College of Registered Nurses of Saskatchewan

Acute Urticaria Adult and Pediatric

Skin and Integumentary

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

Effective Date: February 1, 2022

Background

Well-circumscribed skin lesions that are intensely pruritic, raised wheals (hives) are typically one to two cm in diameter, although they can vary in size and may coalesce (Garnett, Winland-Brown, & Porter, 2019). They also can appear pale to brightly erythematous (Garnett et al., 2019). Angioedema is urticaria that involves edema of both the dermis and subcutaneous tissue typically related to a potentially life-threatening immunoglobulin E (IGE)-dependent reaction (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:

- if the client is pregnant, to rule out cholestasis;
- the client has repeated episodes of urticaria;
- the client presents with symptoms of angioedema (e.g., shortness of breath, wheezing or swelling of the tongue or mouth (Interprofessional Advisory Group [IPAG], personal communication July 19, 2019).

The RN(AAP) should treat the client for anaphylactic shock as contained in an applicable RN Clinical Protocol within RN Specialty Practices or as per employer policy (Interprofessional Advisory Group [IPAG], personal communication July 19, 2019).

Predisposing and Risk Factors

Predisposing and risk factors for urticaria include exposure to allergens to which the client has been sensitized which causes degranulation of mast cells (Garnett et al., 2019). Inflammatory factors including histamine are released, increasing vascular permeability and pruritus (Garnett et al., 2019).

Health History and Physical Exam

Subjective Findings

The circumstances of urticaria should be determined. These may include:

- recent exposure to a known or unknown allergen (e.g., food, physical stimuli, infections, insect stings, stressful occurrences);
- recent medication intake including vitamins, acetylsalicylic acid (ASA), non-steroidal anti-inflammatory drugs (NSAIDs), antibiotics, opioids, and progesterone;
- personal or family history of atopy; and
- response to previous treatments, if applicable (Kanani, Betschel, & Warrington, 2018).

Objective Findings

The signs and symptoms of urticaria may include:

- localized or generalized hives or wheals, irregular in shape and size, anywhere on the body;
- frequently present as raised white or light rose-pink patches, usually surrounded by red halo;
- peripheral extension and coalescence of patches may occur;
- patches may wax and wane;
- individual wheals rarely persist for > 12-24 hours, but may reappear again the next day;
- evidence of scratching may be evident;
- gastrointestinal symptoms (nausea or vomiting); or
- respiratory symptoms (gasping for air, respiratory stridor and hoarseness) (Garnett et al., 2018; Kanani et al., 2018).

Differential Diagnosis

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

- atopic dermatitis,
- contact dermatitis,
- fixed drug reaction,
- vasculitis,
- insect bites,
- erythema multiforme,
- systemic lupus erythematosus,
- Henoch-Schönlein purpura,
- morbilliform drug reactions,
- pityriasis rosea, or
- viral exanthem (Kanani et al., 2018).

Making the Diagnosis

The diagnosis is usually made clinically based on the health history and physical exam.

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 relieve symptoms, identify precipitating factor(s), prevent recurrence, and desensitize the client, if able (Garnett et al., 2019). Most cases of acute urticaria resolve spontaneously within one to two weeks (Garnett et al., 2019). Cases that last longer than six weeks are classified as chronic idiopathic urticaria and treatment is not covered in this CDT (Garnett et al., 2019; Kanani et al., 2018).

Non-Pharmacological Interventions

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

- discontinuation of medications that may be considered a trigger;
- application of cool compresses to reduce itching or cold showers/bath;
- avoidance of overheating;
- avoid tight clothing as wheals often occur in areas with increased pressure or friction; and
- temporary avoidance of hot, spicy food (Garnet et al., 2019; Kanani et al., 2018).

Pharmacological Interventions

The pharmacological interventions recommended for the treatment of urticaria are in accordance with the *Managing Urticaria in Primary Care* (Tidman, 2015), *RxFiles Drug Comparison Charts* (RxFiles Academic Detailing Program, 2021), and *Urticaria and Angioedema* (Kanani et al., 2018).

