SASKATCHEWAN RN ASSOCIATION

SASKATCHEWAN REGISTERED NURSES' ASSOCIATION

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

PHARYNGITIS ADULT

DEFINITION

Pharyngitis is the inflammation or infection of mucous membranes of the pharynx (may also affect the palatine tonsils).

IMMEDIATE CONSULTATION REQUIRED IN THE FOLLOWING SITUATIONS

- Clients with oliguria associated with pharyngitis
- Infectious mononucleosis suspect when:
  - Generalized symmetric lymphadenopathy present
  - Abdominal pain, splenomegaly, or hepatomegaly
  - Jaundice
  - Nausea and anorexia without vomiting
  - Fatigue
  - Young adults or teenager
  - Urticarial or maculopapular rash after beta lactum antibiotics are given
- Any signs of airway obstruction such as dyspnea or dysphagia or stridor
- Muffled or "hot potato" voice
- Trismus (spasm of jaw muscles)
- Odynophagia (pain on swallowing)
- Neck pain
- Drooling
- Neck swelling
- High fever, rigor, and night sweats
- Periorbital or facial edema
- New onset hypertension
- Dehydration
- Peritonsillar abscess or peritonsillar cellulitis

CAUSES

Infectious

- Viruses (e.g., rhinovirus, adenovirus, parainfluenza, coxsackievirus, Epstein-Barr virus, herpes virus, coronavirus, influenza A and B, parainfluenza, cytomegalovirus, HIV)
- Bacteria (e.g., most common group A ß-hemolytic streptococcus (GAS), Group C and Group G streptococci, Chlamydia, *Corynebacterium diphtheriae*, *Haemophilus*

influenzae, *Neisseria gonorrhea*, *Arcanobacterium haemolyticum*, *Francisella tularensis*, *Yersinia pestis*, mixed anaerobes, *Mycoplasma pneumonia)*
- Fungi (e.g., Candida) rare except in immunocompromised clients (e.g., HIV/AIDS, or inhaled steroids)

Noninfectious
- Allergic rhinitis
- Sinusitis with postnasal drip
- Mouth breathing
- Trauma
- Gastroesophageal reflux disease (GERD)
- Malignancy

PREDISPOSING AND RISK FACTORS
- Contact with a person with upper respiratory tract infection (URTI)
- Crowded living quarters
- Immunocompromised clients
- Fatigue
- Smoking
- Excess consumption of alcohol
- Oral sex
- Diabetes mellitus or use of steroids (oral or inhaled)
- More common in fall and winter

HISTORY

Bacterial
- Abrupt onset of sore throat duration usually < 3 days
- Pain on swallowing
- Pain in the throat
- Halitosis
- Myalgia
- Absence of cough
- Fever or chills or flushed
- Malaise
- Skin rash may be present

- Headache
- Anorexia
- Nausea
- Winter or early spring
- Exposure to GAS
- Vomiting
- Abdominal pain

Viral

- Slow, progressive onset of sore throat
- Mild malaise
- Cough
- Nasal congestion

Noninfectious

- Slow, progressive onset of sore throat
- Mild malaise
- Cough
- Persistent, recurrent
- Pain on swallowing
- Unlikely to have runny nose, cough, conjunctivitis, hoarseness, diarrhea, viral exanthem

PHYSICAL FINDINGS

Bacterial

- Fever
- Tachycardia
- Petechiae on soft palate
- Swollen uvula
- Client may appear acutely ill
- Posterior pharynx red and swollen
- Tonsils enlarged, may be asymmetric
- Purulent exudate may be present
- Tonsillar and anterior cervical nodes enlarged and tender
- Rash (scarlatiniform in GAS infection)
- GAS is less likely if otalgia and cough present

Viral

- Temperature may be elevated
- Posterior pharynx red and swollen
- Purulent exudate may be present
- Tonsillar and cervical nodes may be enlarged and tender
- Petechiae on palate (in mononucleosis)
- Vesicles (Herpes simplex virus)

Noninfectious

- Posterior pharynx red and swollen
- Tonsillar and anterior cervical nodes may be enlarged and tender
- Exudate may be present

DIFFERENTIAL DIAGNOSIS

- Distinguish probable bacterial from viral infection
- Infectious mononucleosis
- Sexually transmitted infection (for chronic pharyngitis, investigate sexual practices)
- Vincent's angina (necrotic tonsillar ulcers)
- Distinguish reactive inflammation from an underlying disorder (see "Causes")

COMPLICATIONS

Bacterial Pharyngitis

Complications as a result of the body's immune response to GAS.
Evidence is unclear whether antibiotic use can prevent these complications:

