

# External Genital Warts



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## Jack's Case

Jack, a 19-year-old male presents complaining of peri-anal warts for 1 month. He asks how he could have warts around the anus when he is only having sex with women. He has been sexually active with women since the age of 16 and denies ever having sex with men. He reports using condoms less than 50% of the time and has had a steady female partner for the last six months. On examination, he has pink, cauliflower-like growths in the peri-anal area (see Figure 1). No other lesions are visible on the external genital skin.



Figure 1: Pink, cauliflower-like peri-anal warts in a heterosexual male.

Infection with HPV is one of the most common sexually transmitted infections. It is estimated that 70% of the adult population will have at least one HPV infection in their lifetime.<sup>1</sup> Since HPV is not a notifiable infection in Canada, the incidence and prevalence are unknown except from studies in specific populations.<sup>2</sup> Although cervical cancer is the most important consequence of HPV infection, the virus can also cause external genital warts (EGW) and cancers in males.<sup>3</sup>

More than two-thirds of individuals infected with HPV have a transient infection that is later cleared by the host immune response. EGW or condyloma acuminata affect an estimated 1% of the population and are caused by low oncogenic risk HPV types 6 or 11.<sup>4</sup>

Penile-vaginal and penile-anal intercourse are the predominant modes of genital HPV transmission.<sup>3,4</sup> Nonpenetrative sexual contact may also result in transmission of HPV. Most EGW in males are found on the penis or anus and can occur in males who do not report sex with other men, since, once infected with HPV, the warts can appear anywhere on the genital skin.<sup>3</sup> EGW

can also be associated with psychosocial stigma, depression, and lower quality of life.

Anal cancers are rare in the general population but are increasing in both males and females at 2% per year.<sup>3</sup> Anal EGW are also associated with anal cancers likely due to co-infection with multiple HPV types including oncogenic types.<sup>3</sup> Anal cancers are more common in men who have sex with men (MSM) with a history of receptive anal intercourse and in immunocompromised individuals, particularly those with HIV.

## *How are external genital warts diagnosed?*

The diagnosis of EGW is clinical and involves close inspection of the lesions. A magnifying glass may be helpful to view the lesions. EGW may present in a variety of ways.<sup>5,4</sup> The most common clinical appearance is cauliflower-like lesions (see Figure 1). Lesions may vary in colour from skin coloured to pink, and they may be dome shaped, flat topped, or keratotic. A

Table 1

### Patient Applied Treatment Modalities for External Genital Warts

Patient Applied	Indications	Application Method	Efficacy
Imiquimod 5% cream (Aldara)	<ul style="list-style-type: none"> <li>External HPV infections in non-pregnant adults</li> </ul>	Apply to lesions 3 times a week for up to 16 weeks	<ul style="list-style-type: none"> <li>Clearance: 37–54% after 16 weeks</li> <li>Recurrence: 13–19%</li> </ul>
Podofilox 0.5% gel, solution, or cream	<ul style="list-style-type: none"> <li>External lesions</li> <li>Contraindicated for use in vagina, urethra, perianal areas, cervix, pregnancy</li> </ul>	Apply twice daily for 3 consecutive days, with 4 days of no therapy each week for a max of 4 weeks	<ul style="list-style-type: none"> <li>Clearance: 45–77% within 4–6 weeks</li> <li>Recurrence: 4–38%</li> </ul>

higher index of suspicion for neoplasia should be maintained for immunocompromised patients, atypical lesions, and those that are pigmented or recalcitrant to treatment; such cases should be biopsied. The use of acetic acid on genital skin for diagnosis of subclinical HPV is not recommended, because acetowhite changes are not specific for HPV. Typing for HPV is not helpful for the diagnosis of warts.<sup>6</sup>

#### *What is the best treatment for external genital warts?*

Treatment is only recommended for clinically apparent genital warts. However, if there are co-existing

squamous intraepithelial abnormalities, then management should be based on the histopathologic findings. The primary purpose of treatment of EGW is to ameliorate symptoms and remove visible warts for cosmetic purposes; it is unclear whether treatment reduces infectivity.<sup>5</sup> Many warts will regress spontaneously over time. All treatments are associated with a high risk of recurrence and no currently available treatment completely eradicates the virus.

