

Warts of HPV Infection, Clinical Manifestation and Management: A Review Article

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Abstract

Introduction: Human papillomavirus (HPV) is one of the most common causes of sexually transmitted diseases in men and women worldwide, especially in developing countries. The prevalence of asymptomatic infection varies from 2 to 44%, depending on the population and region studied. The most common manifestation of HPV in the genital area is anogenital warts or condylomata acuminata. These lesions appear as papules, nodules or soft growths, filiform, pink, sessile or pedunculated. There is usually an exophytic growth similar to cauliflower and is usually asymptomatic.

Discussion: Patients with genital warts usually report itching, burning, pain or bleeding. Sometimes the patient is not aware of the disease. Most genital warts occur on the penis, scrotum, urethral meatus, and perianal area in males. Whereas in women it occurs more often at the vaginal introitus, vulva, perineum and perianal area. Locations where genital warts are rare include the cervix and vaginal walls, pubic area, groin in both men and women. The goals of treatment are to relieve warts and improve symptoms, if any. The appearance of warts can also cause significant psychosocial distress, and removal can eliminate cosmetic problems. In most patients, treatment results in resolution of warts. If left untreated, GWE may not spontaneously disappear, remain unchanged, or increase in size or number. Because warts may resolve spontaneously within 1 year, an acceptable alternative for some people is to discontinue treatment and wait for spontaneous resolution. Available therapies for GWE can reduce, but may not eradicate, HPV infectivity.

Conclusion: Most Warts respond within 3 months of therapy. Factors that may influence response to therapy include immunosuppression and medication adherence. In general, warts located on moist surfaces or in intertriginous areas respond best to topical treatment. A new treatment modality should be chosen when no substantial improvement is observed after complete treatment or if severe side effects occur; Treatment response and therapy-related side effects should be evaluated during therapy.

Keywords: Warts; Clinical Manifestation; Management; HPV.

Introduction

Human papillomavirus (HPV) is one of the most common causes of sexually transmitted diseases in men and women worldwide, especially in developing countries. The prevalence of asymptomatic infection varies from 2 to 44%, depending on the population and region studied. Most HPV infections are transient and some studies show that the majority of sexually active individuals can be exposed to and acquire infection from this virus in some time. HPV infection is more common in young adults, beginning with their sexual activity, with a

subsequent decline in prevalence rates with increasing age, possibly as a result of the development of an immune response to the virus and reduced sexual activity (Smith et al., 2015).

According to estimates from the WHO, the estimated worldwide incidence of HPV infection, low- and high-grade dysplasia is 300 million, 30 million, and 10 million cases. In 2006, the prevalence of HPV in the United States was estimated at 20 million, and an estimated 6.2 million people are newly infected

each year. According to the most robust population-based data for North America, the age-adjusted prevalence of HPV was 16.8%, and rates for HPV types 16 and 18 were 10.6% and 3.5%, respectively. Estimates of the prevalence of HPV in men vary widely with different sampling methods from different genital sites. Similarly, for women, it was found to be highly variable, from 2 to 44%, due to differences in the age of the population sample and varying screening sensitivity (Smith et al., 2015; Bhatia et al., 2013).

Noncogenic HPV types, particularly types 6 and 11, are associated with low grade cervical lesions with external genital warts (EGW). Approximately 90% of EGW is caused by HPV-6 or HPV-11. EGW is the most common clinical manifestation of HPV infection. About 1 to 2% of Canadians who are sexually active as adults have had EGW at least once. About 10% of adults will have contracted EGW during their lifetime. The highest incidence of EGW occurs in women aged 15 to 24 years and men aged 20 to 29 years. In the United States, there are more than 500,000 new cases of EGW each year, and the incidence is increasing every year.

The most common manifestation of HPV in the genital area is anogenital warts or condylomata acuminata. These lesions appear as papules, nodules or soft growths, filiform, pink, sessile or pedunculated. There is usually an exophytic growth similar to cauliflower and is usually asymptomatic (Smith et al., 2015; Coleman et al., 1994).

