College of Registered Nurses of Saskatchewan

Balanitis: Adult & Pediatric

Genitourinary

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

Effective Date: June 9, 2022

Background

Balanitis is an inflammation of the glans penis (Burns, Dunn, Brady, Starr, & Blosser, 2017) and often occurs concurrently with posthitis, which is inflammation of the prepuce (foreskin) (Rodway & McCance, 2019). When the penis and foreskin are affected it is termed balanoposthitis (Burns et al., 2017). Balanoposthitis only occurs in uncircumcised males (Barrisford, 2018). Balanitis can be due to infectious and non-infectious causes, including irritation, trauma, or skin disorders (Rodway & McCance, 2019).

The most common cause is due to poor hygiene and accumulation of debris under the foreskin (Burns et al., 2017; Rodway & McCance, 2019). Infectious causes can be from a number of microorganisms, with Candida being the most common. Irritation is typically related to poor hygiene, allergic reaction to products (latex condoms, contraceptive jelly, soaps), and/or reaction to a medication (e.g., tetracycline, salicylates) causing a fixed drug eruption. It can also be caused by trauma due to friction, lacerations, or erosions of the foreskin and skin disorders including psoriasis, lichen planus, or eczema (Rodway & McCance, 2019).

Immediate Consultation Requirements

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

- paraphimosis, a condition in which the foreskin, once pulled back behind the glans penis, cannot be brought down to its original position. This impairs venous blood and lymphatic flow from the glans penis and prepuce causing edema of the glans. As the edema worsens, arterial blood flow becomes compromised causing ischemia and vascular engorgement. This can lead to gangrene or autoamputation of the distal penis;
- urethral stricture;

- phimosis, only if associated with bleeding, evidence of scar tissue, severe ballooning of the foreskin with urination, and recurrent infections;
- well circumscribed lesions, lesions that are red and velvety, or if there is induration and white patches (could be suggestive of carcinoma in situ); or
- presence of systemic signs and symptoms (Interprofessional Advisory Group [IPAG], personal communication, October 2, 2019; Rodway & McCance, 2019).

Predisposing and Risk Factors

Predisposing and risk factors for balanitis include:

- males who are not circumcised,
- phimosis,
- diabetes mellitus,
- immunodeficiency,
- poor hygiene and over-washing,
- trauma (e.g., zipper injury),
- non-retraction of the foreskin (in adults),
- diaper dermatitis,
- obesity,
- edematous conditions (e.g., congestive heart failure), and/or
- sexually transmitted diseases (e.g., herpes and gonorrhea) (Barrisford, 2018; Burns et al., 2017).

Health History and Physical Exam

Subjective Findings

Clients presenting with balanitis may report:

- recent onset of symptoms (past three to seven days);
- penile pain;
- dysuria;
- infant/toddler may be irritable;
- itchiness, often associated with erythematous lesions on glans or prepuce;
- tenderness and swelling of the glans or prepuce;
- problems retracting the foreskin;
- thick, foul smelling, purulent discharge;
- erythema of glans;
- ulceration, scaly lesions, or plaques;
- symptoms may be worse after sexual intercourse; and/or
- systemic symptoms may be present, such as painful joints or erections, mouth sores, swollen or painful lymph glands, and malaise or fatigue (Burns et al., 2017; Rodway & McCance, 2019).

Objective Findings

The signs and symptoms of balanitis may include:

- red and swollen foreskin and glans penis,
- tight foreskin, and/or
- discharge around the glans (Burns et al., 2017).

The RN(AAP) should also conduct an examination of the genitals for paraphimosis and the oral mucosa, joints, and skin that may help in determining the diagnosis.

Differential Diagnosis

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

- fungal infection (Candida),
- viral infection (herpes simplex Type 1 or 2, human papillomavirus),
- bacterial infection (e.g., E. coli, Staphylococcus aureus, Streptococcal pathogens, gonorrhea, chlamydia),
- irritant contact dermatitis,
- fixed drug eruption,
- leukoplakia,
- lichen planus,
- psoriasis,
- reactive arthritis,
- penile cancer,
- nummular eczema, or
- scabies (Barrisford, 2018; Wray, Velasquez, & Khetarpal, 2022).

