The Diagnosis and Management of Acute Group A Streptococcal Pharyngitis
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.”


The online version of this article is available at:

Each of the Key Points listed includes a systematic weighting of the strength of the recommendation (ie, “strong” or “weak”) and quality of evidence (ie, “high”, “moderate”, “low” or “very low”), using the GRADE (Grading of Recommendations Assessment, Development, and Evaluation) system. A detailed description of the methods, background, and evidence summaries that support each of the recommendations can be found in the full text of the guidelines.

This guideline discusses diagnosis and management of Group A Streptococcal (GAS) pharyngitis in children and adults, and recommendations are provided regarding antibiotic choices and dosing.

The following selected Key Points are extracted from the guideline for ADULT, ADOLESCENT AND PEDIATRIC patients:

1) Testing for GAS pharyngitis usually is not recommended for children or adults with acute pharyngitis with clinical and epidemiological features that strongly suggest a viral etiology (eg. cough rhinorrhea, hoarseness, and oral ulcers (strong, high)). It should be noted that GAS infection in children <3 years old is often associated with fever, mucopurulent rhinitis, excoriated nares, and diffuse adenopathy and that exudative pharyngitis is rare in this age group.

2) The diagnosis of GAS pharyngitis should be established by rapid antigen detection test (RADT) and/or culture should be performed because the clinical features alone do not reliably discriminate between GAS and viral pharyngitis. In children and adolescents, negative RADT’s should be followed up with a
throat culture (strong, high). Positive RADT’s do not necessitate a follow up culture because they are highly specific (strong, high).

3) For adults in usual circumstances, negative RATD’s do not need to be followed up with a throat culture because of the low occurrence 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 use conventional throat culture or to back up negative RATD results with culture.

4) Diagnostic studies for GAS pharyngitis may not be indicated for children < 3 years old because acute rheumatic fever is rare in children < 3 years old and the incidence of streptococcal pharyngitis and the classic presentation of streptococcal pharyngitis are uncommon in this age group. Selected children < 3 years old who have other risk factors (household contact with a school-aged sibling with documented GAS infection, attending day care or another setting with a high rate of cases of GAS infection, invasive retropharyngeal space infection) may be considered for testing (strong, moderate). It should be noted that GAS infection in children < 3 years old is often associated with fever, mucopurulent rhinitis, excoriated nares, and diffuse adenopathy and that exudative pharyngitis is rare in this age group.

5) 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).

6) 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.

7) 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).

8) 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). Aspirin should be avoided in children (strong, moderate). Adjunctive therapy with a corticosteroid is not recommended (weak, moderate).

9) 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).

10) 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)).
11) Follow-up post-treatment throat cultures or RADT are not recommended routinely but may be considered in special circumstances (strong, high).

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

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

CENTOR CRITERIA

Clinical scoring criteria have been developed to help determine the likelihood of a bacterial cause. The most widely used are the modified Centor criteria, which include fever by history, tonsillar exudates, tender anterior cervical adenopathy, and absence of cough. 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.

The American College of Physicians (ACP) - Clinicians should test patients with symptoms suggestive of group A streptococcal pharyngitis (for example, persistent fevers, anterior cervical adenitis, and tonsillopharyngeal exudates or other appropriate combination of symptoms) by rapid antigen detection test and/or culture for group A Streptococcus. Clinicians should treat patients with antibiotics only if they have confirmed streptococcal pharyngitis.

CDC Adult Treatment recommendations – Clinical features alone do not distinguish between GAS and viral pharyngitis. A rapid antigen detection test (RADT) is necessary to establish a GAS pharyngitis diagnosis. Those who meet two or more Centor criteria (eg., fever, tonsillar exudates, tender cervical lymphadenopathy, absence of cough) should receive a RADT. Throat cultures are not routinely recommended for adults. Antibiotic treatment is NOT recommended for patients with negative RADT results.

CDC Pediatric Treatment recommendations – Clinical features alone do not distinguish between GAS and viral pharyngitis. Children with sore throat plus 2 or more of the following features should undergo a rapid antigen detection test (RADT): absence of cough, presence of tonsillar exudates or swelling, history of fever, presence of swollen and tender anterior cervical lymph nodes, and age younger than 15 years. Testing should not generally be performed in children younger than 3 years in whom GAS rarely causes pharyngitis and rheumatic fever is uncommon. In children and adolescents, negative RADT tests should be backed up by a throat culture and positive RADT’s do not require a back up culture.
## Table 1: Antibiotic Regimens Recommended for Group A Streptococcal Pharyngitis

<table>
<thead>
<tr>
<th>Drug Route</th>
<th>Dose or Dosage</th>
<th>Duration or Quantity</th>
<th>Recommendation Strength, Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>For individuals without penicillin allergy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Penicillin V, oral</td>
<td>Children: 250 mg twice daily or 3 times daily; Adolescents and Adults: 250 mg 4 times daily or 500 mg twice daily</td>
<td>10 days</td>
<td>Strong, high</td>
</tr>
<tr>
<td>Amoxicillin, oral</td>
<td>50 mg/kg once daily (max = 1000mg); alternate: 25 mg/kg (max = 500 mg twice daily)</td>
<td>10 days</td>
<td>Strong, high</td>
</tr>
<tr>
<td>Benzathine penicillin G, intramuscular</td>
<td>&lt;27 kg: 600,000 units; &gt;27 kg: 1,200,000 units</td>
<td>1 dose</td>
<td>Strong, high</td>
</tr>
<tr>
<td>For individuals with penicillin allergy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cephalexin, oral *</td>
<td>20 mg/kg/dose twice daily (max = 500mg/dose)</td>
<td>10 days</td>
<td>Strong, high</td>
</tr>
<tr>
<td>Cefadroxil, oral *</td>
<td>30 mg/kg once daily (max = 1 g)</td>
<td>10 days</td>
<td>Strong, high</td>
</tr>
<tr>
<td>Clindamycin, oral</td>
<td>7 - 10mg/kg/dose 3 times daily (max = 300mg/dose)</td>
<td>10 days</td>
<td>Strong, moderate</td>
</tr>
<tr>
<td>Azithromycin, oral **</td>
<td>12 mg/kg once daily (max = 500mg)</td>
<td>5 days</td>
<td>Strong, moderate</td>
</tr>
<tr>
<td>Clarithromycin, oral **</td>
<td>7.5 mg/kg/dose twice daily (max = 250mg/dose)</td>
<td>10 days</td>
<td>Strong, moderate</td>
</tr>
</tbody>
</table>

Abbreviation: max, maximum.

*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%
PATIENT EDUCATION


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

Reference:


http://www.cdc.gov/getsmart/community/for-hcp/outpatient-hcp/adult-treatment-rec.html

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.

<table>
<thead>
<tr>
<th>Initial Approval Date and Reviews:</th>
<th>Most Recent Revision and Approval Date:</th>
<th>Next Scheduled Review Date:</th>
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Condition: Group A Streptococcus