

# Condyloma acuminatum: some aspects

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**Arūnas Rimkevičius,**

**Alina Pūrienė,**

**Mindaugas Gaigalas**

*Institute of Odontology,  
Faculty of Medicine,  
Vilnius University,  
Vilnius, Lithuania*

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Condyloma acuminatum is a rare human papilloma virus (HPV) related to oral lesion. The purpose of the article is to present a 42-year-old patient with condyloma acuminatum and to review references on the subject-related etiological, pathological, diagnostic and treatment aspects.

**Key words:** condyloma acuminatum, oral mucosa, papilloma virus, HIV

## INTRODUCTION

Condyloma acuminatum is a verrucous or papillary growth infectious lesion that is characteristically located in the anogenital region but may also involve the oral mucosa (1). Oral lesions are ordinarily located on the mucosa of the gingiva, cheeks, lips and hard palate or at the site of the contact / traumatic event on non-keratinized tissues (2). The prevalence rate seems to be similar in men and women, and the frequency of clinically apparent cases has been recorded at 1% in the sexually active population. It has been etiologically related to human papilloma virus (HPV) subtypes 6 and 11, sometimes 16 and 18 (3, 4). Nearly 70 different strains of the virus exist, and 8 types are known to cause pre-cancerous or cancerous changes (9). At present, it is impossible to tell from a biopsy specimen which specific type of the virus was diagnosed in the patient, but the biopsy is expected at least to show the presence or absence of any pre-cancerous or cancerous changes. The maturation of various subtypes of HPV within oral and genital mucosal cells is essentially the same. Keratinized cells act as a virus host, with replication linked to the process of keratinization. An increasing frequency of this lesion has been noted in HIV-infected patients. The disease can be transmitted sexually and characteristically grows as a group of numerous pink nodules (5, 6). There are certain strains of the virus

that are not necessarily transmitted sexually, i. e. they may be contracted by merely getting the virus on one's hands. Oral lesions can occur without the accompanying anogenital disease. The exact incubation time is unknown but has been indicated to range from 3 weeks to 8 months by most researchers in the area (8).

In some instances, condyloma acuminatum may resemble focal epithelial hyperplasia. The differential diagnosis should also include condylomas from verruca vulgaris, multiple squamous papillomas and oral mucosal lesions of Cowden's (multiple hamartoma) syndrome (7).

Multiple medical treatments are available to remove condyloma acuminatum; the main strategy is to eliminate as many of the visible lesions as possible until the host immune system can control viral replication. Surgical excision may be performed by cryosurgery, scalpel, electro desiccation, or laser ablation; however, not a single medical treatment technique can be referred to as in all instances preferable in respect of others. Patients should be informed that after treatment the virus may endure and lesion reoccurrences are possible. The first case study of oral condyloma was reported in 1967 by Knapp and Uohara (9).

The disease is sexually transmitted; therefore, the risk of acquiring HPV is primarily dependent on several factors related to sexual activity. These factors include the number of sexual partners, frequency of sexual intercourse, and the presence of genital warts on sexual partners. In most studies, cigarette smoking is a risk factor after controlling for sexual behaviour (7). Latex condoms offer some, but not complete, protection in the transmission of HPV. The most

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Correspondence to: Alina Pūrienė, Žalgiris Clinic, Vilnius University Hospital, Žalgirio 117, LT-08217 Vilnius, Lithuania.  
E-mail: alina.puriene@mf.vu.lt

efficient prevention against condyloma acuminatum is provided by abstinence from sex or by the human papilloma-virus vaccine (18).

The present report describes a 42-year-old man with typical oral mucosa and histopathological features of oral condyloma acuminatum and no HIV infection.

## CASE PRESENTATION

A 42-year-old male applied to the Žalgiris Clinic of Vilnius University Hospital. The patient complained of a group of growing lesions on the anterior part of his tongue. Lesions had been first noticed almost two years ago and never treated. No other symptoms were identified. Quite characteristically, oral examination revealed on the tongue and buccal mucosa a group of multiple oral asymptomatic nodules, pink to red in colour, with thin feet, less broad-based, soft texture reminiscent of cauliflower, variably sized, up to 2–3 cm on the patient's tongue. Three lesions were located at the contact / traumatic side of the tongue (Figs. 1 and 2). The diag-

nostics of such oral lesions was based on the clinical evaluation, followed by cytology which was further confirmed by biopsy. Such oral lesions may be an oral manifestation of HIV infection, thus additional laboratory diagnostics for HIV infection and other sexually transmitted diseases were requested. The tests for other diseases were negative, so the lesions were surgically removed by excisional biopsy under local anesthesia and sutured with Vicryl 5–0 sutures. The histopathological examination of the oral lesion, performed by the National Center of Pathology, revealed an exophytic papillary squamous proliferation, hyperplastic epithelium irregularly thickened by acanthosis and a concentration of parakeratosis, with identification of koilocytes (Fig. 3), without evidence of dysplastic changes. Koilocytes, a hallmark of condyloma acuminatum and HPV infection-modified keratinocytes, were found in the upper spinous and corneal layers.

