

The Diagnosis and Management of Pharyngitis in Adults

Clinical Practice Guideline

MedStar Health

Antibiotic Stewardship

“These guidelines are provided to assist physicians and other clinicians in making decisions regarding the care of their patients. They are not a substitute for individual judgment brought to each clinical situation by the patient’s primary care provider in collaboration with the patient. As with all clinical reference resources, they reflect the best understanding of the science of medicine at the time of publication, but should be used with the clear understanding that continued research may result in new knowledge and recommendations.”

Pharyngitis is a common reason for ambulatory care visits, accounting for about 12 million office visits yearly. ¹ Most cases of pharyngitis are caused by viral illnesses and are self-limited, though clinicians prescribe antibiotics about 60% of the time. ² Distinguishing viral from bacterial causes as well as recognizing potentially life-threatening complications or mimickers of pharyngitis can be challenging. This guideline discusses diagnosis and management of pharyngitis in adults. A separate guideline exists for children.

Viral cause of pharyngitis

Viral illnesses are the most common infectious cause of pharyngitis. The clinical presentation is usually characteristic and includes sore throat, low grade fever, nasal congestion, sneezing, fatigue and cough. Hoarseness and oral ulcers also point to a viral cause. The condition is usually self-limited, treatment is symptomatic with throat lozenges and analgesics, and no diagnostic testing is needed or appropriate. In particular, testing for Group A Strep is not recommended.

Group A Strep pharyngitis

In adults, Group A Strep (GAS) pharyngitis accounts for 5-15 % of pharyngitis cases. Symptoms that are suggestive of GAS include sudden onset of sore throat, fever, tonsillar exudates, cervical adenopathy and absence of typical viral URI symptoms, especially cough. Sore throat occurring after known GAS exposure increases the likelihood that GAS may be the cause. The patient may occasionally present with a scarlatiniform rash, palatal petechiae or a strawberry tongue.

The diagnosis of GAS pharyngitis should be established by rapid antigen detection test (RADT) and/or culture because the clinical features alone do not reliably discriminate between GAS and viral pharyngitis. Clinical scoring criteria have been developed to help determine the likelihood of a bacterial cause. The most widely used are the Centor criteria, which include fever by history, tonsillar exudates, tender anterior cervical adenopathy, and absence of cough and the modified Centor criteria (McIsaac criteria) which subtract one point for age over 45. Because the Centor criteria have a low positive predictive value for determining the presence of group A streptococcal infection, the IDSA suggests that they can be used to identify patients who have a low probability of group A streptococcal pharyngitis and do not warrant further testing. Patients who meet fewer than 3 Centor criteria do not need to be tested.

Rapid antigen detection tests have high specificity (88-99%) and moderate sensitivity (77-92%) for detecting group A strep.³

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Consequently, positive results do not need to be confirmed by culture. For **adults in usual circumstances**, negative RADT's do not need to be followed up with a throat culture because of the low incidence of GAS pharyngitis in adults and because the risk of subsequent acute rheumatic fever is generally exceptionally low in adults with acute pharyngitis (strong, moderate). The risk of acute pharyngitis due to GAS among adults is higher for parents of school-age children and for those whose occupation brings them in close association with children. Physicians who wish to ensure they are achieving maximal sensitivity in diagnosis may continue to culture specifically for Group A Streptococcus (e.g., 'B-Hemolytic Streptococcus Culture, Group A Only' at LabCorp) or to back up negative RADT results with a culture specific for Group A Streptococcus.' Proper specimen collection (swabbing both tonsils or tonsillar pillars and posterior pharynx) is crucial.

Recommendations from the Infectious Disease Society of America 2012 guideline ⁵ (strength of recommendation, quality of evidence) are:

Penicillin or amoxicillin remain the treatments of choice, and recommendations are made for the penicillin-allergic patient, which now include clindamycin, clarithromycin and azithromycin (see Table 1).

Patients with acute GAS pharyngitis should be treated with an appropriate penicillin antibiotic at an appropriate dose for 10 days unless treated with penicillin G long acting single dose. Benefits of therapy include a 1-2 day shortening of the acute illness and a reduction in the risk of suppurative complications (peritonsillar abscess, etc) and immunologic ones (rheumatic fever and post-streptococcal glomerulonephritis) (strong, high).

Treatment of GAS pharyngitis in penicillin-allergic individuals should include a first generation cephalosporin (for those not anaphylactically sensitive) for 10 days, clindamycin or clarithromycin for 10 days, or azithromycin for 5 days (strong, moderate).