Making the Diagnosis

The diagnosis is usually made based on health history and physical exam. Balanitis can be suspected in males who present with penile pain and/or redness in the presence of an inflamed and erythematous glans (Barrisford, 2018).

Investigations and Diagnostic Tests

A swab of the glans may be required to determine the underlying cause (fungal, bacterial, or viral) and to guide treatment. Clients presenting with urethral discharge should undergo urine nucleic acid amplification test (NAAT), polymerase chain reaction (PCR), or swab to rule out chlamydia and gonorrhea (Barrisford, 2018).

Additional evaluation may be warranted based upon the history and physical findings.

Management and Interventions

Goals of Treatment

The primary goals of immediate treatment are to eradicate infection, prevent complications, and prevent the condition (through education about proper penile care) (Wray et al., 2022).

Non-Pharmacological Interventions

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

- warm compresses or sitz baths;
- local hygiene: retract foreskin and wash with warm water or saline two times per day;
- avoid forceful retraction of foreskin in young, uncircumcised males;
- ensure adequate drying of tissues after cleansing and voiding;
- ensure foreskin is easily retractable (older children and adults only); and
- avoid chemical and soap irritants, or allergens (Barrisford, 2018; Burns et al., 2017).

Pharmacological Interventions

Pharmacological treatment should be initiated if there is no improvement after three to five days of conservative treatment for mild cases or if symptoms worsen (Barrisford, 2018). The choice of agent depends on whether the clinical exam suggests a fungal infection or dermatitis as the cause.

The pharmacological interventions recommended for the treatment of balanitis are in accordance with the *RxFiles: Drug Comparison Charts* (RxFiles Academic Detailing Program, 2021) and *Balanitis* (Wray et al., 2022).

Antifungal Medications

	Drug	Dose	Route	Frequency	Duration
Pediatric and Adult					
	Clotrimazole 1% cream	small amount to area	topical	b.i.d.	1-3 weeks
OR	Miconazole 2% cream	small amount to area	topical	b.i.d.	1-3 weeks
Adult					
	Fluconazole	150 mg	p.o.	once	n/a

Dermatitis Medication

	Drug	Dose	Route	Frequency	Duration
Pediatric and Adult					
	Hydrocortisone 0.5 to 1% cream	small amount to area	topical	b.i.d.	1 week

Client and Caregiver Education

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

- Counsel about the appropriate use of medications (dose, frequency, compliance, etc.).
- Advise to keep penis clean.
- Advise to not pull back the foreskin of infants and younger children as this could cause adhesions.
- Uncircumcised older children and adult males should be instructed to gently pull back the foreskin, wash the penis with warm water, and ensure that it is dried properly.
- Avoid latex condoms if they cause irritation.
- Wash underwear with mild soap and ensure it is rinsed well.
- Individuals who work with chemicals should be advised to wash hands thoroughly before they void (Burns et al., 2017; Rodway & McCance, 2019; Wray, Velasquez, & Khetarpal, 2022).

Monitoring and Follow-Up

Reassess client in one week to ensure signs and symptoms have resolved. Advise the client to return to the clinic if:

- the pain in the penis worsens,
- fever or chills develop, or
- there is purulent discharge from the penis.

Complications

The following complications may be associated with balanitis:

- pain,
- ulcerative lesions of the glans/foreskin,
- phimosis,
- paraphimosis,
- urethral stricture, and
- progression of premalignant lesions to malignant (Barrisford, 2018; Wray, Velasquez, & Khetarpal, 2022).

Referral

Refer to a physician/NP if client presentation is consistent with those identified in the Immediate Consultation Requirements section (IPAG, personal communication, October 2, 2019).

References

Barrisford, G. (2018). *Balanitis in adults*. www.uptodate.com

Burns, C., Dunn, A., Brady, M., Starr, N., & Blosser, C. (2017). *Pediatric primary care* (6th ed.). Elsevier.

Rodway, G., & McCance, K. (2019). Alterations in the male reproductive system. In K. McCance & S. Huether (Eds.), *Pathophysiology: The biologic basis for disease in adultsand children* (8th ed., pp. 835-866). Elsevier.

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Wray, A. A., Velasquez, J., & Khetarpal, S. (2022). Balanitis. In *StatPearls*. StatPearls Publishing. http://www.ncbi.nlm.nih.gov/books/NBK537143/