Discussion

The most common manifestation of HPV in the genital area is anogenital warts or condylomata acuminata. These lesions appear as papules, nodules or soft growths, filiform, pink, sessile or pedunculated. There is usually an exophytic growth similar to cauliflower and is usually asymptomatic. Low-risk HPVs, HPV 6 and HPV 11, were the most detectable in condylomata acuminata lesions. High-risk HPVs such as HPV 16 and 18 and other HPV types can be found isolated or co-infected with HPV 6 and 11. Clinical manifestations of condyloma acuminatum on the lips, tongue or palate are the rarest manifestations of genital HPV infection. Some patients with condyloma have oral, associated genital and anal warts. Four types of genital warts form, namely condylomata acuminata with a cauli-flower appearance, papular warts grayish white and dome-shaped roof, usually 1-4mm in diameter, thick-layered, crusted, or seborrheic keratotic. keratotic warts with a flat surface appearance, macular or slight elevation (Banura et al., 2013).

Clinical Manifestation

Patients with genital warts usually report itching, burning, pain or bleeding. Sometimes the patient is not aware of the disease. Most genital warts occur on the penis, scrotum, urethral meatus, and perianal area in males. Whereas in women it occurs more often at the vaginal introitus, vulva, perineum and perianal area. Locations where genital warts are rare include the cervix and vaginal walls, pubic area, groin in both men and women (Banura et al., 2013; Fernandes & Fernandes, 2018).

Buschke-Loewenstein tumor (giant condyloma acuminatum or verrucous carcinoma of the anogenital region) is a clinically aggressive tumor, with ulcerated cauliflower-like lesions, often associated with fistulas and abscesses. They present exophytic and endophytic growth, local invasion and high recurrence rates. Metastases are very rare, and histologically, benign. These lesions are associated with HPV 6 and 11. This condition is found in rare cases, warts with large size and local destruction but not metastases, which can be called Giant Condyloma, which are often positive for HPV 6 (Quick et al., 1980).

A Differential diagnoses for popular genital warts include skin tags, pearly penile papules, vestibular papillae, Tyson's glands, melanocytic nevus, molluscum contagiosum, Crohn's disease, seborrheic keratoses, lichen planus, lichen nidus and condyloma lata. While the differential diagnosis for genital warts, which are macular in shape and flat surface is, psoriasis, seborrheic dermatitis, balanitis sirsinate from Reiters syndrome, Bowen's disease, erythroplasia de Queyrat of the glans penis, HPV associated with squamous cell cancer. If the diagnosis is still unclear, a biopsy may be performed (Kementerian Kesehatan Republik Indonesia, 2011).

Another manifestation is bowenoid papulosis (BP) referring to multifocal papular lesions on the genitalia with histological features similar to SCC in situ or BD. Its clinical manifestation is characterized by several brownish or erythematous papules located in the anogenital area, which affects mostly young adults with active sex lives. Clinically, it must be distinguished from seborrheic keratosis, melanocytic nevus, and common warts. BP is strongly associated with HPV 16 (Banura et al., 2013).

Apart from the histologic atypia and association with high-risk HPV, the course of BP in males and young individuals is usually benign, with spontaneous regression occurring in most cases. In women, the association with cervical cancer shows a less benign course, both in women who have the lesion and in the individual's partner with BP. In elderly and immunocompromised patients, the evolution also tends to be more aggressive. Other HPV types such as HPV 18, 31-35, 39-42, 48 and 51-54 have been detected in BP lesions (Klaus et al., 2013).



FIGURE 28-6. Keratotic penile warts. (Courtesy of KR Beutner.)



Figure 1: HPV infection in the form of keratotic and macular in the penis (Banura et al., 2013).

General principles of treatment of genital warts

The goals of treatment are to relieve warts and improve symptoms, if any. The appearance of warts can also cause significant psychosocial distress, and removal can eliminate cosmetic problems. In most patients, treatment results in resolution of warts. If left untreated, GWE may not spontaneously disappear, remain unchanged, or increase in size or number. Because warts may resolve spontaneously within 1 year, an acceptable alternative for some people is to discontinue treatment and wait for spontaneous resolution. Available therapies for GWE can reduce, but may not eradicate, HPV infectivity (Latini et al., 2017).

Complications are rare when treatment is administered properly. Persistent hypopigmentation or hyperpigmentation can occur with ablative modalities (eg, cryotherapy and electrocautery) and has been described with immune-modulating therapy (eg, imiquimod cream). Depressive or hypertrophic scars are rare but can occur, especially if the patient does not have enough time to heal between treatments. Rarely, treatment can cause chronic pain syndrome (eg, vulvodynia and hyperesthesia of the treatment site) or, in the case of anal warts, painful bowel movements or fistulas (Leto et al., 2011).

