

GUIDELINES & PROTOCOLS

ADVISORY COMMITTEE

Sore Throat– Diagnosis and Management

Effective Date: March 2003

Scope

This guideline applies to patients three years of age and older presenting with sore throat. It provides recommendations for performing throat swabs and prescribing antibiotics. The desired outcomes to be achieved through this guideline are:

- prevention of suppurative and other complications
- prevention of acute rheumatic fever
- rapid reduction of infectivity to limit spread of group A beta-hemolytic streptococcal infections
- abatement of clinical signs and symptoms
- decrease antibiotic resistance by minimization of inappropriate antimicrobial usage.

Approximately 10 to 20 per cent of patients with sore throat have an infection caused by group A beta-hemolytic streptococcus (strep throat). A small percentage of sore throats will be caused by a variety of other bacterial organisms (e.g., Group C and G streptococcus) or disease processes (e.g., lymphoma). However, most patients have viral infections and benefit from symptomatic treatment alone.

Although many viruses cause sore throat, Epstein-Barr virus (EBV) is singled out in this guideline because of the rare but potentially fatal complication of splenic rupture.

In a previously well individual with a sore throat the first priority is to distinguish between viral and strep infection.

Table 1: Indicators that increase or decrease the likelihood of strep throat

Increased likelihood of strep throat	Decreased likelihood of strep throat
Age 3-14 years	Age 45 years or older
Recent fever (> 38 °C)	Afebrile
Absence of a cough	Cough
Exudative pharyngitis/tonsillitis	Coryza/conjunctivitis
Anterior cervical adenitis	Hoarseness
Current group A strep epidemic	Discrete oral ulcerative lesions
Recent close exposure to group A strep	Diarrhea

RECOMMENDATION 1: Throat swab for culture: when and how

A throat swab should be taken when a diagnosis of strep throat is suspected from the clinical and epidemiological findings (see Table 1 above) and the patient is not already taking antibiotics.

Technique: Using a sterile throat swab, contact the posterior pharyngeal wall and the surface of both tonsils, then place in an appropriate transport medium for prompt delivery to the laboratory.

A culture is usually the only test required. However, antibiotic sensitivity should also be requested in penicillin allergic patients due to the emergence of erythromycin resistant strains of streptococcus. A culture is not indicated following a course of antibiotics for strep throat unless symptoms persist. Asymptomatic contacts of a patient with strep throat do not require cultures or empiric antibiotics.

RECOMMENDATION 2: Antibiotics: when and which

Antibiotics should not be prescribed until the culture result confirms strep throat or another treatable bacterial pathogen. Immediate administration of antibiotics should be considered only when patients are very ill, culture results will be delayed more than 72 hours, or patient follow-up will be difficult. Antibiotics should be discontinued if the culture result is negative.

Table 2: Antibiotic choice for strep throat

Antibiotic of choice:	Penicillin V	(300 mg PO t.i.d./q.i.d. for 10 days or 600 mg PO b.i.d. for 10 days)
Acceptable alternative for children:	Amoxicillin	(40 mg/kg/day divided t.i.d. for 10 days, max 250 mg t.i.d.)
Recommended alternative for penicillin allergic patients:	Erythromycin	(30-40 mg/kg/day divided b.i.d./t.i.d. for 7-10 days, max 2 g/day)

Note: Patients with EBV infection who are treated with amoxicillin usually develop a rash.

RECOMMENDATION 3: Suspected Epstein-Barr virus (EBV) infection

If EBV infection is suspected it may be confirmed by:

- 1) monospot test (not useful in patients younger than four)
- 2) specific EBV serology.

Although difficult to identify clinically, splenic enlargement may occur in EBV infection increasing the risk of rupture, both spontaneous and traumatic. Therefore, it is prudent to recommend avoidance of vigorous activity for four weeks after the onset of clinical illness.

Rationale

Sore throat is one of the most frequent illnesses for which primary care physicians and pediatricians are consulted. However, only approximately 10 to 20 per cent of patients will have strep throat. Moreover, the signs and symptoms of group A streptococcal and nonstreptococcal pharyngitis overlap so broadly that accurate diagnosis on clinical grounds alone is usually impossible. Scoring systems to assist in decisions about when to obtain a culture have been developed by a variety of investigators. However, these scoring systems require further evaluation.

With the exception of rare infections by certain pharyngeal bacterial pathogens (e.g., *Corynebacterium diphtheriae*, *Neisseria gonorrhoeae* and *Arcanobacterium haemolyticum*), antimicrobial therapy is of no proven benefit in the treatment of acute pharyngitis due to bacteria other than group A streptococcus. It is therefore extremely important that physicians properly establish the diagnosis of strep throat to prevent inappropriate administration of antimicrobials to large numbers of patients with pharyngitis. The inappropriate administration of antimicrobials leads to unnecessary expense and exposes patients to the hazards of antimicrobials. It may also contribute to the emergence of antibiotic resistant organisms.

If a diagnosis of strep throat is established, the clinician should select the most appropriate antimicrobial with respect to specificity, compliance, safety and cost.

