Innovations

Condyloma Acuminatum in oral cavity - a case report

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Abstract
Condyloma acuminatum is a sexually transmitted disease, caused by human papillomavirus infection, characterized by a proliferation of stratified squamous epithelium in the genitalia, anus, mouth and pharynx. In the oral cavity, condyloma acuminatum has a predilection for the mucosa of the lip, soft palate, and lingual frenulum, manifesting as single or multiple pink, exophytic, sessile lesions with a firm consistency, of up to 3 cm in diameter. The transmissible aetiological agents of this lesion are papovaviruses. Genital warts have long been recognised and are now thought to be one of the four most common sexually transmitted diseases and second only to genital herpes among the sexually transmissible viruses.The disease is more common in children and teenagers and appears as solitary papules or plaques with pebbled surfaces or as pedunculated papillary lesions. Oral lesions commonly affect the lips, floor of the mouth, lateral and ventral surfaces of tongue, buccal mucosa, soft palate and rarely gingiva. In this case report, we diagnose condyloma acuminatum in a geriatric male who was unaware of the STI on the lower lip region that was treated by complete surgical excision.

Keywords *-1. Condyloma acuminatum; 2.human papilloma virus; 3.sexually transmitted*

Introduction

Condyloma acuminatum is a sexually transmitted disease, that occurs most frequently on the mucous membranes of the perianal and genital areas of men and women (1). It is caused by human papillomavirus infection, characterised by a proliferation of stratified squamous epithelium in the genitalia, anus, mouth and pharynx. In the oral cavity, condyloma acuminatum has a predilection for the mucosa of the lip, soft palate, and lingual frenulum, manifesting as single or multiple pink, exophytic, sessile lesions with a firm consistency, of up to 3 cm in diameter. Globally, human papillomavirus (HPV)

infection is the most common etiologic agent for sexually transmitted infections (2). In the United States, it is estimated that there are greater than 6.2 million cases diagnosed per year (3). However, infections can progress and usually result in condyloma on the genital and perianal regions (4). Condyloma acuminatum is infectious, as 65% of men or women will become infected from their sexual partner (5). The virus can infect epithelium and mucosa resulting in slow, benign proliferations of stratified squamous epithelium frequently observed on the skin, anogenital area and oral cavity (6-8). HPV-induced oral infections are associated with the risk of developing cancer of the oral cavity (9,10).

Case report

A 64 year old male reported with a chief complaint of growth in the lower lip for the past 2 years. History of growth in the lower lip region progressed in size and was associated with itching and not associated with pain. His past medical history revealed that he has known history of hypertension for the past 10 years and under medication. He also had the history of Road Traffic Accident and his right leg amputation was done 59 years back. Personal history revealed no history of tobacco chewing habits such as smoking and no history of alcohol usage. Patient was a retired worker and married. Sexual history not have any significance (Fig 1A). There was no history of self-inflicted from genital area of the patient or spouse. On extra oral examination, an ulceroproliferative lesion in lower lip in relation to the vermillion border with no facial asymmetry, no salivary gland abnormalities and no swollen lymph nodes. (Fig 1B)

Fig.1A Profile

Fig.1B Extra oral

On intra oral examination an extensive proliferative growth showing a mixed pattern of white hyperplastic surface growth with areas of lobulation and pebbled surface. Surface of the growth was rough on palpation with no tenderness. No bleeding or secondary changes from the exophytic growth. The lesion extended from left to right commissure of the lip measuring 4 cm mediolaterally and 3 cm anteroposteriorly. (Fig.2)

Fig .2 - Intra oral

Based on the clinical appearance of the lesion the provisional diagnosis included inflammatory growth, neoplastic, infective and metastatic. Based on history and clinical appearances the lesion could be an inflammatory growth, malignant or benign neoplastic growth like squamous papilloma or verrucous hyperplasia. The third possibility is that the patient does not give the habit of tobacco history, predisposing factors or risk factors like alcohol consumption. So the lesion is considered to be infectious in origin, Pebbled in granular surface is suspicious for viral aetiology. Final possibility is that the lesion on clinical appearance increase in size, not painful, could also point towards possible malignant lesion either primary carcinoma or metastatic lesion. Even though it is a soft tissue , as a baseline investigation , a panoramic x-ray is taken to rule out any possible bony involvement (Fig.3). Incisional biopsy shows hyper parakeratinized stratified squamous epithelium of variable thickness with papillary projections supported by thin fibrovascular connective tissue stroma along with blunt and broad rete pegs (Fig.4).

