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Squamous papilloma

Report of two cases

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Abstract Squamous papillomas are exophytic masses of the oral cavity which are most often benign and asymptomatic. They are innocuous lesions that are neither transmissible nor threatening. As an oral lesion they raise concerns because of the clinical appearance, which may mimic an exophytic carcinoma. The pathogenesis is related to human papillomavirus but there is controversy regarding the viral origin. In this article two cases of squamous papilloma of the oral cavity are presented.

Keywords: Human papillomavirus, Squamous papilloma, Cauliflower-like surface, Koilocytes, Mouth diseases

Introduction

Oral squamous papilloma (OSP) is a benign proliferation of the stratified squamous epithelium, which results in a papillary or verrucous exophytic mass induced by human papillomavirus (HPV; [1]). Oral and oropharyngeal squamous cell papillomas occur mainly between 30 and 50 years of age, although they may also occur below 10 years of age. They represent about 8% of oral tumors in children [2]. The sites of predilection for localization of the lesions include the tongue and soft palate but any surface of the oral cavity can be affected [1].

The HPV involvement in head and neck carcinogenesis was first proposed in 1983 by Syrjanen et al. [3]. Kreimer et al. reported the overall prevalence of HPV in 25% of head and neck cancers versus 35.6% in oropharyngeal cancer and 23.5% in oral squamous cell carcinomas [4]. High risk HPV types 16 and 18 are by far the most pre-

dominant types at all sites [5]. This article reports two cases of squamous papilloma of the oral cavity.

Case report 1

A 35-year-old female patient presented with a painless growth in the roof of the mouth over the past year. The patient noticed the growth 1 year previously which started as a small growth, gradually increased in size over a period of 6 months and attained the present size. There was no history of pain, paresthesia or numbness associated with the growth and no similar lesions were present elsewhere. The patient claimed to be a smoker and smoked 8–10 Chuttas per day. Medical, dental, family and personal histories were inconspicuous and no other abnormalities were noted on general physical examination.

Intraoral examination revealed the presence of a solitary, well-defined, oval-shaped and exophytic growth on the left half of the hard palate (Fig. 1) measuring approximately 0.7×0.3 cm in size. Anteroposteriorly the growth extended 2 cm behind the incisive papilla to 1 cm in front of the junction of hard and soft palate and mediolaterally 0.5 cm posterior to the midpalatine raphe to 2 cm in front of the palatal aspect of teeth 24 and 25. The surface over the growth appeared verrucous and whitish in appearance and the surrounding mucosa showed hypermelanotic areas. On palpation the growth was pedunculated, non-tender, firm in consistency and arose from the underlying soft tissue.

Case report 2

A 63-year-old male patient presented with a painless growth in the right half of the tongue since 8 months. Patient history revealed that the growth had been noticed 8 months prior to presentation which initially started as a small growth and gradually increased over a period of

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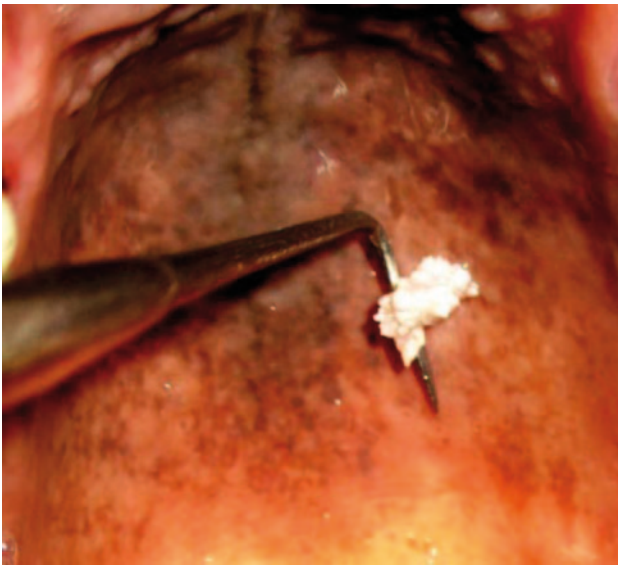


Fig. 1 Intraoral aspect showing a solitary, well defined, oval-shaped and exophytic growth



Fig. 2 Intraoral view of the tongue showing a solitary, well-defined, oval-shaped and exophytic growth

4 months to attain the present size. The patient claimed that there was no history of pain, paresthesia or numbness and no similar lesions were present elsewhere. The medical, dental, family and personal histories were non-contributory.

