the development of OPSCC. [2]

Normally papillomavirus infects the epidermis in sites near the site of entry, but self-inoculation often occurs, and the virus can infect farther sites. This phenomenon is known as the Koebner phenomenon. It has been observed that the immune system has an important role in controlling the spread of the virus, as, despite the virus infecting the intraepidermal cells that are considered “hard-to-reach” by the immune system, it was found that papillomas tend to reactivate and are more extensive in immunocompromised individuals. [6]

Rarely are papillomas able to cause serious and life-threatening complications. This mainly depends on the anatomical site of the lesion.

- Recurrent respiratory papillomatosis may grow extensively and rapidly in the larynx and upper trachea, causing upper airway obstruction and stridor.
- Choroid plexus papillomas in the brain cause increased cerebrospinal fluid production and can lead to increased intracranial pressure and hydrocephalus, which may eventually lead to brain herniation and death.
- Papillomas in themselves are rarely premalignant in immunocompetent individuals; however, malignant transformation still does occur. [6]

Oral squamous papilloma, in most cases, is due to HPV; among others, various diagnostic methods are used with a different sensitivity, such as histopathologic examination, polymerase chain reaction (PCR), and in situ hybridization. [7] The histopathology finding in the specimens classically shows finger-like epithelial projections extending from a narrow base with supporting fibrovascular cores containing dilated capillaries. Hyperplastic stratified epithelium with papillary proliferations that could be of non-keratinized type or with a covering layer of orthokeratin or parakeratin of variable thickness. [8] Both PCR and in situ hybridization can detect the presence of HPV in the lesion. In situ hybridization uses a special radioisotope-labeled specific probe to detect HPV deoxyribonucleic acid (DNA), but its sensitivity is less compared to PCR. [6] Regardless of other available molecular methods used for HPV testing, PCR amplification of HPV genomes is still the most sensitive method. It works by using consensus primers pointed at relatively

conserved regions of the HPV genome, allowing the amplification of HPV genotypes in a single reaction. [7] In the majority of oral papilloma cases and cases of recurrent respiratory papillomatosis, the DNA sequences of HPV genotypes 6 and 11 were detected. Co-infection with both HPV 6 and 8 is more common in children with laryngeal papillomatosis compared to adults, which is usually caused by a single virus. [9]

Diagnosis of oral papilloma can be challenging. The differential diagnoses are condyloma acuminatum, verruca vulgaris, and multifocal epithelial hyperplasia, which are difficult to differentiate between them clinically. Condyloma acuminatum and verruca vulgaris both have features that almost mimic the presentation of oral squamous papilloma; therefore, histopathological examination is required for the diagnosis. [10] Both lesions have an exophytic growth appearance, but histologically condyloma acuminatum had a hyperplastic squamous proliferation with fibrovascular cores and a broad base, [11] while verruca vulgaris had Prominent surface keratinization with Inward cupping of the rete ridge and Hypergranulosis. [10]

While complete surgical excision remains the gold standard for benign oral squamous papilloma (OSP) removal, including the lesion base and a small safety margin to minimize recurrence, alternative methods like laser ablation have emerged. [5] Research on long-term recurrence rates comparing conventional scalpel techniques and various laser wavelengths found a key factor: the extent of healthy tissue excised around the OSP. Interestingly, the study revealed that including at least 3 mm of healthy surrounding tissue, regardless of whether a scalpel or laser was used, significantly reduced recurrence rates. This suggests that focusing on adequate margin excision, rather than the removal method itself, plays a crucial role in preventing OSP regrowth. [12]

4. Conclusion

While oral squamous papillomas are frequently encountered, their occurrence on the uvula is a rare and under-reported phenomenon. Notably, our case presented an atypical picture. Despite the small size of the uvular papilloma, which typically remains asymptomatic for years, the patient experienced significant symptoms related to the mass. This highlights the potential for atypical presentations of OSP, even in uncommon locations.

Human Subjects

The consent was obtained from the patient.

Conflicts of Interest

All authors have declared that no financial support was received from any organization for the submitted work, and neither has there been a financial relationship at present nor within the previous three years with any organizations that might have an interest in the submitted work.

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