Genital Warts

Manitoba Health
Public Health
Communicable Disease Control Unit

Case Definition

A viral disease manifested by a variety of skin and mucous membrane lesions (see below). A wart is an epidermal tumor caused by the human papillomavirus (HPV).

Reporting Requirements

Genital warts are not reportable in Manitoba.

Clinical Presentation/Natural History

Condylomata acuminata, known as "venereal warts" or "pointed condylomas", are warts with a soft, cauliflower-like, fleshy appearance. They are often seen in moist areas in and around the genitalia, around the anus and within the anal canal. Areas that are liable to trauma during intercourse allow entry of the papillomavirus and may be the first to display symptoms. They must be differentiated from condyloma lata of secondary syphilis. Men with urethral condylomas may complain of urethral bleeding or discharge, or of a reduction in urinary stream, but many are symptomless. Because they are inconspicuous, it has been suggested that urethral condylomas may be an important source of infection to others. At least 50% of women with vulvar warts show evidence of cervical HPV infection.

Flat papillomas are smooth, slightly elevated lesions, usually multiple and varying in size from 1 mm to 1 cm. They are often found on the cervix. Laryngeal papillomas occur on the vocal cords and the epiglottis.

Both laryngeal and genital warts occasionally become malignant. There is evidence implicating HPV as a major factor in the development of cervical, vaginal, vulvar, anal and penile squamous cell cancers. HPVs may also have a role in the pathogenesis of oral, laryngeal and esophageal carcinomas.

Etiology

Human papillomavirus (HPV) of the papovavirus group of DNA viruses, the human wart viruses. At least 70 types have been identified with probable specific manifestations. HPV types 16, 18 and others have been associated with cervical intraepithelial neoplasia (CIN); and types 6 and 11 with laryngeal papillomata.

Epidemiology

Many of the epidemiologic features of HPV infection remain to be determined, and precise estimates of the incidence, prevalence and natural history of this infection are unavailable.

Reservoir: Humans

Transmission: Exposure to HPV is usually by direct sexual contact with a partner with a clinical or subclinical infection. Maternal to child transmission can also occur.

Occurrence:

General: Anogenital warts are the most common of the viral sexually transmitted infections in North America and appear to be increasing rapidly in incidence. It is estimated that approximately 500,000 people each year acquire symptomatic genital warts.

Canada: In 1993, approximately 1,300 new cases of invasive cervical cancer were diagnosed and about 400 deaths occurred from this disease.

Incubation Period: Approximately two to three months; range is one to 20 months.

Susceptibility and Resistance: Genital warts are seen in sexually active young adults. The incidence of warts is higher in immunosuppressed persons, smokers and possibly with long-term users of oral contraceptives. Some studies have demonstrated that cofactors such as uncircumcised male sexual

partners, dietary factors and previous infection with cytomegalovirus may play a role in the acquisition of HPV; other studies have failed to demonstrate an association.

Period of Communicability: Unknown, but probably at least as long as the visible lesions persist. HPV is probably communicable during stages of subclinical infection. In newborns, exposure to HPV in the birth canal is strongly associated with the development of both anogenital and laryngeal warts.

Diagnosis

The diagnosis of warts is usually made clinically by physical examination. Molluscum contagiosum, particularly in its more atypical presentations, may be difficult to distinguish from anogenital warts.

Clinical detection of anogenital warts in females can be enhanced by the use of colposcopy with prior application for three to five minutes of 3-5% acetic acid, which causes the lesions to turn white.

Although there is ample evidence that the development of genital cancer, particularly cervical, is greatly increased in the presence of "high-risk" HPVs, the clinical value of HPV typing has not been established. Therefore the management of diseases related to HPV infection should not rely on HPV typing.

Histologic examination of a biopsy or cytology specimen is diagnostic. There is no culture available for HPV. The laboratory diagnosis and typing are usually by molecular techniques.

Wart biopsies and/or cells from cervical scrapings may be submitted to Cadham Provincial Laboratory for detection, confirmation and typing of HPV. Specimens should be submitted in a small amount of sterile, phosphate-buffered saline (PBS). Dry swabs will be accepted; however formalin-fixed specimens are not acceptable. Specimens will be batched and referred for analysis to the Canadian Science Centre for Human and Animal Health in Winnipeg.

Key Investigations

- Interview case for history of exposure, risk assessment, contacts and promotion of safer sex practices.
- Test for other STDs, including HIV infection.

Control

Management of Cases:

- Women should have a yearly Pap smear.
- A Pap smear showing severe reactive cellular changes with inflammation should be repeated within three months.
- The presence on Pap smear of atypical squamous cells of undetermined significance or of squamous intraepithelial lesions (SIL) require prompt referral for gynecologic evaluation and care.
- Cases should be interviewed for history of exposure, risk assessment, contacts and promotion of safer sex practices. Other STDs should be tested if indicated.
- Appropriate counseling should be offered.
- Genital warts in the anogenital region of prepubertal children require that sexual abuse be considered.

Treatment:

- There is no effective therapy for HPV infection that is specific or consistently produces long-term success. Treatment of the affected person will decrease the amount of wart virus available for transmission. Warts usually regress spontaneously within months to years.
- For readily accessible genital warts, treatment may include one of the following:
  - Application of 10-25% podophyllin in tincture of benzoin (except in pregnant females). This formulation is toxic and well absorbed through vaginal epithelium; only small areas should be treated at a time (1-2 cm^2).

  - Cryotherapy with liquid nitrogen.
  - Electrodessication.
  - Interferon therapy (but effect may be transient).
- For widespread genital lesions, 5-fluorouracil has been helpful.
- For laryngeal papillomata:
  - Surgical removal or laser therapy is required. To prevent their development in newborns, Caesarean section may be considered if genital papillomatosis is very extensive. This is extremely rare in Manitoba.
  - Vaccines are not currently available for human disease.
- For women with cervical warts, dysplasia must be excluded before treatment is started. Management should be carried out in consultation with an expert.

Management of Contacts:

- Current sexual partner(s) should have a routine STD evaluation. Any genital warts that are identified should be treated.

Preventive Measures:

- At present, no effective methods of prevention are available for warts, other than avoiding contact with infectious lesions.

Additional Resources

- American Sexual Health Association (ASHA) website: www.ashastd.org and booklets:
  - HPV and Cervical Cancer Screening
  - A Patient Guide: HPV in Perspective
- *Canadian STD Guidelines, 1998 Edition*. Available from Audiovisual and Publications Department, Manitoba Health, telephone (204) 786-7112, fax (204) 772-7213.
- STD/HIV Information Line (Winnipeg RHA), 940-2200
- AIDS/STD Information Line (Village Clinic/Nine Circles Community Health Centre)
  Winnipeg, 945-2437
  Outside Winnipeg, 1-800-782-2437
- Facts of LIFE Line (Sexuality Education Resource Centre)
  Winnipeg, 947-9222
  Outside Winnipeg, 1-800-452-1957