Intraoral examination revealed the presence of a solitary, well-defined, oval-shaped and exophytic growth on the right anterior two thirds of the tongue measuring approximately 1×0.8 cm in size (Fig. 2). The growth extended 0.5 cm behind the tip of tongue and mediolaterally extended 0.5 cm from the midline to 0.5 cm from the right lateral border of the tongue. The surface over the growth appeared pebbled and pale. On palpation the growth was sessile, non-tender, firm in consistency and arose from the underlying soft tissue.

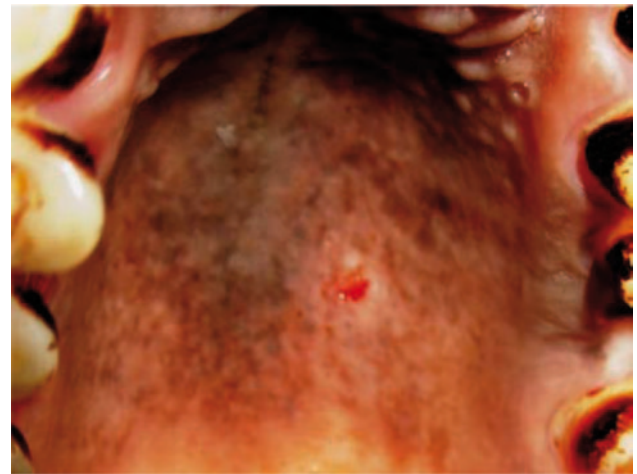


Fig. 3 Intraoral view in case 1 after the growth was excised



Fig. 4 Intraoral view in case 2 after the growth was excised

Based on the history, clinical features and the nature of the growth a provisional diagnosis of oral papilloma was considered for the first case report and irritational fibroma for the second case report. Differential diagnoses of fibroepithelial polyp, fibroma and condyloma acuminatum were considered. The patients were subjected to complete hematological examination and all the parameters were within normal limits. Both growths were excised (Figs. 3 and 4) and specimens were subjected to histopathological evaluation.

On microscopic examination the specimens showed hyperparakeratinized stratified squamous epithelium forming a number of blunt and pointed finger-like projections (Fig. 5) with connective tissue cores continuous with submucosal fibrovascular connective tissue with scattered chronic inflammatory cells. Koilocytes were seen in the superficial (yellow arrow) and middle (red arrow) spinous layers of the epithelium (Fig. 6) suggestive of squamous papilloma.

case study

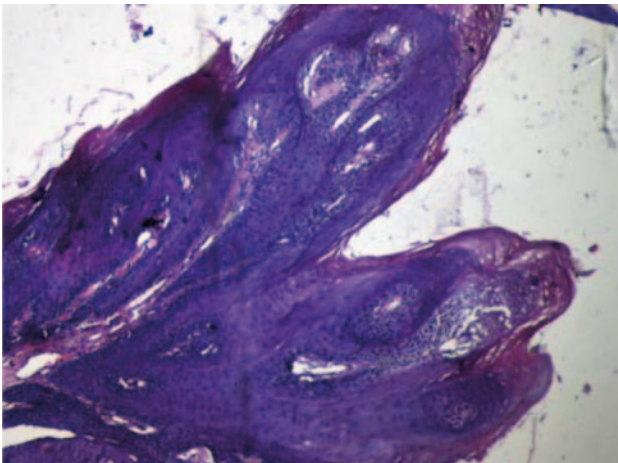


Fig. 5 Histological section of the specimen from case XXX showing hyperparakeratinized stratified squamous epithelium forming a number of blunt and pointed fingerlike projections