Viral infections cause the majority of sore throats. Epstein-Barr virus (EBV) is just one of many viruses that can cause sore throats. EBV infection may be considered from clinical features such as hepatosplenomegaly and generalized lymphadenopathy. Most cases can be treated symptomatically. More severe cases, with upper airway obstruction or hepatosplenomegaly, may require additional precautions and treatments.

The monospot slide test is sensitive, specific and easily performed. Approximately 85-90 per cent of patients will show positive results by the third week of illness. However, test results may be negative early in the course of illness.

The monospot test is unreliable in children younger than four. In these young patients EBV serology is the test of choice. However, its usefulness is limited by the much longer time it takes to get results.

References

- Bisno AL, Gerber MA, Gwaltney JM, Kaplan EL, Schwartz RH. Diagnosis and management of group A streptococcal pharyngitis: a practice guideline. Infectious Diseases Society of America. Clin Infect Dis 1997;25:574-83.
- Bisno AL. Acute Pharyngitis. N Engl J Med 2001; 344(3): 205-211.
- Del Mar CB, Glasziou PP, Spinks AB. Antibiotics for sore throat (Cochrane Review). In The Cochrane Library, Issue 4 2002. Oxford: Update Software
- Group A streptococcal infections. In: Peter G, editor. 1997 Red Book: Report of the Committee on Infectious Diseases. 24th ed. Elk Grove Village (IL): American Academy of Pediatrics; 1997. p. 483-502.
- Haines JD Jr. When to resume sports after infectious mononucleosis. How soon is safe? Postgrad Med 1987;81:331-3.
- Lan AJ, Colford JM Jr. Impact of dosing frequency on the efficacy of 10-day penicillin or amoxicillin therapy for streptococcal tonsillopharyngitis: a meta-analysis. Pediatrics 2000;105:E19.
- Mclsaac WJ, Goel V, Slaughter PM, Parsons GW, Woolnough KV, Weir PT, et al. Reconsidering sore throats; Part 1: Problems with current clinical practice. Can Fam Physician 1997;43:485-93.
- Mclsaac WJ, Goel V, Slaughter PM, Parsons GW, Woolnough KV, Weir PT, et al. Reconsidering sore throats. Part 2: Alternative approach and practical office tool. Can Fam Physician 1997;43:495-500.
- Mclsaac WJ, White D, Tannenbaum D, Low DE. A clinical score to reduce unnecessary antibiotic use in patients with sore throat. Can Med Assoc J 1998;158:75-83.
- Peter J, Ray CG. Infectious mononucleosis. Pediatr Rev 1998;19:276-9.
- Pichichero ME. Sore throat after sore throat after sore throat. Are you asking the critical questions? Postgrad Med 1997;101:205-18.
- Protecting patients from antimicrobial resistance: the role of the family physician. Vancouver (BC): University of British Columbia; 1999.

Sponsors

This guideline was developed by the Guidelines and Protocols Advisory Committee, approved by the British Columbia Medical Association and adopted by the Medical Services Commission. Funding for this guideline was provided in full or part through the Primary Health Care Transition Fund.

Revised Date: April 1, 2007

This guideline is based on scientific evidence current as of the effective date.

Guidelines and Protocols Advisory Committee

PO Box 9642 STN PROV GOVT

Victoria BC V8W 9P1

Phone: (250) 952-1347

E-mail: h1th.guidelines@gov.bc.ca

Fax: (250) 952-1417

Web site: BCGuidelines.ca

The principles of the Guidelines and Protocols Advisory Committee are:

- to encourage appropriate responses to common medical situations
- to recommend actions that are sufficient and efficient, neither excessive nor deficient
- to permit exceptions when justified by clinical circumstances.

Sore Throat

A GUIDE FOR PATIENTS

Effective Date: March 2003

Viral sore throat

Sore throats are usually caused by viruses and they sometimes accompany a cold. Antibiotics do not work against viruses and can be harmful if taken when not needed. You can usually treat a viral sore throat yourself. It should get better in 2-3 days. See the box below for self-care advice.

Strep throat

Strep throat is a sore throat caused by streptococcal bacteria. It is more common in children aged 3 to 14 and is treated with antibiotics to prevent rheumatic fever. Your doctor may decide to do a throat swab in order to confirm strep before prescribing antibiotics. If you or your child are prescribed antibiotics, take all your pills exactly as instructed by your doctor.

General Treatment for Relief of Sore Throat (Viral and Strep)

- Rest and drink plenty of fluids (juice, water, weak tea with honey and lemon)
- Eat soft and bland foods
- Gargle frequently with warm salt water (5 ml in a half-litre [1 teaspoon in 2 cups] of water)
- Stop smoking and avoid others' smoke
- If necessary for pain or fever, take aspirin or acetaminophen (Do not give aspirin to children or teens under 20)
- Throat lozenges may help (Do not give lozenges to children under 5)
- Increase room humidity (e.g., use a humidifier or vaporizer)