

Warts, corns and calluses

Non-Prescription Drugs and Parapharmaceuticals

Dr Rawan Abudalo

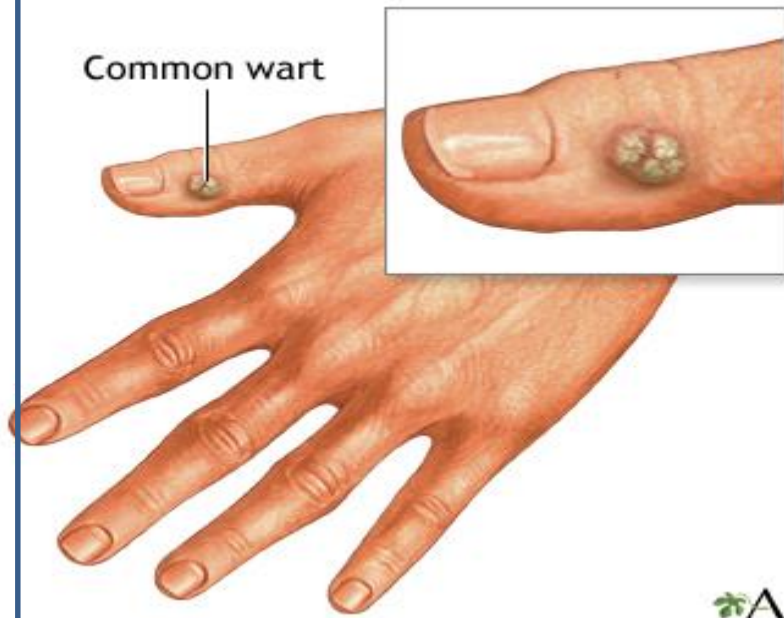
Department of Clinical Pharmacy and Pharmacy Practice

Faculty of Pharmaceutical Sciences

Hashemite University

Warts and verrucae

- **Warts** are small, rough growths that are caused by infection of skin
- cells with certain strains of the **human papillomavirus (HPV)**.
- Appear anywhere on the skin but are most commonly seen on the hands and feet.
- **Verruca** (also known as a plantar wart) is a wart on the sole of the foot.
- Up to 30% of warts disappear by themselves within 6 months. Most will disappear without any treatment within 3 years.



ADAM.



ADAM.



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What you need to know

1. Age

occur in children and adults , more common in children, and the peak incidence is found between the ages of **12 and 16 years**.

2. Appearance

- appear as raised fleshy lesions on the skin with a roughened surface; the most common type is said to resemble a cauliflower.
- The appearance can vary, mostly related to where they occur on the body.

Appearance of warts



Warts

- You are more likely to get one of these viruses if you cut or damage your skin in some way.
- Wart viruses are contagious. Warts can spread by contact with the wart or something that touched the wart.
- Warts can grow on any part of your body.

3. Location

- The palms or backs of the hands are common sites for warts, as is the area around the fingernails.
- Verrucae on the sole of the foot may be present singly or as several lesions.

4. Types

- **Common warts (verrucae vulgaris):** These common warts typically develop on the hand, and fingers

4. Types:

- **Plantar warts (verrucae plantaris):**

Occur on the plantar surface, or bottom of the foot.

- **Periungual warts**

Occurs around and underneath the nail beds.

- **Flat warts** are most commonly seen on the face, the back of the hands, and lower legs.

- **Anogenital warts** are caused by a different type of HPV and require medical referral for examination, diagnosis and treatment.

Types of Warts



flat wart



plantar wart



common wart



oral wart



genital wart



periungual wart

5. Duration and history

- It is known that most warts will disappear spontaneously within a period of 6 months to 2 years.
- The younger the patient, the more quickly the lesions are likely to remit as immunity to the virus develops more rapidly.
- Any unusual change in the appearance of a wart should be treated with suspicion and referral to the doctor is advised

Prevention

- If you know of anyone who has warts:
 1. Avoid skin contact with this person.
 2. Avoid using his towel and ensure that you clean your skin well regularly in order to avoid transfer of the infection.
- Don't brush, clip, comb or shave areas that have warts, in order to avoid spreading the virus.