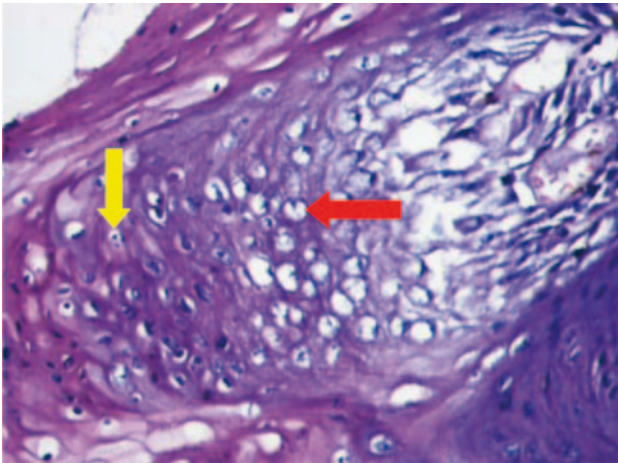


Fig. 6 Koilocytes seen in the superficial (yellow arrow) and middle (red arrow) spinous layers of the epithelium

The patients were observed over a period of 3 and 6 months, respectively and no recurrence or new growth was noted elsewhere.

Discussion

Oral squamous papilloma is a generic term that is used to include papillary and verrucous growths consisting of benign epithelium and minor amounts of supporting connective tissue [6, 7]. It is the fourth most common oral mucosal mass and is found in 4 out of every 1,000 lesions [8]. Accounting for 3–4% of all biopsied oral soft tissue lesions this entity was first reported as a gingival “wart” by Tomes in 1848 and is a localized, benign HPV-induced epithelial hyperplasia.

At least 150 different types of HPV have already been identified, DNA sequences of HPV 16 and 18 have been found in approximately 85% of invasive squamous cell carcinomas and precursors, such as grave dysplasia

and carcinoma in situ [1]. The infection starts when the virus penetrates the new host through microinjuries. The development of this incubation phase into active expression depends on three factors: cell permeability, virus type and host immune status [2]. Infection by HPV acts as an initiator and additional somatic mutations are essential, where the occurrence of these alterations is facilitated by smoking, other co-existent infections, dietary deficiencies and hormonal changes, all considered to be co-factors in the pathogenesis [1].

The prevalence of HPV in normal oral mucosa (latent infection) and its relation to oral cancer have generated conflicting opinions. The discrepancy observed is mainly attributed to a variation in the sensitivity of the methods employed and epidemiologic factors related to the group of patients examined [2].

There is no clearly defined mode of transmission and most occur spontaneously [9]. Theories have proposed multiple pathways including perinatal transmission (during the passage through an infected birth canal and in utero, as a transplacental or ascending infection), autoinfection from orogenital contact by hand and sexual transmission by orogenital contact [4].

Squamous papilloma occurs with equal frequency in both men and women [10], can occur at any age and are frequently seen in children and adolescents, usually 30–50 years of age. Intraorally, it is found most commonly on the tongue, lips, buccal mucosa, gingiva and palate, particularly areas adjacent to the uvula [8].

The lesions generally measure less than 1 cm in the largest dimension and appear as pink to white exophytic granular or cauliflower-like surface alterations [6, 7]. The lesions are generally solitary in presentation although several lesions have been noted on occasions. The lesions are generally asymptomatic [6] and may be pedunculated or sessile in configuration. Non-keratinized lesions appear coral pink in color and if keratinized, they are white. Some have a cauliflower-like surface whereas others have discrete finger-like projections [9]. Patients who are HIV positive often have multiple oral lesions [7].

Clinically, the differential diagnoses of fibroepithelial polyp, fibroma and condyloma acuminatum were considered. Fibroepithelial polyp is a flattened pink mass that is attached to the palate by a narrow stalk. It is easily lifted up with a probe, which demonstrates its pedunculated nature [10]. Fibroma is a painless, broad-based swelling that is paler in color than the surrounding tissue. The surface may occasionally be traumatically ulcerated, particularly in larger lesions. It is typically found in frequently traumatized areas, such as the buccal mucosa, lateral border of the tongue and lower lip [6]. Condyloma acuminatum is a sexually transmitted disease with lesions developing at a site of sexual contact or trauma. Oral lesions most frequently occur on the labial mucosa, soft palate and lingual frenum. Clinically, it appears as a sessile, pink, well demarcated, non-tender exophytic mass with short, blunted surface projections [10].

