



Genital Warts, Etiology, Signs, Treatment and Prevention

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Abstract

Genital warts, scientifically known as Condylomata acuminata, are the consequences of Human Papilloma Virus (HPV), probably one of the most occurring sexually transmitted infections. Human Papilloma Virus is non enveloped dsDNA virus and its predilection site are epithelium of genital organs. It belongs to the viral family Papoviridae, which replicates in the basal layer of genital epithelium. The genital mucosa may be infected anywhere including, penis, scrotum, vulva, vagina, cervix, anus, pubic and perianal area. Four subtypes of HPV 16, 18, 31, and 33, are known to cause cervical cancers, while HPV 6 and 11 cause 90% cases of genital warts. Genital warts may commonly appear as lesions on penis, scrotum, vulva, vagina, cervix, anus, pubic and perianal area. The genital warts may be treated using 0.5% solution of Podophyllin, 25% solution of Podophyllotoxin, Imiquimoid 5% cream, Trichloroacetic acid 60-90% and Podophyllin resin 15%. For the purpose of prevention of the disease vaccines are also available which are parentally administered.

Keywords: Podophyllin; Podophyllotoxin; Imiquimoid; Trichloroacetic acid

Introduction

Genital warts, scientifically known as condylomata acuminata, are the consequences of Human Papilloma Virus (HPV), probably one of the most occurring sexually transmitted infections. It is significantly public health problem because, it prone females at risk of cervical cancer as well as anal malignancy [1,2]. Warts are visible on external genitalia in the form of skin tags and lesions. Genital warts typically appear as flesh colored lesions on external genitalia and appear as small bumps on penis, scrotum, vulva, vagina, anus, pubic and perianal area, these may be flat or verrucous on the keratinized skin. Internal warts may also be produced in the vagina, cervix, urethra and even mouth [3].

Etiology

Human Papilloma Virus is non enveloped dsDNA virus and its predilection site are epithelium of genital organs. It belongs to the viral family Papoviridae, which replicates in the basal layer of genital epithelium. The genital mucosa may be infected anywhere including, penis, scrotum, vulva, vagina, cervix, anus, pubic and perianal area [4] Uptill now 120 subtypes of HPV are discovered out of which 16, 18, 31, and 33 are high risk subtypes are confirmed for 4 cervical cancers while HPV 6 and 11 are rarely known to cause cervical cancers but are responsible for 90% cases of genital warts [5]. The viral genome comprises of six Early open reading frame

genes i.e. E1, E2, E4, E5, E6 and E7 which are coded for regulatory function of the HPV while, two Late reading frame genes known as L1 and L2 are responsible for encoding viral capsid proteins [6].

Signs and Symptoms

The incubation period of the HPV ranges from 3 weeks to 8 months before it is clinically manifested. Most often the clinical manifestation and signs appear in 2 to 3 months of initial contact [7] The genital mucosa may be infected anywhere by HPV including the epidermis layer of penis, scrotum, vulva, vagina, cervix, anus, pubic and perianal area. These typically appear as flesh colored lesions and small bumps on the external genitalia, commonly referred as skin tags.

Treatment and Prevention

The primary goal of therapy is the removal of lesions or genital warts. Treatment may be through chemical agents or ablative. The warts are most successfully treated using 0.5% solution of Podophyllin or 25% solution of Podophyllotoxin. Moreover, Imiquimoid 5% cream, Trichloroacetic acid 60-90% and Podophyllin resin 15% [8]. Commonly available vaccines for the prevention of genital warts are HPV2 Cervarix® (GlaxoSmithKline) and HPV4 Gardasil® (Merk and Co.)

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