Prevention

- Keep your hands as dry as possible, because warts are more difficult to control in a moist environment.
- Wash your hands carefully after touching your warts.
- Use footwear in public showers or locker rooms

When to refer

- Changed appearance of lesions: size and colour
- Bleeding
- Itching
- Genital warts
- Facial warts
- Immunocompromised patients
- Pregnancy and breastfeeding

- **Treatment timescale**
- Treatment with OTC preparations should produce a successful outcome within 3 months; if not, referral may be necessary.

Treatment aim

- to reduce the size of the lesion by gradual destruction of the skin.

Continuous application of the selected preparation for several weeks or months is needed, and it is important to explain this to the patient for any benefit to be achieved.

Surrounding healthy skin may need to be protected during treatment

Treatment- Salicylic acid

- Acts by softening and destroying the lesion by chemically burning.
- Preparations are available in a variety of strengths, sometimes in collodion-type bases or paints that help to retain the *salicylic acid* in contact with the wart.



Treatment- Salicylic acid

- Salicylic acid concentrations of 17% or less are generally used for common warts, and higher concentrations (i.e., 40%) are used for plantar warts.
- In most instances, warts will begin to improve within a couple of weeks of treatment with salicylic acid.

Treatment- Salicylic acid

- Treatments containing *salicylic acid* should be applied once a day, usually at night. The treatment is helped by prior soaking of the affected hand or foot in warm water for 5–10 min to soften and hydrate the skin, increasing the action of the *salicylic acid*.
- Adverse effect:
salicylic acid preparations is in causing chemical burns and irritation of the unaffected skin. Protection of the surrounding skin can be achieved by applying a layer of *petroleum jelly* to prevent the treatment from making contact with healthy skin

Cryotherapy

- By freezing the warts → the warts should fall off after 10 days after application
- Using a mixture of **dimethyl ether** and **propane** for the self-treatment of common and plantar warts.
- Available in an application system for home use.



Cryotherapy

- In most instances, warts will resolve after one treatment with cryotherapy. Self-treatment may be repeated every 2-3 weeks.
- The treatment should not be used by people with diabetes or by pregnant women. It should not be used on warts that are adjacent to finger nails (periungual).

Corns and calluses

Corns

- Calluses and corns are areas of thick, hardened, dead skin (hyperkeratosis at the area with excessive pressure) .
- They may appear grayish or yellowish, be less sensitive to the touch than surrounding skin, and feel bumpy.
- become a problem when they grow large enough to cause pain.
- It is not a serious condition.

CORNS



CALLUSES



What causes them?

- Calluses and corns are caused over a period of time by repeated pressure or friction on an area of skin. The pressure causes the skin to die and form a hard, protective surface.

What causes them?

- Calluses and corns are not caused by a virus and are not **contagious**.
- women are more susceptible because women often wear shoes that create friction on the feet, such as high-heeled or thin-soled shoes.