Specific treatment for EGW should be guided by patient preference and can be divided into patient- and provider-applied therapies (See Tables 1 and 2).

Table 2

### Provider Applied Treatment Modalities for External Genital Warts

Provider Applied	Indications	Application Method	Efficacy
Cryotherapy	<ul style="list-style-type: none"> <li>External lesions</li> <li>Safe in pregnancy</li> </ul>	Typically 2–4 freeze thaw cycles of cryotherapy repeated every 1–2 weeks for 6–10 weeks	<ul style="list-style-type: none"> <li>Clearance: 71–79%</li> <li>Recurrence: 38–73% by 6 months</li> </ul>
Surgical excision	<ul style="list-style-type: none"> <li>Extensive warts</li> <li>Warts recalcitrant to other therapies</li> </ul>	Special equipment (e.g., scalpel, cutterage, scissors, and expertise)	<ul style="list-style-type: none"> <li>Clearance: 35–72%</li> <li>Recurrence: High, undefined</li> </ul>
Loop electrosurgical excision	<ul style="list-style-type: none"> <li>Perianal condylomata</li> <li>Penile and anal verge lesions</li> </ul>	Special equipment and expertise	<ul style="list-style-type: none"> <li>Clearance: 90–96%</li> </ul>
Trichloroacetic acid (TCA)	<ul style="list-style-type: none"> <li>External lesions only</li> <li>Safe in pregnancy</li> </ul>	Apply 3 times per week for a maximum of 4 weeks	<ul style="list-style-type: none"> <li>Clearance: 63–70%</li> <li>Recurrence: High, undefined</li> </ul>
Podophyllin solution, 10–25%	<ul style="list-style-type: none"> <li>Best suited for small external lesions</li> <li>Contraindicated in pregnancy</li> <li>Not recommended for internal use</li> </ul>	Apply to lesion(s) and repeat 1–2 times per week; not to exceed 1–2 mL per visit	<ul style="list-style-type: none"> <li>Clearance: 20–77%</li> <li>Recurrence: 23–65%</li> </ul>
Laser ablation	<ul style="list-style-type: none"> <li>External lesions recalcitrant to other therapies</li> </ul>	Special equipment and expertise	<ul style="list-style-type: none"> <li>Clearance: 60–95%</li> <li>Recurrence: 60–77%</li> </ul>

Imiquimod may help induce immune “memory” and prevent future recurrence.<sup>4</sup>


Women with obvious abnormalities of the cervix upon visual inspection or with certain cervical abnormalities upon cytology should be referred for colposcopy following local guidelines. Males with intraurethral warts should undergo urethroscopy.

### *Can external genital warts be prevented?*

The quadrivalent HPV vaccine (Gardasil®) vaccine was licenced in Canada for females in January, 2006 and for males in February, 2010. Although a bivalent vaccine is available in Canada (Cervarix®), it is currently only licensed for use in females, and does not protect against HPV 6 and 11. If administered prior to sexual debut, the quadrivalent vaccine is safe and highly effective in preventing infection with HPV types 6, 11, 16, and 18 in females as well as males.<sup>7,8</sup>

## Take-home Messages

- Anal condylomata can occur in heterosexual males
- Regular and consistent condom use can reduce the acquisition of HPV infection
- Treatment of external genital warts is for visible lesions, but it does not eradicate infection with HPV

Condom use reduces, but does not eliminate, the risk of HPV transmission, due to skin to skin contact outside the area of the condom.<sup>9</sup> Regular use of condoms can alter the natural history of some HPV lesions in men.<sup>10</sup> In partners infected with the same HPV type, condom use results in regression of flat penile lesions. 

#### References

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