

GENITAL WARTS

Revised May 15, 2006

Genital and anal warts are caused by certain types of human papillomavirus (HPV), usually type 6 or 11. Different types, especially HPV-16, 18 and others, cause most cases of cervical and other anogenital squamous cell cancers and dysplasia. Genital HPV infection is a highly prevalent STD, occurring in up to 50% of young sexually active adults. The large majority of HPV infections of all types are subclinical and are detectable only by the use of HPV DNA tests. These guidelines address only anogenital warts and not anogenital cancers, or the diagnosis and management of subclinical HPV infection. Warts of the face or mouth may be a sign of advanced HIV infection or other impairment of cell-mediated immunity.

A. Diagnosis

Visual diagnosis is the norm: Typical "cauliflower" or hyperkeratotic, papular lesions, usually involving the external genitalia, perineum, or perianal area; atypical lesions may be papular, filiform or plaque-like.

B. Treatment of external anogenital warts and small, easily accessible meatal and vaginal mucosal warts.

1. Provider-applied therapies

- a. Liquid nitrogen: Treat only visible warts; freeze each lesion 10-15 seconds or until white, allow the lesion to thaw, then repeat 1-2 times; this should be repeated weekly until warts resolve. Multiple treatments are usually necessary; safe in pregnancy.
- b. Podophyllin resin 25% in tincture of benzoin, applied in conjunction with liquid nitrogen therapy.

Podophyllin should be washed off 2 hours after the first application; if there is no unusual pain or inflammation, each subsequent application may remain for 4-8 hours, Podophyllin should not be applied to warts located on vaginal, anal canal and oral mucosa; contraindicated in pregnancy.

2. Patient-applied therapies

- a. Imiquimod 5% cream once daily (usually at bedtime) 3 times weekly for up to 16 weeks; the treated area should be

cleansed 6-10 hours after each application; safety in pregnancy has not been determined.

- b. Podofilox 0.5% twice a day for 3 days, followed by 4 days without treatment; repeat this weekly cycle as needed for up to 4 weeks; avoid in pregnant women.
 3. Consider referral of selected patients to an appropriate specialist for possible surgical excision, laser therapy, or other treatment: widespread anogenital warts, cervical warts, giant condylomata, mucosal warts (other than small, easily accessible vaginal or meatal lesions), and warts not responding to the above measures over 3-4 weeks of repeated therapy.
- C. Treatment of genital warts is of uncertain medical or public health benefit, especially in asymptomatic patients. Patients should be treated only if they are interested in returning for treatment until their warts clear or purchasing a self-applied treatment. Because the treatment is particularly ineffective in patients with abnormal immunity (e.g., HIV infection) these patients should be counseled that treatment should be prioritized to situations where warts are symptomatic or enlarging.
- D. Pregnancy: Cryotherapy is the treatment of choice for pregnant women; neither podophyllin (or Podofilox) nor Imiquimod is considered to be safe in pregnant women. In general, care of genital warts should be assumed by the patient's primary care provider as part of prenatal care.
- E. Follow-up: PRN if warts reappear following clinical resolution; re-treat once weekly until visible warts resolve; advise patient that recurrences are common and to return for evaluation of any new lesion.
- F. Sexual activity, partner management, and counseling
 1. Advise sexual abstinence with new partners until warts are resolved; abstinence with ongoing partners is optional, because most such partners can be presumed to be infected.
 2. Patients should be advised to refer symptomatic partners for evaluation for genital warts. Routine evaluation of asymptomatic partners is optional and should be individualized, but in most cases the partners of persons with first episodes of newly diagnosed genital warts should be advised to attend for clinical evaluation, screening for other STDs, and counseling.
 3. Inform patients and partners that most genital HPV infections are subclinical and remain so, without visible warts or development of

cancer or precancerous changes; that different HPV types cause genital warts compared with cancer and precancerous dysplasia; that most sexually active persons are or have been infected with one or more HPV types; and that consistent condom use may help prevent transmission, but that condoms are not completely effective.