

VIROLOGY LECTURE

By: Dr. Mohammed Arif

Associate Professor &

Consultant Virologist

Head of the Virology Unit

College of Medicine & KKUH

Genital Warts (Condylomata acuminata) Or (Venereal Warts)

1- Viral etiology:

- Genital warts are caused by certain types of human papiloma viruses
- There are more than 100 types of HPV
- More than 30-types are associated with genital warts
- Types 6, 11, and 42 are associated with raised, rough, easily visible genital warts.
- Types 6, 11, 16, 18, 31, and others are associated with flat warts.
- Types 16, 18, 31, 35, 39, 45, 51, and 52 have strong to moderate association with cervical cancer.

Genital Warts
(Condylomata acuminata)
Or (Venereal Warts) (Continued)

2- Virology:

- Family Papovaviridae
- Genus papillomavirus
- Small
- Enveloped
- Icosahedral
- ds-circular DNA genome

3- Transmission:

- They are transmitted sexually
- Requires skin to skin contact
- Transmitted during vagina, anal, and oral sex with infected sexual partner
- Very contagious

Genital Warts (Condylomata acuminata) Or (Venereal Warts) (Continued)

4- Risk factors for Genital Warts:

These factors increase the risk of acquiring genital warts and cervical cancer:

- Multiple sexual partners
- Early sexual activity, before the age of 18 years.
- Having another sexually transmitted disease (HIV, herpes)
- Weak immune system
- Poor nutrition and hygiene

Genital Warts (Condylomata acuminata) Or (Venereal Warts) (Continued)

Treatments:

- 1) Cryotherapy: freezing with liquid nitrogen to remove warts.
 - Best for small warts
- 2) Electrocautery:
 - Warts are destroyed with an electric current
 - Local anesthesia is required
 - Best for small and single warts.
- 3) Laser vaporization: intense laser beam is used to destroy the warts.
 - Best for intensive warts on the genitalia

Genital Warts (Condylomata acuminata) Or (Venereal Warts) (Continued)

Treatments:

4) Surgical excision:

- Warts are removed surgically
- Good for large warts

5) Topical treatment:

- Applied directly to the warts
- Need daily or weekly repeated treatments
- Used only for external warts
 - 20% podophyllin anti-mitotic solution
 - 0.5% podofilox solution
 - 5% 5-fluorouracil cream
 - Tri chloroacetic acid (TCA).

Genital Warts (Condylomata acuminata) Or (Venereal Warts) (Continued)

Vaccine:

- A new vaccine has been developed to prevent genital warts infection and cervical cancer:
 - The vaccine contains HPV types 6, 11, 16, 18
 - The vaccine is recommended to sexually non active female (age 11 & 12)

Preventive measures:

- Avoid sexual contact with individuals who have genital warts. Practice safer sex by having one sexual partner.
- Condom is **NOT** fully protective

Genital Warts (Condylomata acuminata) Or (Venereal Warts) (Continued)

Lab Diagnosis:

- 1) By detection of the viral – DNA using PCR.
 - No serological diagnosis: Kits
 - No convenient cell culture
- 2) Immunocytochemistry can be used to detect major capsid protein (not for typing)
- 3) Colposcopy is used to visualize flat genital warts
- 4) Abnormal Pap-smear is indicative of HPV infection and cervical cancer.

Genital Warts (Condylomata acuminata) Or (Venereal Warts) (Continued)

Signs & Symptoms:

- Anogenital warts usually appear 3-4 months after exposure.
- Typically, they appear on the vulva, cervix, prepuce, penis, scrotum or inside the vaginal or rectum.
- Lesions on the external genitalia are easily recognized. They are raised, rough, flesh-colored, that may occur singly or in clusters. If not treated, they grow and enlarge to form cauliflower-like.
- Lesions inside the vagina and cervix are flat and not easily visible with the naked eye (colposcopy).
- the majority of infected individuals have no visible warts.

Genital Warts (Condylomata acuminata) Or (Venereal Warts) (Continued)

Other Symptoms Include:

- Itching, localized pain and discomfort, increased vaginal discharge, abnormal vaginal bleeding.
- Recent study using PCR, shown that: HPV-DNA is present in 99.7% of cervical cancer specimens.
- This data indicate that HPV infection is necessary caused of cervical neoplasia.