Introduction

Genital warts (condyloma acuminatum , venereal warts) are common highly contagious benign epithelial lesions occurring on the genitals, perianal area, and inguinal folds, and are caused by human papillomavirus (HPV) ***(Brodell et al., 2007) .***

Warts are not exclusive to external genital tissues. Sexual exposure can be associated with warts in the urethra and at the meatus, cervix, vagina, anus, and oral cavity ***(Wiley et al., 2002).***

More than 100 HPV types have been described, with approximately a third of these types predominantly infecting the genital epithelium. Approximately 90% of GWs are caused by HPV 6 or 11, and up to 70% of cervical cancers are caused by HPV 16 or 18 , and HPV 6, 11 , 16 , 18 cause one-third of low-grade cervical lesions. Therefore, only 4 HPV types are responsible for the majority of the burden of HPV disease ***(Munoz et al.,2003) .***

In the United States , Genital HPV is the most common sexually transmitted infection, with an estimated 80% lifetime risk of acquiring HPV at least once ***(Baseman & Koutsky ,2005)*** .

The incidence of GWs has steadily increased since the early 1970s in every country where such data have been evaluated. In the United States , the incidence of GWs increased from 13/100,000 in the years 1950-54 to 106/100,000 in the years 1975-78 , and clinicians reported a 450% increase in the treatment of GWs from 1966 to 1984 ***(Baseman & Koutsky ,2005)*** .

In a study on the prevalence of HPV infection among a highrisk group of Egyptian women, PCR in-situ hybridization of cervical biopsies revealed an approximately 70% infection rate ***(Abdel Aziz et al., 1998)***, but no data are available on the infection rate in the general population ***(Abdel Aziz et al., 2006) .***

The majority of genital warts are described as " cauliflower-like " condyloma acuminata , or genital papillomas . GWs can also be dome-shaped , papular, pedunculated , or flat, and they can occur as single lesions, in clusters, or as plaques ***(Habif , 2004).***

HPV infection, unlike many genitourinary infections, is not usually associated with immediate symptoms such as itching , burning ,and vaginal discharge . Rather , the majority of those infected with HPV will not develop clinical disease or symptoms because the host immune system resolves most infections. In one study, only 24.8% of women infected with HPV 6 or 11 actually developed GWs.***(Mao et al.,2003)***

The greatest risk factors for infection are gender, age, and sexual activity, with the highest rates being consistently found in sexually active women less than 25 years of age ***(Winer et al.,2003) .***

Histologically , a wart demonstrates acanthotic epidermis with papillomatosis , hyperkeratosis and parakeratosis . Koilocytes are often observed , and the rete ridges often form thick bands extending extensively into the underlying, highly vascular dermis ***(Lowry & Androphy , 2003) .***

Not only are GWs unsightly , but their persistence and inconstant response to treatment cause anxiety and introspection in the patient and give the patient the burden of multiple clinic attendances. ***(McMillan & Ogilvie , 2004)***

There are multiple treatments for GWs , but none that directly eradicate HPV. Of these, the Centers for Disease Control and Prevention of Sexually Transmitted Disease Guidelines recommend BCA *(bichloroacetic acid*), TCA*(trichloroacetic acid*), cryotherapy podophyllin resin and surgical removal as first-line provider-applied therapies, and podofilox , imiquimod and sinecatechins as first-line patient-applied therapies ***(CDC Sexually Transmitted Disease Guidelines. ,2010) .***

Primary prevention approaches for GWs have been limited in the past to abstinence, mutual long-term fidelity, or use of condoms. Until recently, the first 2 options were believed to be the only effective approaches because condom use has now been shown to reduce the risk of acquiring HPV by 70% only in a population of young women ***(Winer et al.,2003) .***

The most effective tool for primary prevention is undoubtedly vaccination with an quadrivalent HPV vaccine containing HPV types 6, 11, 16, and18. The potential for prevention of over 90% of all genital HPV lesions in young girls and women not previously exposed will be the most immediate vaccination benefit , while prevention of 70% of cervical cancers is the most dramatic and lifesaving benefit of this vaccine ***(Frazer et al., 2006) .***