College of Registered Nurses of Saskatchewan

Warts: Adult & Pediatric

Skin and Integumentary

Clinical Decision Tools for RNs with Additional Authorized Practice [RN(AAP)s]

Effective Date: February 1, 2022

Background

Warts (verrucae) are benign epithelial tumors that can occur on any epithelial surface of the body and produce characteristic lesions at various anatomic sites (Garnett, Winland-Brown, & Porter, 2019). There are several types of warts including: common warts (verruca vulgaris), flat warts (verruca plana), plantar warts (verruca plantaris), and anogenital warts (condyloma acuminata) (Garnet et al., 2019; McCann & Huether, 2019). Warts are caused by human papillomavirus (HPV) and can be transmitted by direct skin-to-skin or mucous membrane contact and by fomites (e.g., showers) (Garnett et al., 2019; McCann & Huether, 2019). Autoinoculation from common warts at another site should be considered as a possible mode of transmission (Garnett et al., 2019).

Immediate Consultation Requirements

The RN(AAP) should seek immediate consultation from a physician/NP when any of the following circumstances exist:

- extensive Human papillomavirus (HPV) infection exists in an otherwise healthy child to rule out underlying immunodeficiency, and
- any child with genital warts (Interprofessional Advisory Group [IPAG], personal communication, July 19, 2019).

Predisposing and Risk Factors

Predisposing and risk factors for warts include:

- use of communal showers,
- schools and daycare centres, or
- crowded housing (Garnett et al., 2019).

Health History and Physical Exam

Subjective Findings

The circumstances of the presenting complaint should be determined. These include:

- exposure history, and
- length of time since the development of warts (Garnett et al., 2019).

Objective Findings

The signs and symptoms of warts may include the following depending on the type and where they are located.

Common	Flat	Plantar	Anogenital
• may be solitary or multiple and range in size from millimeters to centimeters, • may occur anywhere on the body, • may demonstrate linear patterns from autoinoculation, • may be filiform or threadlike in skin creases and on mucous membranes.	• are typically small, rough, flat-topped, slightly scaly papules; • most often occur on the face and extremities of children and lower legs of women; • their size ranges from 1-3 mm.	• are painful, in-growing, hyperkeratotic papules, and plaques found on the plantar surface of the feet; • the surface of these lesions may have small black dots from thrombosed blood vessels which is a result of trauma from • weight-bearing.	• may be skin-coloured flat warts or moist, pink to brown, cauliflower-like lesions found in the skin creases and around the vagina and anal openings; • are localized to the penis in adolescent and adult males.
Warts do not retain the usual fingerprint lines of the hands and feet, as calluses and corns do.			

(Garnett et al., 2019; McCann & Huether, 2019)

Differential Diagnosis

The following should be considered as part of the differential diagnosis:

- seborrheic keratosis,
- moles,
- epidermal nevi,
- tinea versicolor,
- milia,

- molluscum contagiosum,
- folliculitis,
- lichen nitidus,
- lichen planus,
- corns,
- calluses,
- foreign bodies,
- human papillomavirus,
- irritant contact dermatitis,
- skin tags, or
- hemorrhoids (Garnett et al., 2019).

Making the Diagnosis

The diagnosis of warts is based on history and physical findings.

Investigations and Diagnostic Tests

Lab testing is not used routinely and not recommended.

Management and Interventions

Goals of Treatment

The primary goals of immediate treatment are to eradicate the lesions and control spread (Garnett et al., 2019).

Non-Pharmacological Interventions

The RN(AAP) should recommend, as appropriate, the following non-pharmacological options:

- Prior to application of topical medications in the home setting, the affected area should be soaked in warm water to soften the wart and a pumice stone should be used to remove dead tissue (Garnett et al., 2019).
- Application of duct tape to the affected area may work. The RxFiles Academic Detailing Program (2021) recommends a regime of duct tape application for six days, remove for 12 hours, and then reapply. The cycle may need to be repeated five to ten times.

Pharmacological Interventions

The pharmacological interventions recommended for the treatment of warts are in accordance with the *RxFiles Drug Comparison Charts* (Rx Files Academic Detailing Program, 2021) and *Viral Skin Infections* (Garnett et al., 2019).

Topical Irritants

The wart and surrounding area should be cleansed with rubbing alcohol and then debrided to remove scales prior to applying treatment. Protect normal surrounding skin with petroleum jelly. If using a solution, allow surface to dry and cover with a piece of tape or a bandage to enhance penetration.

	Drug	Dose	Route	Frequency	Duration
Pediatric and Adult (management at home)					
	Keratolytic over the counter preparations (e.g., Compound W, Duofilm)	varies depending on product, refer to product monograph	topical	as per package - directions will change based on product used	may take 8-12 weeks for resolution
OR	40% Salicylic acid	small amount to wart	topical	once daily or as prescribed	may take 8-12 weeks for resolution
Pediatric and Adult (management by primary care provider)					
	Cantharone	small amount to wart	topical	q2-3 weeks prn	may take 8-12 weeks for resolution

Cryotherapy

The wart and surrounding area should be cleansed with rubbing alcohol and then debrided to remove scales prior to applying treatment. Causes necrosis and blister formation. Produces a rapid response, however, the treatment is painful and may lead to infection, scarring, and may damage normal skin. Over-the-counter (OTC) home-based cryotherapy kits are available. Ensure client closely follows direction to avoid damage to surrounding skin and tissue.

	Drug	Dose	Route	Frequency	Duration
Pediatric and Adult					
	Liquid nitrogen	small amount based on surface area	topical	q1-2 weeks	may take 8-12 weeks for resolution

Client and Caregiver Education

The RN(AAP) provides client and caregiver education as follows:

- Counsel about appropriate use of medications (dose, frequency, application, protection of surrounding skin, etc.).
- Advise that clients with peripheral neuropathy (e.g., advanced diabetes or circulation disorders) should not self-treat with OTC products.
- Advice that warts are self-limiting and will, in most cases, resolve spontaneously within one to two years.
- That the treatment typically takes eight to 12 weeks or longer, and that there is the possibility of treatment failure or recurrence.
- On strategies to avoid spread to other areas of the body and to other persons, for example during contact sports all lesions should be completely covered or the use of shower shoes when using public showers (Garnett et al., 2019).

Monitoring and Follow-Up

The RN(AAP) should recommend follow-up every one to two weeks to assess response and adherence to treatment regimen.

Complications

Complications that may be associated with warts include irritation and secondary infection due to scratching (Garnett et al., 2019).

Referral

Refer to a physician/NP if client presentation is consistent with those identified in the *Immediate Consultation Requirements* section, if the client has facial warts, extensive warts in pregnancy, or if there has been no response after 12 weeks of therapy (IPAG, personal communication July 19, 2019).

References

Garnett, S., Winland-Brown, J., & Porter, B. (2019). Viral skin infections. In L. Dunphy, J.Winland-Brown, B. Porter, & D. Thomas (Eds.), *Primary care: The art and science of advanced practice nursing – an interprofessional approach* (5th ed., pp. 200-209). F. A. Davis.

McCann, S., & Huether, S. (2019). Structure, function, and disorders of the integument. In K. McCance & S. Huether (Eds.), *Pathophysiology: The biologic basis for disease inadults and children* (8th ed., pp. 1496-1529). Elsevier.

Rx Files Academic Detailing Program. (2021). *RxFiles: Drug comparison charts* (13th ed.). Saskatoon Health Region.