Fig. 3 - Orthopantogram

Fig. 4 - Papillary surface projections

Wide local excision and flap reconstruction surgery was done. Frozen section revealed as a virally induced lesion. Histological examination revealed koilocytic changes and abundant keratin with keratin crypt. (Fig. 6A,6B).

Fig.5 - Frozen section

Fig. 6A - Koilocytic change

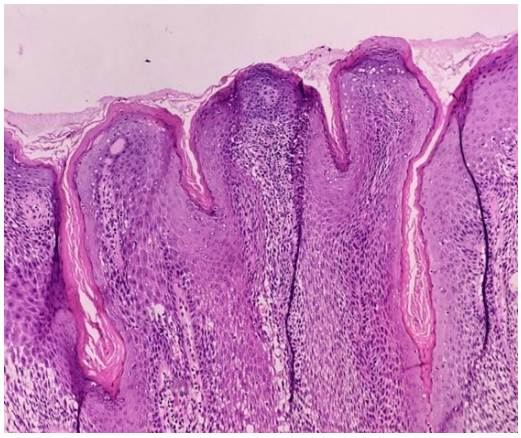

Fig. 6B - Abundant keratin with keratin crypt

Patient underwent excisional biopsy with reconstruction surgery. Post surgical period of the patient was good with no complications. Patient recalled after a few weeks for undergoing further dental procedures such as extractions, scaling and restorative procedures. (Fig.8)

Fig.8 - Post surgery after flap reconstruction

Discussion

Human papilloma virus affects all age groups and condyloma acuminatum is a sexually transmitted infection caused by HPV 6 and 11 in patients who engage in oral sex (11, 12). Transmission of the HPV to the oral cavity can occur through oral sex, autoinoculation, and rarely, perinatal transmission through the birth canal (13, 14). Non-sexual transmission of HPV oral lesions can also occur by autoinoculation from lesions on the genitals via hand to mouth, and perinatal transmission (15). Histopathologic features of oral condyloma acuminatum demonstrate papillomatosis, and the primary diagnostic feature, koilocytosis, which are cells with nonuniform perinuclear halos of variable size and hyperchromicity [16-18). The characteristic feature of CA infection is the presence of koilocytes (Figure 2B) which are virus-infected epithelial cells with perinuclear cytoplasmic vacuolization of cells of the spinous layer of the epithelium. This results in the nuclei becoming pyknotic and cremated surrounded by an optically clear zone (19) .The histopathologic findings in our patient are characteristic of HPV-induced condyloma acuminatum. Differential diagnoses that need to be excluded include normal skin variations (e.g. pearly penile papules, parafrenular glands, Fordyce spots, vestibular papillae, sebaceous cysts), other infectious or inflammatory conditions and other papules (syphilis on mucosal plates, molluscum contagiosum, lichen planus, psoriasis, condyloma lata) and benign or malignant neoplastic lesions (papillomatosis of

vulva, nevi, verrucous carcinoma, invasive carcinoma, seborrhoeic keratosis, Bowen's disease, Buschke-Löwenstein disease, pigmented or unpigmented grade 2–3 intraepithelial neoplasia, lymphangioma). Hailey-Hailey disease and Darier's disease may be misdiagnosed as condyloma acuminatum,as may vulvar neurofibromas. In women, vulvar vestibular papillae may be misdiagnosed as genital warts. Studies that rely on visible evidence of condylomata acuminata may represent only the tip of the iceberg in terms of actual HPV prevalence. This is partly because genital HPV seems to run a fluctuating course, changing from clinical to subclinical over various time intervals. As studies proceed from visible condylomata acuminata to colposcopy/cytology to DNA assays, the the prevalence of HPV infection is shown to increase. Some reports suggest that women are at a higher risk than men for acquiring this infection, although no consensus on this point exists.(20)

Conclusion

A case of oral condyloma acuminatum of a 64 year old male is presented to create awareness of this sexually transmitted infection in the oral cavity of a geriatric patient due to the human papillomavirus. Educating clinicians and senior citizens about the HPV and condyloma acuminatum will create greater awareness that despite their advanced age group, they are not immune to sexually transmitted infections.