- Glomerulonephritis (GAS only)
- Reactive arthritis

Complications related to Streptococcal infections may be prevented by appropriate antibiotic use:

- Peritonsillar abscess
- Peritonsillar cellulitis
- Sinusitis
- Acute otitis media
- Mastoiditis

- Parapharyngeal and retropharyngeal abscess
- Suppurative cervical adenitis
- Meningitis
- Scarlet fever
- Infective endocarditis
- Pneumonia
- Bacteremia or streptococcal toxic shock syndrome
- Rheumatic fever (GAS only) - very rare in Saskatchewan
- Lemierre's disease

Viral Pharyngitis
- Secondary bacterial infection
- Often resolve without any complications

INVESTIGATIONS AND DIAGNOSTIC TESTS
- Rapid Strep test if available (see below "The Modified Centor (Sore Throat) Score" for indications to swab)
- Swab the throat for culture when indicated (see below "The Modified Centor (Sore Throat) Score")

MAKING THE DIAGNOSIS
It is often impossible to distinguish clinically between bacterial and viral pharyngitis. Refer to the clinical tool "The Modified Centor (Sore Throat) Score" to help decide whether a client has a GAS throat infection and needs antibiotics.

Testing and treatment with antibiotics are usually not needed for adults with acute pharyngitis with features that strongly suggest viral etiology. These are:
- Conjunctivitis
- Coryza or rhinorrhea
- Anterior stomatitis and discrete oral ulcers
- Cough
- Hoarseness
- Diarrhea
- Viral exanthem or enanthem

Presence of tonsillar exudate, tender anterior cervical lymphadenopathy or

lymphadenitis, history of fever, and absence of cough increases the probability of GAS.

The Modified Centor (Sore Throat) Score
In adults, 85-90% of sore throats are caused by viral infections. In an effort to assess the probability of diagnosing GAS pharyngitis in a client presenting with a sore throat, a number of tools have been developed. In a primary care setting, the Modified Centor (Sore Throat) Score provides an evidence-based clinical decision rule for all age groups.

Step 1
Determine the client's total Modified Centor (Sore Throat) Score by assigning points using the following criteria.

Criteria	**Score**
History of fever or measured temperature > 38°C oral	1
Absence of cough	1
Tender anterior cervical adenopathy	1
Tonsillar exudate or swelling	1
Client's age • 15-44 years of age • ≥ 45 years of age	 • 0 • -1

Step 2
Choose the appropriate management according to the total score.

Total Score	**Management**
0 to 1	No culture/Rapid Strep test or antibiotics needed
2 to 3	If Rapid Strep test is available: • If result is negative: perform throat culture and wait for results. • If result is positive: treat with antibiotics. No need for throat culture to back up diagnosis. If no Rapid Strep test is available: perform culture; no antibiotics unless culture returns positive.
4 to 5	Culture and consider empiric antibiotic therapy on clinical grounds until culture result available.

Note: Adapted from *Anti-infective guidelines for community-acquired infections,* p. 8, by Anti-infective Review Panel, 2013, Toronto, ON: MUMS Guideline Clearinghouse.

The Modified Centor (Sore Throat) Score is invalid in:

- any community in which an outbreak or epidemic of GAS pharyngitis is occurring and should *not* be applied in this type of situation.
- clients with a history of rheumatic fever or valvular heart disease or who are immunosuppressed.

MANAGEMENT AND INTERVENTIONS

Goals of Treatment

- Eradicate infection
- Prevent complications
- Prevent spread of GAS to contacts
- Provide appropriate education for the management of viral pharyngitis
- Avoid unnecessary use of antibiotics

PHARYNGITIS ADULT

Appropriate Consultation

Consult a physician/RN(NP) for all situations in the "Immediate Consultation Required in the Following Situations" section above, and if:

- the client has significant dysphagia or dyspnea (signaling obstruction of the upper airways).
- there is concern about an underlying pathology.
- the client is unlikely to complete the course of oral antibiotics and there is need to discuss use of an injectable antibiotic.
- the client is taking a disease-modifying anti-rheumatic drug (DMARD) or carbimazole.
- the client is immunocompromised (e.g., leukemia, aplastic anemia, asplenia, HIV/AIDS, or is receiving chemotherapy).