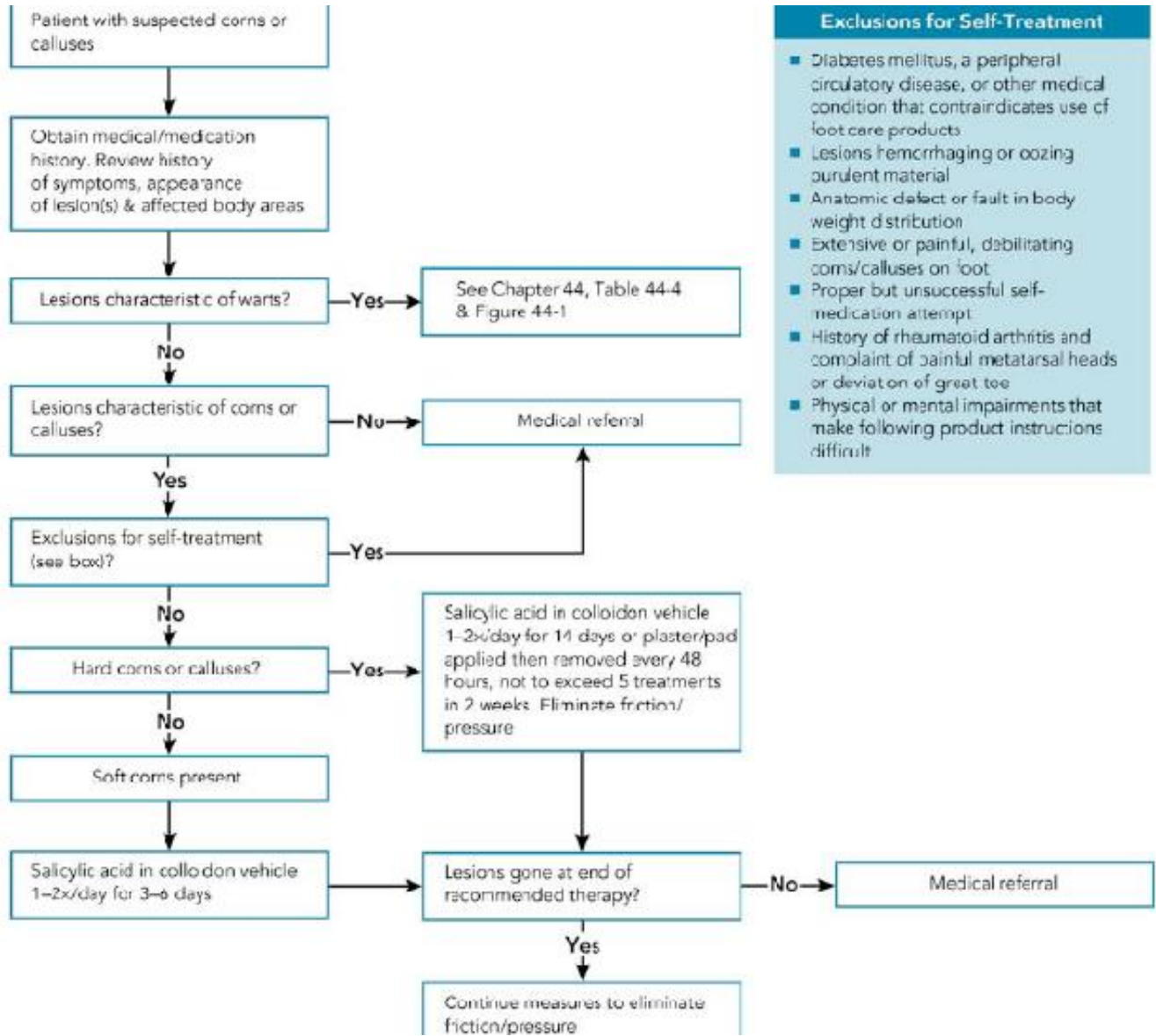
The goal of self-treatment:

To provide symptomatic relief.

Remove corns and calluses.

Prevent their recurrence by correcting the underlying cause

Self care of corns and calluses



Exclusions for Self-Treatment

- Diabetes mellitus, a peripheral circulatory disease, or other medical condition that contraindicates use of foot care products
- Lesions hemorrhaging or oozing purulent material
- Anatomic defect or fault in body weight distribution
- Extensive or painful, debilitating corns/calluses on foot
- Proper but unsuccessful self-medication attempt
- History of rheumatoid arthritis and complaint of painful metatarsal heads or deviation of great toe
- Physical or mental impairments that make following product instructions difficult

Product Recommendation

- First line treatment (no pharmacological): epidermabrasion or hydrocolloid plasters.
- Second line treatment (pharmacological) : plasters and liquids applications containing salicylic acid .

Epidermabrasion

- A physical process that involves removal of the horny skin by the use of a mechanical aid and does not involve the use of pharmacological agents.
- Several gently abrasive materials and appliances are available such as emery boards and pumice stones.

