



Warts and its management.

Dr.P.T.Kenny



General information.

- Warts are caused by papilloma viruses, which are small DNA viruses.
- Human papillomas have been typed by DNA hybridisation into **55** different types, with different types having different specificity for different anatomical sites, and giving rise to distinctive clinical conditions.

Table 1: The main clinical lesions caused by different HPV types

HPV-1	Deep plantar warts, common warts
HPV-2	Common warts, flat warts, mosaic plantar warts
HPV-3	Flat warts
HPV-4	Common warts, plantar warts
HPV-5	EV
HPV-6	Genital warts, laryngeal papillomas
HPV-7	Common warts in meat handlers
HPV-8	EV
HPV-9	EV, kerato-acanthomas
HPV-10	Flat warts
HPV-11	Laryngeal papillomas, genital warts
HPV-12	EV
HPV-13	Focal epithelial hyperplasia
HPV-14, 15	EV
HPV-16	Genital warts, bowenoid papulosis, cervical dysplasia, cervical carcinoma
HPV-17	EV
HPV-18	Genital warts, bowenoid papulosis, cervical dysplasia, cervical carcinoma
HPV-19 to 25	EV
HPV-26 to 29	Common warts, flat warts
HPV-30	Laryngeal carcinoma, genital warts
HPV-31, 32	Genital warts, bowenoid papulosis, cervical dysplasia, cervical carcinoma
HPV-33	Cervical carcinoma
HPV-34	Bowenoid papulosis, Bowen's disease
HPV-35	Cervical dysplasia, cervical carcinoma
HPV-36	EV
HPV-37	EV, kerato-acanthomas
HPV-38	EV
HPV-39	Bowenoid papulosis, cervical carcinoma
HPV-41	Flat warts
HPV-42	Genital warts, bowenoid papulosis, cervical dysplasia, cervical carcinoma
HPV-43, 44	Genital warts, laryngeal papillomas
HPV-46, 47	EV
HPV-48	Bowenoid papulosis, Bowen's disease
HPV-49, 50	EV
HPV-51 to 54	Genital warts, bowenoid papulosis, cervical dysplasia, cervical carcinoma
HPV-55	Genital warts, laryngeal papillomas



Incidence.

- Warts occur at any age.
- They are rare in infancy and early childhood.
- Peak incidence is between the ages of 12 and 16 years.
- 70% are common warts, 24% are plantar warts and 3,5% plane warts.



Incubation period.

May range from between a few weeks to more than a year, with regard to common and plantar warts.

For genital warts, the incubation period is usually 3 weeks to 8 months after sexual contact.



Mode of transmission.

- Warts may be spread by direct or indirect contact. Skin trauma and maceration predispose to inoculation of the virus, e.g. the spread of finger warts to the lips in nail biters, shaving spreading warts in the beard area, and plantar warts being acquired from swimming pool or shower-room floors.
- Anogenital warts in adults are usually, but not always, sexually transmitted.



Immunity to HPV.

- Wart specific IgG antibodies may play a role in wart regression but cell mediated immunity (CMI) is regarded as the principle mechanism for the rejection of warts.
- Thus, in persistent disorders of CMI the incidence and severity of warts, and the incidence of HPV-related malignancy, are increased.
- In AIDS patients the incidence of warts is 5–27%. Vaginal and intra oral warts (many due to HPV-7) may be seen in this group.



Clinical types.

- **1) Common warts:** mainly due to HPV 2, but also types 1 and 4.
- They occur most frequently on the backs of the hands and fingers and on the knees, but can occur anywhere on the skin. New warts may form at sites of trauma (Koebner phenomenon).
- 65% of warts regress spontaneously within 2 years, with neither the patient's age nor the number of warts present, influencing the course.



Clinical types, continued...

- **2) Plane (flat) warts:** mainly due to HPV 3 and 10.
- They are most commonly found on the face, shins and dorsa of the hands of children. Regression of plane warts may occur without simultaneous disappearance of coexisting common warts. Resolution is HPV-type specific.



Clinical types, continued...

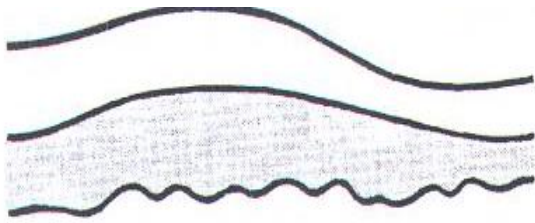
- **3) Plantar warts:** mainly due to HPV 1,2,4.
- They usually have a rough keratotic surface studded with punctate black dots (representing thrombosed capillaries) and a peripheral rim of thickened skin.
- Plantar warts commonly occur beneath pressure points, e.g. the heel or metatarsal heads and may cause pain with weight bearing.
- The duration of plantar warts is variable. In prepubertal children 30 – 50% disappear spontaneously over a 6-month period of observation, but in older children and adults, and in patients with hyperhidrosis or orthopaedic defects, regression may be delayed for several years.