Non-Pharmacological Interventions

- Bed rest during febrile phase
- Adequate oral intake of fluids (6-8 glasses of fluid per day)
- Avoidance of irritants (e.g., smoke)
- Gargling with warm saline several times a day

Pharmacological Interventions

For pain and fever:

- Acetaminophen (Tylenol) 325-650 mg orally q4-6h or 1000 mg orally tid or qid (maximum dose 4 g/day)
  Or
- Ibuprofen (Motrin) 400-800 mg orally tid or qid (maximum dose 3.2 g/day)

Antibiotics:

- are not indicated for viral pharyngitis.
- should not routinely be prescribed to treat an acute sore throat.

Antibiotics should not be prescribed to:

- secure symptomatic relief.
- prevent suppurative complications.
- treat recurrent non-streptococcal sore throat.

- prevent the development of rheumatic fever and acute glomerulonephritis.
- routinely prevent cross-infection in the general community.

Consider a delayed prescribing (delayed antibiotic use) for antibiotics:

- A delayed prescribing strategy (delayed antibiotic use) is defined as the use of, or advice to use, antibiotics more than 48 hours after the initial consultation. This strategy is used when it is not clear to the clinician that antibiotic therapy is needed immediately.
- The decision to use a delayed strategy should only be made if the client can return for follow-up within the agreed upon time.
- Reassure the client the antibiotics are not needed immediately as they will make little difference to symptoms and may have adverse effects.
- Advise the client to use the delayed prescription (or dispensed antibiotic) and return for reassessment if symptoms do not settle or get significantly worse.
- Further information to assist with client education about appropriate antibiotic use is available at: http://www.dobugsneeddrugs.org/guide/sore-throat/

Prescribe an antibiotic based on the Modified Centor (Sore Throat) Score and for:

- those with features of marked systemic illness.
- those at increased risk of serious complications.
- those with valvular heart disease.

Use caution in prescribing an antibiotic in those:

- with an increased risk of severe infection (e.g., diabetes or immunocompromised).
- who are at risk of immunosuppression (e.g., on disease-modifying anti-rheumatic drugs [DMARDs], carbimazole).
- with a history of rheumatic fever.

Treatment within 10 days of onset is likely to prevent rheumatic fever. GAS infection usually resolves without any sequelae. Some European countries consider GAS a self-limiting disease and do not recommend testing or treatment with antibiotics.

Treat with any of the following antibiotics if streptococcal disease is suspected according to "The Modified Centor (Sore Throat) Score" and/or culture or Rapid Strep

testing has confirmed its presence.

- Preferred Antibiotic
  - Penicillin V potassium (Penicillin V) 600 mg orally q12h (or 300 mg orally q8h) for 10 days
    Or
  - Amoxicillin 250-500 mg orally q8h for 10 days
  - If infectious mononucleosis is suspected, do not use amoxicillin because this drug may cause a generalized red "drug rash".

- For clients with penicillin allergy:
  - Cephalexin 250 mg orally q6h for 10 days. Avoid if immediate-type hypersensitivity to penicillin
    Or
  - Clindamycin 300 mg orally q8h for 10 days
    Or
  - Azithromycin 500 mg orally first day then 250 mg daily for day 2-day 5

Client and Caregiver Education

- Educate client/caregiver that treatment for viral pharyngitis includes adequate rest, oral fluids, and analgesics.
- Discourage the use of antibiotics if viral pharyngitis is suspected.
- Reassure the client/caregiver that a sore throat is generally self-limiting, with most clients recovering after 7 days with or without antibiotic treatment.
- If fever is present, encourage adequate fluid intake to avoid dehydration.
- Explain that urgent medical attention should be sought if the client develops any difficulty breathing, stridor, drooling, a muffled voice, severe pain, dysphagia, or if they are not able to swallow adequate fluids or become systemically unwell.
- Advise regular use of acetaminophen or ibuprofen to relieve pain and fever.
- If antibiotics are prescribed, counsel client/caregiver about the appropriate use of medications (dose, frequency, compliance, etc.).
- Provide advice regarding food and drink to avoid exacerbating pain (e.g., avoid hot drinks).
- Some clients may find ice or flavoured frozen desserts (such as ice popsicles) provide additional symptomatic relief.

- Suggest the use of simple mouthwashes (e.g., warm salty water) at frequent intervals until the discomfort and swelling subside.

Monitoring and Follow-Up

- Instruct client to return to clinic for reassessment if symptoms do not improve in 48-72 hours.
- Immunocompromised clients should seek immediate medical advice if they become systemically unwell.

Referral

- Referral may be necessary if condition is recurrent or persistent or an undiagnosed underlying pathology is suspected or complication develops.
- Refer to a physician/RN(NP) in older clients with risks factors of cancer and persistent sore throats.

DOCUMENTATION

- As per employer policy

REFERENCES

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