Adjunctive therapy may be useful in the management of GAS pharyngitis. If warranted, use of an analgesic/antipyretic agent such as acetaminophen or an NSAID for treatment of moderate to severe symptoms or control of high fever associated with GAS pharyngitis should be considered as an adjunct to an appropriate antibiotic (strong, high).

Adjunctive therapy with a corticosteroid is not recommended (weak, moderate).

Recurrent episodes of pharyngitis associated with laboratory evidence of GAS pharyngitis may be due to chronic pharyngeal GAS carrier who is experiencing repeated viral infections rather than repeated streptococcal pharyngitis at close intervals (strong, moderate).

GAS carriers do not ordinarily justify efforts to identify them nor do they generally require antimicrobial therapy because GAS carriers are unlikely to spread GAS pharyngitis to their close contacts and are at little or no risk for developing suppurative or nonsuppurative complications (eg. acute rheumatic fever (strong, moderate)).

Follow-up post-treatment throat cultures or RADT are not recommended routinely but may be considered in special circumstances (strong, high).

Diagnostic testing or empiric treatment of asymptomatic household contacts of patients with acute streptococcal pharyngitis is not routinely recommended (strong, moderate).

Tonsillectomy solely to reduce the frequency of GAS pharyngitis is not recommended (strong, high).

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Table 1: Antibiotic Regimens Recommended for Group A Streptococcal Pharyngitis

Drug Route	Dose or Dosage	Duration or Quantity	Recommendation Strength, Quality
For individuals without penicillin allergy			
Penicillin V, oral	Adolescents and Adults: 250 mg 4 times daily or 500 mg twice daily	10 days	Strong, high
Amoxicillin, oral	1000 mg once daily or 500 mg twice daily	10 days	Strong, high
Benzathine penicillin G, intramuscular	1.2 million units	1 dose	Strong, high
For individuals with penicillin allergy			
Cephalexin, oral *	500 mg every 12 hours	10 days	Strong, high
Cefadroxil, oral*	1g once daily	10 days	Strong, high
Clindamycin, oral	300 mg every 8 hours	10 days	Strong, moderate
Azithromycin, oral**	12 mg/kg once daily (max = 500mg) on day 1 followed by 6mg/kg once daily (max=250mg) on days 2-5	5 days	Strong, moderate
Clarithromycin, oral**	250 mg every 12 hours	10 days	Strong, moderate

*Avoid in individuals with immediate type hypersensitivity to penicillin.

**Resistance of GAS to these agents is well known and varies geographically and temporally. Macrolide resistance rates 5-20%. Clindamycin resistance rare, ~1-3%

Group C and Group G Streptococcal pharyngitis

Group C and Group G strep cause 5-10% of pharyngitis in adults. The clinical presentation can be indistinguishable from Group A strep pharyngitis. These pathogens can occur in epidemics (military and educational institutions or foodborne outbreaks) or perhaps sporadically (their significance outside of epidemics is uncertain). Diagnosis is made by throat culture (RADT tests are negative since the organisms lack the Group A antigen which is the target of RADTs). Treatment is the same as for group A strep (penicillin is the drug of choice) though treatment duration is 5 instead of 10 days (since there is no association with rheumatic fever and the longer treatment course in GAS is for rheumatic fever prevention).

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Infectious mononucleosis

Pharyngitis in infectious mononucleosis is generally associated with fever, significant and sometimes prolonged fatigue, and posterior cervical adenopathy. Splenic enlargement may also occur. It is most commonly seen in adolescents and young adults. Typical findings on CBC include lymphocytosis (more than 50% of WBC or absolute lymphocyte count > 4500/microl) with more than 10% atypical lymphocytes. The presence of heterophile antibodies (as in the Monospot test) in the proper clinical context is diagnostic, though the false negative rate in the first week of illness can be as high as 25%. Treatment is supportive. Because of the risk of splenic rupture, patients should be advised to refrain from contact sport for 3-4 weeks. In addition, recognizing signs and symptoms of impending upper airway obstruction from tonsillar enlargement (muffled voice, drooling, stridor, respiratory distress or sitting in a “tripod” position) is important since hospitalization, administration of corticosteroids, and airway management are necessary.

