

Oral HPV Lesion: A case report

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Abstract

Abstract: The human papillomavirus (HPV) has over 200 known strains. This virus can spread from mother to offspring or between individuals. The spread occurs skin to skin or mucosa to mucosa. It is the most common sexually transmitted disease. HPV 16 and 18 are high risk strains for developing malignancy. The types of cancer that can be caused by HPV include oral, cervical, vaginal, anal, vulva, and penile. This case report will focus on oral HPV lesions and the differential diagnostic process. HPV related lesions of the oral cavity include verruca vulgaris, squamous papilloma, condyloma acuminatum, and multifocal epithelial hyperplasia.

Background





Pathogenesis: The HPV virus infects the basilar epithelial stem cells through a microabrasion or trauma. Once the virus gains entry into the cell, the episomal genome enters the nucleus. In the nucleus, viral transcription is initiated. The HPV virus strength comes from its ability to evade the host's immune surveillance.

Oral HPV: HPV is responsible for 60-70% of oropharyngeal cancers. HPV 6 and 11 are commonly throughout of as sexually transmitted strains, however other modes of transmission are possible.

Prevention

Vaccination: The HPV vaccine (Gardasil-9) is recommended for children aged 11-12. The vaccine consists of 2 doses given 6-12 months apart. Individuals between the ages of 15-26 require a third dose. The vaccine can prevent more than 90% of cancers caused by HPV. It protects against strains; 6, 11, 16, 18, 31, 45, 52, and 58.

Differential Diagnosis

Lesion	Strains of HPV	Description	Area	Amount	Image
Verruca Vulgaris	2 & 4	Lesions are pink to white, sessile, and display exophytic fronds	Vermillion border, labial mucosa, anterior tongue	Usually solitary lesions	
Squamous Papilloma	6 & 11	Exophytic projections, cauliflower appearance, pedunculated, color is white to pink/red	Palate, tongue, labial mucosa	Usually occurs with multiple lesions	
Condyloma Acuminatum	6, 11, 16, 18	Sessile, raised skin-colored fleshy papules	Labial mucosa, soft palate, lingual frenum	Usually occurs in multiples (may coalesce into one lesion)	
Multifocal epithelial hyperplasia (Heck's disease)	13, 32	Papillomatous pattern with pale or white surface	Buccal and labial mucosa, tongue	Occurs in multiple lesions	

Case Report

2 year 11 month old female patient presenting to the University of Michigan school of Dentistry with her mother for oral pathology consult.



CC: "she has an overgrowth on her upper gum area, was pointed out at a mobile dental clinic"

Lesion Description

Location: on buccal and lingual papillae around teeth #G and #H extending towards hard palate
Size: larger than typical papilloma, around 20mm x 10mm
Description: Exophytic, papillary-like surface

Most consistent with: viral induced proliferation

Management

Spontaneous resolution within a 2 year time frame occurs about 40%. Biopsy is needed for a precise diagnosis. The goal of management is to decrease viral transmission, as well as for aesthetics and discomfort. Excisional biopsy has a low chance of recurrence. Excision of lesion with CO2 laser, electrotherapy, or cryotherapy is also utilized at times. Treatment of condyloma acuminata can be delayed in children as the lesion often resolves spontaneously in 2 years, if lesion persists more than 2 years, treatment should be considered.

Conclusion

HPV is a common virus with many strains that is very contagious. Due to high potential of spread and potential for malignancy in various strains of HPV, as dental providers it is important to educate our patients on prevention and management as well as proper documentation in dental records to aid in best treatment for each patient.

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Images (numbered in table):

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