SASKATCHEWAN REGISTERED NURSES' ASSOCIATION

RNs WITH ADDITIONAL AUTHORIZED PRACTICE
CLINICAL DECISION TOOL
DECEMBER 1, 2016

WARTS (VERRUCAE) ADULT & PEDIATRIC

DEFINITION

Warts (verrucae) are benign epithelial tumours that can occur on any epithelial surface of the body and produce characteristic lesions at various anatomic sites.

Types of warts:

- Common warts (*verruca vulgaris*) - rough, minimally scaly papules and nodules on the hands, face, arms, and legs.
- Flat warts (*verruca plana*) - rough, flat-topped, minimally scaly papules on the face and legs.
- Plantar warts or weight-bearing warts (*verruca plantaris*) - painful inward-growing papules and plaques on the bottom of the feet.
- Anogenital warts (*condyloma acuminata*) - subtle skin-coloured flat warts or moist, pink to brown, cauliflower-like lesions around the genital region and anal opening.

IMMEDIATE CONSULTATION REQUIRED IN THE FOLLOWING SITUATIONS

- Underlying immunodeficiency should be considered in any otherwise healthy child with extensive *Human papillomavirus* (HPV) infection.
- Any child with genital warts should be immediately referred.

CAUSES

Warts are caused by HPV, which is a subgroup of papovaviruses.

- There are over 200 types of HPV.
- Humans are the only reservoir for HPV.
- HPV can be transmitted by direct skin-to-skin or mucous membrane contact and by fomites (e.g., showers).
- Autoinoculation from common warts at another site should be considered as a possible mode of spread.

PREDISPOSING AND RISK FACTORS

- Use of communal showers
- Schools and day care centres
- Crowed housing

HISTORY

- Obtain exposure history from family members and caretakers

- Determine the duration of the warts
- Elicit any history of immunodeficiency

PHYSICAL FINDINGS

- Common warts
  - May be solitary or multiple and range in size from millimetres to centimetres
  - Linear patterns may be seen from autoinoculation
  - Filiform or threadlike warts may be seen in the skin creases and on mucous membranes
- Flat warts
  - Small, rough, flat-topped, slightly scaly papules
  - Size ranges from 1-3 mm
- Plantar warts
  - Painful, in-growing, hyperkeratotic papules, and plaques on the plantar surface of the feet
  - As a result of trauma from weight-bearing, the surface of these lesions may have small black dots from thrombosed blood vessels.
- Anogenital warts
  - May be skin-coloured flat warts or moist, pink to brown, cauliflower-like lesions in the skin creases and around the vagina and anal openings
  - In adolescent and adult males, the warts are localized to the penis. The lesions are brown to slate-blue, pigmented macules and papules.

DIFFERENTIAL DIAGNOSIS

- Flat warts:
  - Moles
  - Epidermal nevi
  - *Tinea versicolor*
  - Milia
  - *Molluscum contagiosum*
  - Folliculitis
  - *Lichen nitidus*
  - *Lichen planus*
- Plantar warts:

  - Corns
  - Calluses
  - Foreign bodies
- Anogenital warts:
  - Irritant contact dermatitis
  - *Molluscum contagiosum*
  - Skin tags
  - Hemorrhoids

COMPLICATIONS

- Irritation and secondary infection of common warts may result in itching and pain.
- HPVs have been associated with melanoma, keratoacanthoma, squamous cell carcinoma, leukoplakia and oral carcinoma.

INVESTIGATIONS AND DIAGNOSTIC TESTS

- Tests are rarely needed.

MAKING THE DIAGNOSIS

- Warts can be differentiated from corns or calluses after paring down superficial surface.
- Warts do not retain normal skin lines of hands and feet.
- Warts have a typical punctate pattern of multiple pinpoint blood vessels.

MANAGEMENT AND INTERVENTIONS

- Wart and surrounding area should be cleansed with rubbing alcohol and then debrided to remove scales prior to applying treatment.
- Topical irritants and duct tape are inexpensive and easy to use at home:
  - Keratolytics - topical irritants such as lactic acid, salicylic acid, other α-hydroxy acids, urea, benzoyl peroxide, and tretinoin cause an inflammatory reaction and are used to remove the excess scale surrounding warts.
- Duct tape (or any durable, occlusive tacky tape) causes local irritation and stimulates an immune response. Distant warts also resolve which suggests a systemic immune response. Duct tape has been proven to be more effective than

cryotherapy in some studies.

- Cryotherapy
  - Involves using liquid nitrogen and deep-freezing the warts
  - Causes necrosis and blister formation
  - Is inexpensive, produces a rapid response, and does not require anesthesia; however, the treatment is painful and may lead to infection, scarring, and damage normal skin.

Goals of Treatment

- Eradication of lesion
- Control of spread

Appropriate Consultation

- Consult with a physician/RN(NP) for facial warts or any extensive warts in pregnancy.

Non-Pharmacological Interventions

- Warts are self-limiting in most cases.
- Give the client support and encouragement to persevere as the treatment is long and tedious.
- Before each application of medication: soak affected area in warm water to soften wart; use a pumice stone to remove dead tissue or pare away dead skin with scalpel.

Pharmacological Interventions

Explain to client how to apply topical treatment to warts:

- Salicylic and lactic acid (Duo Film) liquid daily for up to 3 months
- Remind client to protect normal surrounding skin with Vaseline petroleum jelly

Client and Caregiver Education

- Counsel client/caregiver about appropriate use of medications (dose, frequency, application, protection of surrounding skin, etc.).
- Suggest strategies to avoid spread to other areas of body and to other persons. For example, during contact sports all lesions should be completely covered prior to participation.

- Advise use of shower shoes when using public showers.

Monitoring and Follow-Up

- Follow-up every 2 weeks to assess response and adherence to treatment regimen.

Referral

- Refer to a physician/RN(NP) if no response after 12 weeks of therapy.

DOCUMENTATION

- Document the location, size, and type of wart.
- Document all education provided and treatment applied.

REFERENCES

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