Conflict of interest

Authors declare that there is no conflict of interest.

References

1. *World Health Organisation (2007). International Agency for Research on Cancer (IARC). Human Papillomaviruses. IARC. Monogr Eval Carcinog Risk Hum, 90:47-79.*
2. *Cates W Jr (1999). Estimates of the incidence and prevalence of sexually transmitted diseases in the United States. American Social Health Association Panel. Sex Transm Dis, 26:S2-7.*
3. *Dunne EF, Nielson CM, Stone KM, et. al (2006). Prevalence of HPV infection among men: A systematic review of the literature. J Infect Dis, 194:1044-57.*
4. *Scheurer ME, Tortolero-Luna G, Adler-Storthz K (2005). Human papillomavirus infection: biology, epidemiology, and prevention. Int J Gynecol Cancer, 15:727-46.*
5. *Oriel JD (1971). Natural history of genital warts. Br J Vener Dis, 47:1-13.*
6. *Abbey LM, Page DG, Sawyer DR (1980). The clinical and histopathologic features of a series of 464 oral squamous cell papillomas. Oral Surg Oral Med Oral Pathol 49(5):419-428.*
7. *Zunt SL, Tomich CE (1989). Oral condyloma acuminatum. J Dermatol Surg Oncol, 15:591-594.*
8. *Neville BW, Damm DD, Allen CM (2009). Epithelial pathology. In: Textbook of oral and maxillofacial pathology. Ed 3rd. Elsevier, pp. 362- 364.*
9. *de Villiers EM, FaquetC, Broker TR, et. al (2004). Classification of papillomaviruses. Virology, 324:17–27.*
10. *Abbey LM, Page DG, Sawyer DR (1980). The clinical and histopathologic features of a series of 464 oral squamous cell papillomas. Oral Surg Oral Med Oral Pathol 49(5):419-428.*
11. *Anderson KM, Perez-Montiel D, Miles L, et. al (2003). The histologic differentiation of oral condyloma acuminatum from its mimics. Oral Surg Oral Med Oral Pathol Oral RadiolEndod, 96:420-428*

12. *Choukas NC, Toto PD (1982). Condyloma acuminatum of the oral cavity. Oral Surg Oral Med Oral Pathol, 54(4):480-485.*
13. *Butler S, Molinari JA, Plezia RA, et. al (1988). Condyloma acuminatum in the oral cavity: Four cases and a review. Rev Infect Dis, 10(3):544-550.*
14. *Panici PB, Scambia G, Perrone L, et. al (1992). Oral condyloma lesions in patients with extensive genital human papillomavirus infection. Am J ObstetGynecol, 167(2):451-458.*
15. *Anderson KM, Perez-Montiel D, Miles L, et. al (2003). The histologic differentiation of oral condyloma acuminatum from its mimics. Oral Surg Oral Med Oral Pathol Oral RadiolEndod, 96:420-428.*
16. *Nuovo GJ (1990). Human papillomavirus DNA in genital tract lesions histologically negative for condylomata: analysis by in situ, Southern blot hybridization and the polymerase chain reaction. Am JSurgPathol, 14:643-651.*
17. *Nuovo GJ, Gallery F, McConnell P (1992). Detection of amplified HPV 6 and 11 DNA in vulvar lesions by hot start PCR in situ hybridization. Mod Pathol, 5:444-448.*
18. *Zunt SL, Tomich CE (1989). Oral condyloma acuminatum. J Dermatol Surg Oncol, 15:591-594.*
19. *Park JS, Hur S (2013). Up to date: Comprehensive knowledge of human papillomavirus. Expert Rev Vaccines, 12(4):353-355.*