Sexually Transmitted Infections presenting as pharyngitis

- Pharyngeal gonorrhea—an uncommon cause of pharyngitis, usually acquired by oral sexual contact and presenting with sore throat, fever and adenopathy. It should be considered in the appropriate clinical context (receptive oral intercourse) and confirmed by nucleic acid antigen test of the pharynx. Treatment consists of ceftriaxone 250 mg im X 1 and azithromycin 1 gram po once.
- Acute HIV infection—should be considered in patients with potential HIV exposure (particularly those with a recent STI) who present with pharyngitis, fever, adenopathy, malaise, diarrhea, headache, mucocutaneous ulcers and/or rash. Pharyngitis in this condition is usually manifest by pharyngeal erythema but no exudates. Diagnostic testing should include a sensitive immunoassay (antigen/antibody immunoassay) plus HIV viral load testing.

Deep Tissue Infections and Epiglottitis

These conditions require hospitalization and urgent management. Features that may distinguish them from the more common causes of pharyngitis include the severity of the patient’s complaints, unilaterality, toxic appearance and neck pain.

Syndrome	Clinical Features
Peritonsillar abscess	Severe unilateral sore throat, fever, ear pain, neck pain and swelling. Exam with severely swollen or fluctuant tonsil with deviation of uvula or bulging of the soft palate. Trismus is common.
Submandibular abscess (Ludwig’s angina)	Fever, rigor, mouth pain, drooling, stiff neck. Floor or oropharynx may be elevated. Induration and crepitus may be present in the submandibular area.
Parapharyngeal space infection	Fever, rigor, swelling below the angle of the mandible, medial bulging of the pharyngeal wall and trismus.
Lemierre syndrome (suppurative jugular thrombophlebitis)	Persistent fever and sore throat, despite antibiotics. Pulmonary emboli.
Epiglottitis	Sore throat with minimal findings on exam, fever, muffled voice, drooling, hoarseness and stridor or respiratory distress.

Adapted from UpToDate accessed Sept 16, 2018

MEDCONNECT ORDER SET : AMB Adult Pharyngitis/GAS Treatment

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PATIENT EDUCATION

Choosing Wisely:

- <http://www.choosingwisely.org/patient-resources/colds-flu-and-other-respiratory-illnesses-in-adults/>
- <https://www.cdc.gov/antibiotic-use/community/for-patients/common-illnesses/sore-throat.html>

DEFINITIONS

Antibiotic stewardship refers to coordinated interventions designed to improve and measure the appropriate use of antimicrobials by promoting the selection of the optimal antimicrobial drug regimen, dose, duration of therapy, and route of administration. Antimicrobial stewards seek to achieve optimal clinical outcomes related to antimicrobial use, minimize toxicity and other adverse events, reduce the costs of health care for infections, and limit the selection for antimicrobial resistant strains. - See more at:

http://www.idsociety.org/stewardship_policy/#sthash.SM1baBaC.dpuf

References:

1. Appropriate Antibiotic Use for Acute Respiratory Tract Infection in Adults: Advice for High-Value Care from the American. Ann Intern Med. 2016; 164: 425-434.
2. Barnett ML, et al. Antibiotic prescribing to adults with sore throat in the United States, 1997-2010. JAMA Intern Med. 2014; 174: 138-40.
3. Evaluation of acute pharyngitis in adults. UpToDate accessed 9/16/18.
4. Shulman et al, Clinical Practice Guideline for the Diagnosis and Management of Group A Streptococcal
5. Pharyngitis: 2012 Update by the Infectious Diseases Society of America. Clinical Infectious Disease, Sept 2012. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/22965026?dopt=Abstract> (Guideline Summary NGC- 9315 - Clinical practice guideline for the diagnosis and management of group A streptococcal pharyngitis: 2012 update by the Infectious Disease Society of America. http://www.idsociety.org/uploadedFiles/IDSA/Guidelines-patient_Care/PDF_Library/2012%20Strep%20Guideline.pdf
6. Adult Treatment Recommendations. (2016, March 4). Retrieved September 16, 2018. <http://www.cdc.gov/getsmart/community/for-hcp/outpatient-hcp/adult-treatment-rec.html>
7. Khan, ZZ, Bronze, MS, (2014). Group A Streptococcal infections treatment and management. Retrieved from <http://emedicine.medscape.com/article/228936-treatment>
8. Wessels, MR., (2011). Streptococcal Pharyngitis. New England Journal of Medicine. 364:648-55. Retrieved from <http://www.nejm.org/doi/full/10.1056/NEJMcp1009126>
9. Fine, AM., (2012). Large-Scale Validation of the Centor and Mclsaac Scores to Predict Group A Streptococcal Pharyngitis. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3627733/#R3>

Clinical Guidelines are reviewed every two years by a committee of experts in the field. Updates to guidelines occur more frequently as needed when new scientific evidence or national standards are published.

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