After surgical treatment, the patient was informed about possible recurrences which are common and presumably are related to the surrounding appearingly normal tissue that may act as an infectious agent.



Fig. 1. 42-year-old man with a group of nodules up to 2 to 3 cm on the tongue

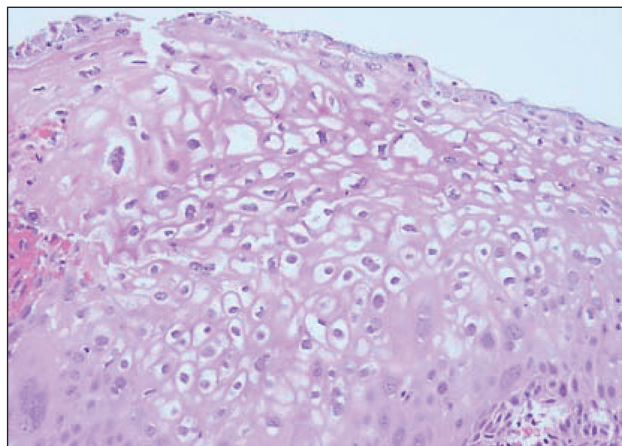


Fig. 3. Photomicrograph (hematoxylin and eosin ×200). Koilocytic cells are visible in the epithelium



Fig. 2. Lesions located at the contact/traumatic side on the tongue and buccal mucosa



Fig. 4. Patient after final healing

## DISCUSSION

The understanding of human papilloma virus disease has significantly improved over the last 20 years, however, leaving a number of key issues unaddressed and requiring some further research, with a view to evaluating the factors relevant for the progression and regression of the disease. HPV is one of the DNA-containing viruses that replicate the flat epithelial cell nuclei. The genome encodes six early open reading frames (E1, E2, E4, E5, E6 and E7) and two late open reading frames (L1, L2). The E genes encode proteins important in the regulatory function, and the L genes encode for viral capsid proteins. This group of viruses can infect many different sites, including the larynx, skin, mouth, esophagus, and the anogenital tract. HPV induces proliferative changes, both benign and malignant, in the stratified squamous epithelium in the epidermis and mucous membranes. Without spontaneous regression, the clinical appearance of condyloma acuminatum is similar to focal epithelial hyperplasia, and the histological distinction between these two conditions also presents difficulties (11). There are no universally accepted microscopic features that can be used to separate these diseases reliably, without clinical view differences; the lesions may be classified reliably only by means of DNA hybridization studies (11).

Recurrences are common for both diseases and perhaps are related to the surrounding normal-appearing tissue that may be harboring the infectious agent. The treatment for these lesions is generally surgical excision by cryosurgery, scalpel, electrodesiccation, or laser ablation with no evidence of any treatment advantage (18). Surgical excision is the most popular method used by doctors, especially when biopsy is indicated (appropriate indications have obtained by means of biopsy).

Sexually active adults aged 15–24 account for approximately one half of new HPV infections each year (12). HPV contributes to 90% of anal cancers and 40% of vulva, vaginal, and penile cancers (13, 14). Squamous cell carcinoma of the oropharynx is associated with HPV in 50% of cases. HPV-16 and HPV-18 subtypes can be recovered in approximately 70% of squamous cell carcinomas of the cervix (15, 16). A human papillomavirus (HPV) quadrivalent vaccine is now available for prevention of HPV-associated dysplasias and neoplasias, including cervical cancer, genital warts (condyloma acuminatum), and precancerous genital lesions (18). Nevertheless, the relation between these viruses and the pathogenic cancer in the oral mucosa remains controversial, and there appears to be more impact of HPV with other chemical and physical carcinogens such as tobacco and alcohol. The importance of multifactor aspects of mouth cancer and also the possible of influence of the HPV and Epstein Barr virus should be highlighted (17).

## CONCLUSION

Oral condylomas are very rare, and a long-term postoperative follow-up is necessary to crosscheck the recurrences of these lesions due to their prognosis. Patients who undergo therapy for condyloma acuminatum should have a clinical examination some 3 to 6 months after treatment, and regular yearly visits are recommended afterwards.

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#### SMALIAGALĖ KONDILIOMA: ATVEJO PRISTATYMAS

##### *Santrauka*

Šio straipsnio tikslas – pateikti 42 metų paciento klinikinį atvejį, kai, ištyrus burnos gleivinės pažeidimus kliniškai ir histologiškai, buvo patvirtinta smaliagalės kondilomos diagnozė, taip pat apžvelgti literatūros duomenis smaliagalės kondilomos etiologijos, patogenezės, diagnostikos ir gydymo klausimais.

**Raktažodžiai:** smaliagalė kondilioma, burnos gleivinė, papilomos virusas, ŽIV