Acute Group A Beta-Hemolytic Streptococcus Pharyngitis in Children – OBSOLETE 2

Clinical practice guidelines serve as an educational reference, and do not supersede the clinical judgment of the treating physician with respect to appropriate and necessary care for an individual patient. In the event HMSA policies differ from the clinical practice guidelines, for benefit purposes, HMSA policies shall supersede the clinical practice guidelines.

Introduction

While a wide range of infectious agents produces acute pharyngitis, viruses are the most common cause. Approximately 60 percent to 75 percent of cases in children are viral. Group A beta-hemolytic streptococcus (GABHS) is the most common cause of bacterial infection, accounting for 15 percent to 30 percent of cases in children, occurring mainly in children five to 15 years of age.

Goals/desired outcomes

The goal is to limit antibiotic treatment in acute pharyngitis in children to those identified by diagnostic testing confirming GABHS.

Diagnosis

GABHS empiric treatment results in poor diagnostic accuracy even with elaborate clinical scoring systems.

Michigan Quality Improvement Consortium Guideline, 2009

Acute group A streptococcal pharyngitis occurs mainly in children five to fifteen years of age, in temperate climates, and more often in the winter and early spring.

Acute group A streptococcal pharyngitis should be suspected on clinical and epidemiological grounds. The diagnosis of group A streptococcal pharyngitis should be supported by a throat swab.

DNA Probe

Rapid antigen detection test (RADT)

Culture for GABHS
The Infectious Diseases Society of America (IDSA) recommends laboratory testing should be performed to support the diagnosis of group A streptococcal pharyngitis.

Positive results of either culture for GABHS or RADT provides confirmation of the presence of group A beta-hemolytic streptococci.

In children and adolescents, unless the physician ascertained in his or her practice that the RADT used is comparable to a culture for GABHS. A culture for GABHS should confirm a negative RADT result.

The generally high specificity of RADTs should minimize over prescription of antimicrobials.

**Treatment**

**Treatment Algorithm**

Diagnosis is confirmed by a rapid strep screen or microbiological testing. Confirm all negative RADT with a culture for GABHS. Determine if the patient is high-risk. High-risk patients have a past history of rheumatic fever, especially carditis/valvular disease, and/or household contact with someone having a history of rheumatic fever. If the patient is not high-risk, assess the likelihood of GABHS pharyngitis using the following (assigning 1 point to each):

- Absence of cough, rhinorrhea and conjunctivitis
- Fever at least 38.3 degrees Celsius (100.9 degrees Fahrenheit) within the last 24 hours
- Ages 5 to 15 years
- Erythema, swelling or exudates of tonsils or pharynx
- Tender anterior cervical nodes (= 1 cm)
- Season (in temperate climates) is November to May

**High-risk patients**

Start antibiotics immediately. If culture for GABHS is negative, discontinue the antibiotics.

**Patients who are not high-risk**

Points = 0-1
The probability of GABHS is low. Symptomatic treatment only is recommended. Avoid antibiotics.
Points = 2-4
There is an intermediate probability of GABHS. If the rapid screen is positive, begin antibiotics. If negative, obtain a strep culture and only use antibiotics if the culture for GABHS is positive. If the culture for GABHS is negative, use symptomatic treatment only. Avoid antibiotics.

Points = 5-6
The probability of GABHS is high. Use a culture for GABHS or RADT to confirm diagnosis. Begin antibiotics immediately. If a culture for GABHS is negative, discontinue the antibiotics.

**Suggested treatment for GABHS strep pharyngitis**

Penicillin VK: 250 to 500 mg twice or three times daily (bid-tid) x 10 days

Amoxicillin: 40 mg/kg/d divided bid-tid x 10 days

Benzathine Penicillin G intramuscularly (IM) x 1:600,000 units for weight <60 lbs; 1.2 million units for weight >60 lbs

If Penicillin allergic: Erythromycin Ethyl Succinate (EES): 40 mg/kg/day bid-four times daily (qid) (max 1 g/day) x 10 days

**Alternate treatment for strep pharyngitis**

Cepahlexin 15 to 50 mg/kg/day divided bid or tid x 10 days

**Re-evaluate/refer**

If the patient fails to respond clinically after 48 hours of treatment, rule out peritonsillar or retropharyngeal abscess. If present, a prompt otolaryngology (ENT) evaluation is recommended.

Assess the potential for a compliance problem.

*Clinical practice guidelines serve as an educational reference, and do not supersede the clinical judgment of the treating physician with respect to appropriate and necessary care for an individual patient. In the event HMSA policies differ from the clinical practice guidelines, for benefit purposes, HMSA policies shall supersede the clinical practice guidelines.*

**Sources**

Michigan Health Systems. Used with permission.

References


Website

**Guideline review date: October 12, 2010**

<table>
<thead>
<tr>
<th>Rev#</th>
<th>Date</th>
<th>Nature of Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0</td>
<td>04/09/2009</td>
<td>This document replaces the previous version.</td>
</tr>
<tr>
<td>2.1</td>
<td>11/08/2010</td>
<td>Updated document with current information.</td>
</tr>
<tr>
<td>2.2</td>
<td>11/30/2010</td>
<td>Minor change to website.</td>
</tr>
</tbody>
</table>

First Published: 12/05/2006
Latest Revision: 11/30/2010

An Independent Licensee of the Blue Cross and Blue Shield Association.
© 2010, Hawaii Medical Service Association. All rights reserved.
CPT codes and descriptions contained herein are copyright 2009, American Medical Association. All rights reserved.