Epidermabrasion



Emery boards



Pumice stones

- Wear socks that fit. Loose socks can bunch up and cause pressure.
- Use protective padding



- Take care of the feet by Washing them regularly, and using lotion to keep them from drying out. Dry skin makes it easier for a callus to crack and bleed.
- Usage of metatarsal bar inserts for your shoes, to distribute your weight more evenly over the ball of your foot.



Hydrocolloid and hydrogel plasters

- They form a soft, protective gel-like cushion that rehydrates and softens the hardened tissue



Keratolytic agents_salicylic acid

- It acts in 2 ways:

1. Decreases keratinocyte adhesion.
2. Increases water binding which lead to hydration of keratin

Thereby, soaking in warm water for 5 min before applying salicylic acid is recommended

Keratolytic agents_salicylic acid

- The concentration of salicylic acid in products used for this purpose ranges from about 11% to 40% depending on the type of formulation such as:
- Plasters contain high concentrations of salicylic acid (usually 40%) in a semi-solid base.
- The plaster should be removed within 48 hours.
- Occasionally local irritation or dermatitis (skin rash) may occur ..
- If happens remove the plaster and clean and dry the area ... don't repeat the treatment



Keratolytic agents_salicylic acid

- The approved concentration in collodion-like vehicle is 12%-17%.
- maintaining the medication at the site of application and prevent maceration of the skin.
- Disadvantages of collodions : they are extremely flammable and volatile



TABLE 44-2 Guidelines for Treating Warts with Salicylic Acid Product

- Wash and dry affected area before applying the salicylic acid product.

Salicylic Acid 5%–17% in Collodion Vehicle

- Apply product to wart no more than twice daily. Morning and evening are usually the most convenient times.
- Apply solution 1 drop at a time until affected area is covered. Do not overuse the product.
- If the medication touches healthy skin, wash it off immediately with soap and water.
- Allow the solution to harden so that it does not run. Repeat this procedure as needed for up to 12 weeks.
- After use, cap the container tightly to prevent evaporation, which would cause the active ingredient to become more concentrated.
- Store product in an amber or light-resistant container away from direct sunlight or heat.

Salicylic Acid 12%–40% Plaster/Pads

- If using plaster, trim it to follow the contours of the wart. Apply plaster to the skin, and cover it with adhesive occlusive tape.
- If using discs with pads, apply appropriately sized disc directly on the affected area, and cover disc with the pad.
- Apply and remove plasters and pads every 48 hours as needed for up to 12 weeks.

TABLE 44-4 Differentiation of Corns, Calluses, and Warts

Criterion	Corns	Calluses	Warts
Location	Usually over bony prominences of fourth and fifth toes, with hard corns occurring on tops of toes and soft corns in toe webs	Usually over weight-bearing areas of foot	Anywhere virus can gain entry into skin
Signs	Raised, sharply demarcated, hyperkeratotic lesion with central core; hard corns are shiny and soft corns are white	Raised, yellowish lesions with irregular margins and diffuse thickening of skin; may be broad based or have central core; no disruption of normal skin ridges	Slightly scaly, rough papules or nodules, cauliflower-like in appearance; may occur alone or in groups; plantar warts disrupt normal skin ridges
Symptoms	Pain	Pain	Pain if warts appear on weight-bearing areas of foot
Quantity/severity	Can vary from few millimeters to 1 cm	Can vary from few millimeters to several centimeters	Can vary from few millimeters to 3 cm
Timing	Variable onset; lesions may progressively enlarge	Variable onset; lesions may progressively enlarge	1- to 24-month incubation period after inoculation, with average period of 3–4 months
Cause	Friction from tight-fitting hosiery/shoes	Friction from tight-fitting hosiery/shoes; walking barefoot; structural biomechanical problems	Human papilloma viruses
Modifying factors	Well-fitted hosiery/footwear relieve signs and symptoms	Well-fitted hosiery/footwear relieve signs and symptoms	Cryotherapy or salicylic acid; proper hygiene