Histopathologically, they are characterized by long, thin, finger-like projections extending above the surface

of the mucosa, each made up of a continuous layer of stratified squamous epithelium and containing a thin, central connective tissue core which supports the nutrient blood vessels [8]. The keratin layer is thickened in lesions with a whiter clinical appearance and the epithelium typically shows a normal maturation pattern. Occasional papillomas demonstrate basilar hyperplasia and mitotic activity which can be mistaken for mild epithelial dysplasia [9]. Koilocytes (HPV altered epithelial cells with perinuclear clear and nuclear pyknosis) may or may not be found in the superficial layers of the epithelium [7, 8].

More recently, gene therapy and vaccines targeted against HPV are currently under trial whereby HPV vaccines should eventually reduce the impact of these viruses on human health [4]. At present two vaccines have been developed: cervarix and gardasil provide protection against HPV types 6, 11, 16, 18 and both existing vaccines are able to create a robust humoral immune response which is much more effective than the levels of antibodies that can be acquired after a general infection [11].

Conservative surgical excision, including the base of the lesion is the gold standard treatment for the oral squamous papilloma and recurrence is unlikely. Frequently, lesions have been left untreated for years with no reported transformation into malignancy, continuous enlargement or dissemination to other parts of the oral cavity [10]. Papillomas are also treated by laser ablation and the exophytic lesion is excised followed by direct ablation of the lateral and deep margins [9]. Recently, surgical excision combined with other forms of treatment, such as systemically used interferon has been introduced [12].

Conflict of interest

The authors declare that there are no actual or potential conflicts of interest in relation to this article.

References

1. Carneiro TE, Marinho SA, Verli FD, Mesquita AT, Lima NL, Miranda JL. Oral squamous papilloma: clinical, histologic and immunohistochemical analyses. *J Oral Sci.* 2009;51(3):367–72.
2. Castro TP, Bussoloti Filho I. Prevalence of human papillomavirus (HPV) in oral cavity and oropharynx. *Rev Bras Otorrinolaringol.* 2006;72(2):272–82.
3. Syrjanen KJ, Pyrhonen S, Syrjanen SM. Evidence suggesting human papillomavirus (HPV) etiology for the squamous cell papilloma of the paranasal sinus. *Arch Geschwulstforsch.* 1983;53:77–82.
4. Campisi G, Giovannelli L. Controversies surrounding human papilloma virus infection, head & neck vs oral cancer, implications for prophylaxis and treatment. *Head Neck Oncol.* 2009;1(8).
5. Major T, Szarka K, Sziklai I, Gergely L, Czegledy J. The characteristics of human papillomavirus DNA in head and neck cancers and papillomas. *J Clin Pathol.* 2005;58:51–5.
6. Regezi JA, Sciubba JJ, Jordan RCK. *Oral pathology: clinical pathological correlations.* 4th ed. St. Louis: Saunders; 2003. pp. 143, 61.
7. Jaju PP, Suvarna PV, Desai RS. Squamous papilloma: case report and review of literature. *Int J Oral Sci.* 2010;2(4):222–5.
8. Rajendran R, Sivapathasundharam B. *Shafer's textbook of oral pathology.* 5th ed. Elsevier 2006. pp. 113–5.
9. Silverman S, Eversole LR, Truelove EL. *Essentials of oral medicine.* London; Decker; 2002. pp. 146–7, 151.
10. Neville BW, Damm DD, Allen CM, Bouquot JE. *Oral and maxillofacial pathology.* 2nd ed. Philadelphia: Saunders; 2002. pp. 316–7, 441.
11. Mannarini L, Kratochvil V, Calabrese L, Gomez Silva L, Morbini P, Betka J et al. Human papilloma virus (HPV) in head and neck region: review of literature. *Acta Otorhinolaryngol Ital.* 2009;29:119–26.
12. Sahin U, Tayyar S, Ercan D, Birol C, Selim C. Combination of surgical excision and interferon alpha-2a treatment in squamous cell papilloma with extensive oral involvement. *Dicle Med J.* 2010;37(3):287–90.