Patients should inform their current partner about having genital warts because the types of HPV that cause transmission of warts can be passed on to partners. Partners should receive counseling messages that participants may already have HPV even though there is no sign of warts, so HPV testing of sex partners of people with genital warts is not recommended. Couples may benefit from a physical exam to detect genital warts and tests for other STDs. No recommendations can be made regarding informing the next sex partner about the diagnosis of genital warts because the duration of viral persistence after the warts have resolved is unknown (McCollum et al., 2014).

Patients were also educated for the high recurrence rate in the first 3 months and were advised to use dual treatment for this. In first-line therapy is not recommended to use expensive and toxic therapy. Treatments for genital warts can be classified as those that are applicable to the patient, or those that must be monitored by a clinician. Patients can use podofilox (in the form of a solution and gel) and imiquimod cream. For those that are applicable to the patient, the patient should be

able to reach the lesion and understand and understand the instructions for use. For those who need a clinician can use topical or excisional treatment. Topicals include: cryotherapy, podophyllin resin, TCA, BCA. Excision treatment includes: curettage, electrosurgery, excision, laser vaporization, interferon injection or 5 fluorouracil/epinephrine gel implant (Trottier et al., 2006).

Podofilox 0.5% in the form of a solution or gel as a mitotic agent purified from podophyllin resin. Unlike podophyllin, podofilox is more stable, and does not require washing after use and causes fewer systemic effects. It was used twice daily with a cotton bud for 3 days then followed without therapy for 4 days for 4 weeks. Imiquimod 5% cream can stimulate the production of interferon and other cytokines, ointment is applied using fingertips 3 times a week at night for 16 weeks, the treated area will be cleaned with soap and water after 6-10 hours of treatment. Imiquimod and podofilox cannot be used perianal, rectal, urethral, vaginal or cervical. Podofilox (podophyllotoxin), podophyllin, and sinecatechin should not be used during pregnancy. Imiquimod appears to pose a low risk but should be avoided until more data are available (Centers for Disease Control and Prevention [CDC], 2010).

Cryotherapy can be used on warts with small areas, by freezing the surrounding area. Most patients require one or two treatment sessions per week it takes about 4-6 weeks. A cryoprobe (modified Q-tip) used liquid nitrogen for each wart. Cryotherapy may be painful and requires local anesthesia. Podophyllin resin contains plant antimitotic, the content is 10-25% solution in ethanol or benzocaine, one to four hours after treatment, should be washed off. Use a cotton swab once to twice a week for up to 6 weeks. Treatment is limited to 0.5 ml or 10 cm² of each treatment to reduce systemic effects such as bone marrow depression. Podophyllin is not used during pregnancy. TCA or BCA in 80-90% solution can be used for the treatment of warts in humid areas.

Treatment weekly and required within 6 weeks, may cause local irritation, so surrounding sodium bicarbonate is required. Warts can be removed by curettage, electrosurgery, excision, scalpel or laser vaporization and local anesthesia is required before excision can be used for warts that are large and wide and can be used during pregnancy. Electrosurgery is a contraindication to the use of cardiac pacemakers. Other treatments include intralesional injection of interferon and 5-flourouracil/epinephrine gel implants (Garland et al., 2009).

Patients with HPV infection can be monitored for the next 3 months. More recurrence of patients occurs in immunocompromised individuals, whereas immunocompetent patients rarely develop recurrences. Prevention can be done by using condoms in sexual behavior and the use of prophylactic HPV vaccines, there are two types, which are derived from the L1 HPV protein. There are two types: Gardasil is quadrivalent protecting against HPV 6, 11, 16 and 18 and Cervarix is bivalent protecting against HPV 16 and 18 (Leto et al., 2011).

One of the ways to prevent HPV infection that is currently available is vaccination with quadrivalent HPV vaccine (to prevent infection with HPV types 6,11 which cause genital warts, and types 16 and 18 which cause malignancies in the anus and genitalia). This vaccine is very Electruseful if given to someone who has never had sex. Can be given to women and men from the age of 9 years to 26 years. The vaccine is given in 3 doses; the second dose is given at an interval of 2 months after the first injection, the third dose is given 6 months after the first injection. Because the price is still considered expensive, HPV vaccination is not yet a national program, but it is already available in private health facilities (Banura et al., 2013; Leto et al., 2011).

Conclusion

Most Wharts respond within 3 months of therapy. Factors that may influence response to therapy include immunosuppression and medication adherence. In general, warts located on moist surfaces or in intertriginous areas respond best to topical treatment. A new treatment modality should be chosen when no substantial improvement is observed after complete treatment or if severe side effects occur; Treatment response and therapy-related side effects should be evaluated during therapy.

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