Antipruritics

Pruritus associated with urticaria can be managed with topical preparations (e.g., calamine lotion), second generation antihistamines (e.g., cetirizine, loratadine), and first generation antihistamines (e.g., DiphenhydrAMINE hydrochloride). Oral treatment using second generation antihistamines is preferable as they are given once daily and do not cause drowsiness.

	Drug	Dose	Route	Frequency	Duration
Pediatric and Adult					
	Calamine lotion	amount based on surface area	topical	q.i.d. prn	as needed

	Drug	Dose	Route	Frequency	Duration
Pediatric (≥ 6 months to ≤ 6 years of age)					
	Cetirizine	2.5 mg	p.o.	qhs	7 days
Pediatric (≥ 6 months to ≤ 12 months)					
	Desloratadine	1 mg	p.o.	once daily	7 days
Pediatric (> 12 months to ≤ 6 years of age)					
	Desloratadine	1.25 mg	p.o.	once daily	7 days
Pediatric (≥ 2 to ≤ 12 years of age)					
	Fexofenadine	30 mg (12 hour formulation; maximum 60 mg/day)	p.o.	q12h	7 days
Pediatric (> 6 years to ≤ 12 years of age)					
	Desloratadine	2.5 mg	p.o.	once daily	7 days
Pediatric (> 6 years of age)					
	Cetirizine	5-10 mg	p.o.	qhs	7 days
OR	Loratadine	10 mg	p.o.	qhs	7 days
Pediatric (> 12 years of age) and Adult					
OR	Desloratadine	5 mg	p.o.	once daily	7 days
Adult					
	Cetirizine	10 mg	p.o.	qhs	7 days
OR	Loratadine	10 mg	p.o.	qhs	7 days
OR	Fexofenadine	60 mg (12 hour formulation; maximum 180 mg/day)	p.o.	q12h	7 days

	Drug	Dose	Route	Frequency	Duration
OR	Fexofenadine	120 mg (24 hour formulation)	p.o.	once daily	7 days
Pediatric ≤ 2, consult physician/NP					
Pediatric (> 2 to ≤ 6 years of age)					
	DiphenhydrAMINE hydrochloride	6.25 mg (maximum dose 25 mg/day	p.o.	q4-6h prn	7 days
Pediatric (> 6 to ≤ 12 years of age)					
	DiphenhydrAMINE hydrochloride	12.5 mg (maximum dose 75 mg/day	p.o.	q4-6h prn	7 days
Pediatric (> 12 years of age) and Adult					
	DiphenhydrAMINE hydrochloride	25-50 mg (maximum dose 150 mg/day	p.o.	q4-6h prn	7 days

Client and Caregiver Education

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

- Counsel about appropriate use of medications (dose, frequency, compliance, etc.). First generation antihistamines may cause drowsiness.
- Avoid over the counter medications such as aspirin and NSAIDs.
- Recommend proper skin hygiene to prevent infection.
- Recommend avoidance of scratching.
- Assist in identifying causative agent (including any recent changes in food or brands, as different food companies put different additives into their products).
- Reassure that episodes are typically self-limited (Garnett et al., 2019; Kanani et al., 2018).

Monitoring and Follow-Up

The RN(AAP) should:

- advise the client to follow-up in two to seven days.
- instruct the client to return for reassessment if lesions progress or symptoms worsen despite therapy.

- instruct the client to return to clinic immediately if shortness of breath, wheezing, or swelling of the tongue or mouth occurs.

Complications

The following complications may be associated with urticaria:

- recurrence of symptoms (hives, wheals, and pruritus),
- systemic allergic response with bronchospasm, or
- anaphylaxis (Garnet et al., 2019).

Referral

Refer to a physician/NP if client presentation is consistent with those identified in the *Immediate Consultation Requirements* section or if the client does not respond to treatment (to rule out allergies or an underlying organic pathology) (IPAG, personal communication, July 19, 2019).

References

Garnett, S., Winland-Brown, J., & Porter, B. (2019). Common skin complaints. In L. Dunphy, J. Winland-Brown, B. Porter, & D. Thomas (Eds.), *Primary care: The artand science of advanced practice nursing – an interprofessional approach* (5th ed., pp.145-158). F. A. Davis.

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