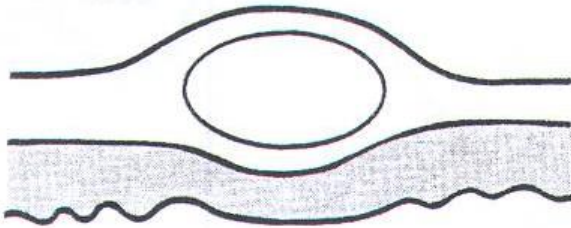
Plantar warts must be distinguished from callosities and corns.

- **A callus** is a localised area of hyperkeratosis related to some form of pressure and friction.
- **A corn** is a small, localised, conical thickening, which may resemble a plantar wart but which gives a different appearance on paring.

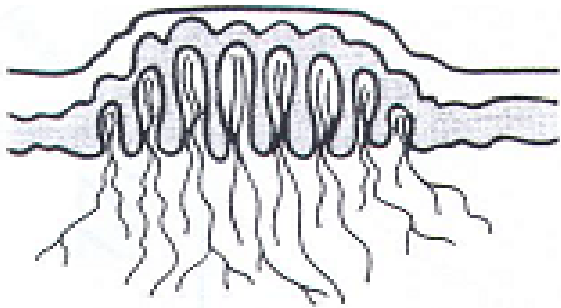
Skin lesion



Callus



Corn

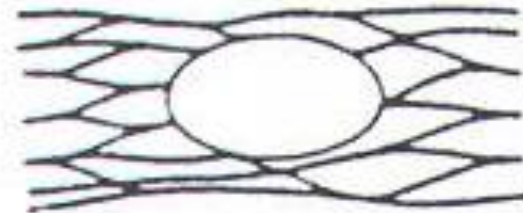


Wart

Effect of paring



Normal skin



Avascular corn with
concave surface



Exposes bleeding points



Treatment...

- There are many treatment protocols for dermal warts.
- Most of these treatments “amuse the patient while nature cures the disease”. Since warts cause little morbidity and usually resolve spontaneously, the doctor and patient may choose to leave them alone. Hand warts and plantar warts are most commonly seen.



Treatment, continued...

- Warts can be cauterized, frozen, treated chemically or surgically, etc.
- **Plantar warts** should only be removed as a last resort, because a scar may later form and cause more discomfort than the wart would do.
- First confirm the diagnosis of a plantar wart. This is easily done by pairing down the lesion and observing the characteristic “black dots”.
- Under local anaesthetic block the lesion can then be cauterized and curetted with a Volkman spoon, or it can be excised.



Treatment, continued...

- Should you decide to use a ***chemical substance*** like Posalfilin® ointment, which contains podophyllum resin and salicylic acid, you need to take special care.
- The following method to treat plantar warts as well as other dermal warts is recommended:
- It is important to prevent the ointment making contact with normal skin.
- Protect the skin surrounding the wart by painting an area with a radius of about 1,5cm, with the wart as the centre of the circle, with Cutex nail polish. Let it dry completely.
- The wart in the centre of this circle is not painted!
- Using an earbud or a matchstick, the Posalfilin® ointment is applied to the wart.
- Now cover the wart and the painted area with a piece of e.g. Elastoplast®.



Remarks...


- Take care to prevent any direct contact between yourself and the ointment!!
- Repeat the whole procedure every 5 days until the wart falls off.
- Do not only re-apply the ointment without again painting the skin with nail polish.
- Freezing / cryotherapy is another treatment option:



Histofreezer

*Draagbaar
Cryochirurgisch Systeem
Système Cryochirurgical
Portatif*

*Satzumstellung / Composition
Zusammensetzung / Contenu
Dimethyl ether, Propane, Isobutane*

LOI	4404
	2003-10

*Lees voor het gebruik
de bijluster
Lire la notice d'emploi avant
le traitement*

Liquid nitrogen cryosurgical treatment units

Cortex Technology's CryoPro series of liquid nitrogen cryosurgical treatment units from Genop Healthcare come in two sizes with a variety of accessories for both spray and contact freezing.



The high cure rate along with excellent cosmetic results make liquid nitrogen cryosurgery the most versatile cryosurgical treatment available at a very low cost per treatment.



ADVANTAGES

- Very short freeze times
- Portable, handheld and refillable
- New valve system for optimal safety and durability
- Teflon gaskets to prevent freezing of unit
- Supplied with 6 interchangeable spray tips
- Probes and tips fully compatible with other liquid nitrogen units
- New withdrawal device to fill treatment unit

**Low-cost,
high cure
treatment**



**KWIKREACH
MEDICAL
EQUIPMENT**

Genop Healthcare (Pty) Ltd
Contact: Dianne Rix or
Drien Brinkworth
Tel: (011) 545 6600
Fax: (011) 315 6008
dianne@genophc.co.za
www@genophealthcare.co.za













Genital warts:

- A patient-applied topical treatment is available. Aldara Cream 5% contains 5% imiquimod, which is an immune-response modifier. It is believed to increase cytokines production and thus stimulates the immune response to help the body fight the virus. The cream is applied three times weekly by the patient for a maximum period of 16 weeks.

Penile warts





Figure 1. Papillae around the corona

Pearly penile papules are common skin coloured, domed shaped papules or papillae that occur in rows around the corona.

Pearly penile papules tend to be most common in uncircumcised men and are often confused with genital warts. These are a normal anatomical variant and asymptomatic, and require no treatment.