Condyloma Accuminata Management Guidelines

reported by Dr. T. Y. Ho

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Human papilloma virus - virology

DNA sequencing has demonstrated that the human papilloma virus (HPV) is not a single virus, but represents a large family of at least 100 genetically related types. More than 20 genetically different HPV types may infect the anogenital area. These can be further classified into the "low-risk" HPV types (HPV 6, 11), which cause benign genital warts; and the 'high-risk' HPV types (HPV 16, 18, 31, 33, 35), which are associated with anogenital intraepithelial neoplasia (IN) and with cervical cancer. Patients who have genital warts can be infected simultaneously with multiple HPV types, with co-existence of both high-risk and low-risk types. Patients presenting with genital warts represent just the tip of the iceberg, as a much larger population have subclinical infection.

Transmission route

Sexual route of transmission is responsible for the occurrence of genital warts in 99% of the cases. Perinatal transmission of the virus from mother to baby can happen and autoinoculation of finger warts to anogenital area is sometimes possible. There has been no case report showing any evidence for, or even suggestion that genital warts can be transmitted by towels, hand-shakes, door-handles, toilet seats, underwear, swimming pools, and saunas.

Prevalence and course of genital HPV infection

Seroprevalence studies showed that the risk of HPV infection increases with the number of sexual partners. The risk of infection by HPV 16 is about 4% per life-time partner, with a saturation plateau level at about 25-60%.

About 30% of young women infected by HPV 16 will have transient cervical intraepithelial neoplasia (CIN) within the first one to two years of infection. Clearance is achieved in 70% of the above cases in the following one year, and 90% within two years. Persistent infection is present in about 15%, which carries a potential of progression to cervical cancer, especially in those aged above 30-35.

The natural course of genital HPV infection can be made up of phases of latency and reactivation. Genital warts usually develop within two to three months after infection but in some cases they first develop years after infection.

About one-third of patients will have recurrences which usually take up to two years to settle regardless of treatment choice. However, spontaneous regression can occur in some patients within one to three years.

Diagnosis

The diagnosis of genital warts is mainly clinical. The lesions can be mutifocal, mutiforme and multicentric. Genital warts tend to appear in areas that are traumatised during intercourse. In uncircumcised men, the preputial cavity is most commonly affected while in circumcised men the shaft of the penis is often involved. In females, lesions are most commonly found at the fourchette, labia minora and labia majora. The urethral meatus is affected in 20-25% of males and 4-8% of females. Warts in the anal canal usually do not go beyond the dentate line.

The use of 5% acetic acid can help identify and delineate the extent of the lesions. However, indiscriminate use should be discouraged, as false-positive results are common.

Treatment

For genital warts, no single treatment is ideal. The choice of treatment should be based on clinical expertise, patients' preference and research evidence. Home

therapies include podophyllotoxin (0.15% cream or 0.5% solution), imiquimod (5% cream); office therapies for the primary care physician include surgery, cryotherapy and trichloroacetic acid.

Podophyllotoxin is a purified extract of podophyllum plant and works by inhibiting mitotic division. Podophyllotoxin home treatment comprises self-application of a 0.5% solution twice daily for three days, followed by four to seven rest days. A hand-held mirror is often useful for female patients. About 70-90% of the warts will disappear after one to two courses of treatment, and about 60-80% of patients will be free of warts within one month of treatment. The recurrence rates with podophyllotoxin are in the range of 7-38%. Urinary meatal warts and warts on keratinised skin are often refractory. Up to 50-65% of patients using podophyllotoxin experience transient local irritation which can usually be tolerated. The 0.15% podophyllotoxin cream has been shown to be as effective as the 0.5% podophyllotoxin solution, and has the advantage of easier application especially for female patients. Compared with podophyllin, podophyllotoxin is better standardised, being made up of only one single active ingredient and has a longer shelf life (more than two years). 0.5% podophyllotoxin was also shown to be have a higher efficacy in the treatment of genital warts than 20% podophyllin.

Immiquimod (5% cream) is another home-based therapy for genital warts. It is an immune response modifier and it was shown that wart clearance could be achieved in 56% of patients (77% in women and 40% in men). The clearance time is shorter in females (8 weeks) compared with males (12 weeks). The recurrence rate is about 13%.

Trichloroacetic acid (TCA) 80-90% solution can be used to treat genital warts due to its caustic action. As it is not an anti-mitotic agent it can be safely used in pregnancy. TCA is most suitable for treating small accuminate or papular warts, but less efficacious for keratinised or large warts. The initial response rate is 70-81% but recurrence rate is up to 36%. When used optimally, a shallow ulcer forms that heals without scarring. Overzealous use may cause excessive pain, deep ulcerations and scarring.

Various surgical procedures (electrosurgery, laser, currettage, scissors excision) can be performed for genital warts. A local anaesthetic cream like EMLA should be applied for 10 minutes before infiltrating the area with topical anaesthetic solution prior to the procedure to minimise pain. Depigmentation can be a complication in dark-skinned patients. Regardless of the technique, 20-30% of patients will develop new lesions.

Generally, genital warts clear up with therapy within one to six months, regardless of choice of treatment, although disease persists in up to one-third of patients.

Counselling

Patient counselling is important in the treatment of genital warts and needs to be non-judgemental and supportive. Explanation should be given about the nature of the disease and therapy expectations, including the long latency periods after transmission and possibility of virus reactivation. General information on sexually transmitted diseases and their prevention should also be provided, especially for young people.

Patients should be encouraged to use barrier protection with new sexual contacts until successful treatment has been completed. Condom use in stable relationship may not be useful in preventing genital warts as the partner would have already been exposed to the infection by the time of consultation. Patients should be advised that coital rest during the course of therapy might reduce therapy related symptoms such as pain or discomfort.

Learning points:

The transmission route of genital warts is predominantly sexual, with no evidence of transmission via fomites or social contact. The long latency after infection and the recurrence nature of the disease should be noted especially when counselling patients.