









### VIRAL INFECTIONS: HUMAN PAPILLOMAVIRUS (HPV) AND WARTS

- Human Papillomavirus (HPV) is a group of more than 200 related viruses, some of which cause warts on the skin and mucous membranes.
- HPV is a DNA virus.
- Different types of HPV are associated with different types of warts, which can appear on various parts of the body.
- It is caused by direct contact with infected skin or surfaces.

Common Types of Warts and associated HPV types (summary table below)

- HPV 1: Deep plantar wart
- HPV 2: Superficial plantar warts
- HPV 3: Flat warts
- HPV 4: Common warts
- HPV 5: EDV (Epidermodysplasia verruciformis)
- HPV 6: Anogenital warts
- HPV 7: Butcher's warts

#### **Clinical Features**

Common Warts (Verruca Vulgaris)



- HPV Types: 2, 4
- Clinical Features:
- · Appear as rough, raised bumps, usually on the hands and fingers
- Painless
- Flesh-colored, but can be darker or lighter than the surrounding skin
- Often have a cauliflower-like surface
- Can spread to other parts of the body through scratching or picking
- Like tiny pebbles, these warts are rough and hard but generally harmless





# **CLINICAL FEATURES**

·Plantar Warts

1E



- HPV Types: 1 (Deep plantar warts), 2 (Superficial plantar warts)
- Clinical Features:
- Found on the soles of the feet
- Appear as thick, callus-like growths with a central black dot (blood vessel)
- Can be painful, especially when walking or standing
- Often flattened due to pressure from walking
- May grow inward due to pressure, making them more painful
  Like walking on a tiny rock, these warts can be uncomfortable.
- Flat Warts (Verruca Plana)



- HPV Type: 3
- **Clinical Features:**
- Small, flat-topped and smooth warts
- Commonly found on the face, neck, hands, and legs •
- Tend to appear in clusters in one area •
- Skin-colored or slightly brownish ٠
- Like a roti, these warts are flat, small, and spread out.





## **CLINICAL FEATURES**

• Filiform Warts

1E

- HPV Types: 1, 2, 4
- Long, narrow, finger-like projections
- Commonly found on the face, around eyes, lips and neck
- Painless
- Can look like small, elongated tags hanging from the skin.

#### Genital Warts



- HPV Types: 6
- Clinical Features:
- Soft, flesh-colored growths in the genital or anal area
- Can be flat, raised or cauliflower-like in appearance
- Often painless but can cause discomfort, itching or bleeding
- Spread through sexual contact
- Can be solitary or multiple and can cluster together
- Like soft little cushions in hidden areas.
- Butcher's Warts
- HPV Types: 7
- Warts that appear on the hands of people who handle meat, such as butchers.
- Similar to common warts but are associated with occupational exposure.
- Can spread more easily due to cuts and abrasions from handling raw meat.





# **CLINICAL FEATURES**

Epidermodysplasia Verruciformis (EDV)

F



- HPV Types: 5, 8
- Rare genetic disorder characterized by susceptibility to HPV, leading to widespread flat warts and . reddish-brown macules.
- Often progresses to squamous cell carcinoma in sun-exposed areas.

#### Management

- Cryotherapy: Freezing the wart with liquid nitrogen
  Salicylic Acid topically to gradually peel away the wart
  Electrosurgery or Laser Therapy: Used for stubborn or large warts
  Imiquimod Cream: Boosts the immune system to fight the virus, often used for genital warts.

| HPV Type | Associated Wart Type                     | Location  | Clinical Features                              |
|----------|--|---|--|
| HPV 1    | Deep plantar wart                        | Soles of the feet                               | Thick, callus-like with<br>a central black dot |
| HPV 2    | Superficial plantar<br>warts             | Soles of the feet                               | Superficial, less thick<br>may be less painful |
| HPV 3    | Flat warts                               | Face, neck, hands, legs                         | Small, flat, smooth<br>warts                   |
| HPV 4    | Common warts                             | Hands, fingers                                  | Rough, raised,<br>cauliflower-like bum         |
| HPV 5    | Epidermodysplasia<br>verruciformis (EDV) | Widespread,<br>especially sun-<br>exposed areas | Flat warts, reddish-<br>brown macules          |
| HPV 6    | Anogenital warts                         | Genital and anal areas                          | Soft, flesh-coloured,<br>may cluster           |
| HPV 7    | Butcher's warts                          | Hands (especially in<br>meat handlers)          | Rough, raised, simila<br>to common warts       |

