Acute pharyngitis (sore throat) accounts for 1% to 2% of all visits to outpatient departments, physician offices and emergency departments. A wide range of infectious agents, most commonly viruses, cause acute pharyngitis. Approximately 5% to 15% of adult cases and 20% to 30% of pediatric cases are caused by group A β-hemolytic streptococcus (GABHS). The incubation period of group A strep pharyngitis is approximately 2 to 5 days. Making the diagnosis of GABHS (or any differential diagnosis) is important in the prevention of rheumatic fever and/or other suppurative complications, hastening illness resolution, and preventing transmission.

Group A strep pharyngitis can occur in people of all ages. It is most common among children 5 through 15 years of age. It is rare in children younger than 3 years of age. The most common risk factor is close contact with another person with group A strep pharyngitis. Adults at increased risk for group A strep pharyngitis include parents of school-aged children and adults who are often in contact with children. Crowding, such as found in schools, military barracks, and daycare centers, increases the risk of disease spread.

The large majority of patients with acute pharyngitis have a self-limited illness, for which ONLY supportive care is needed. Antibiotic treatment for patients with pharyngitis benefits only those with a bacterial pharyngeal infection.

With increasing antibiotic resistance because of antibiotic overuse, accurate diagnosis is imperative. Prescribing antibiotics using a solitary diagnosis of acute pharyngitis – without performing a rapid strep screen is imprudent.

**DIAGNOSIS**

Clinically evaluate all patients with pharyngitis for the presence of the four Centor criteria:

- Fever
- Tonsillar exudates
- Absence of Cough
- Tender anterior cervical lymphadenopathy (Lymphadenitis)

These criteria along with other clinical features by Physical Exam should be used to guide treatment for pharyngitis. The following should be assessed:

- Airway patency
- Temperature (fever)
- HEENT exam i.e. rhinorrhea, hoarseness, oral ulcers, conjunctivitis (usually associated with a viral cause); pharyngeal and tonsillar erythema, palatal petechiae (usually associated with a bacterial cause)
- Lymphadenopathy
- Cardiovascular
- Pulmonary
- Abdomen (Hepatosplenomegaly)
Skin (scarlatiniform rash)

1. a.) **Adults:**
   - Perform a rapid antigen test only if the patient has two or more of the above Centor criteria **unless** the one criteria is tonsillar exudates. One point is also subtracted if the patient is aged 45 years or older.
   - Limit antibiotic therapy to only those patients with positive test results.
   - o

b.) **Pediatrics:**
   - Perform a rapid antigen test for patients with one or more of the Centor criteria. One point is added if the patient is younger than 15 years old.
   - Twenty-four-hour throat cultures **should** be done on all Pediatric patients with a negative rapid strep.
     For those patients with 2 or more of the Centor criteria, a negative rapid strep and a “pending” throat culture, **empirical** use of antibiotics may be considered. Antibiotics prescribed in this case scenario must include: a follow-up call to the patient to report the culture results, and if negative will be instructed to discontinue the use of the prescribed antibiotic.

2. Throat cultures are NOT recommended for the routine primary evaluation of ADULT patients with pharyngitis or for confirmation of negative results on rapid antigen tests when the test sensitivity exceeds 80%.

3. Throat cultures may be indicated as part of investigations of outbreaks of GABHS disease, for monitoring the development and spread of antibiotic resistance, or when such pathogens as gonococcus are being considered.

**TREATMENT:**
- All patients with pharyngitis should be offered appropriate doses of analgesics and antipyretics, as well as other supportive care.
- Lozenges can be used for quick-onset, short-duration of throat pain. When choosing a lozenge, patients should look for any of the following active ingredients: menthol, dyclonine, benzocaine, or hexylresorcinol.
- Throat sprays/gargle solutions are additional over-the-counter options for rapid relief of sore throat pain. The active ingredients generally include phenol, benzocaine, or chlorhexidine gluconate and benzylamine hydrochloride.
- The preferred antibiotic for treatment of acute GABHS pharyngitis is penicillin (pencillin V 500 mg two to three times daily x 10 days). Cephalosporin (cephalexin 500 mg two times per day x 10 days or cefdinir 300 mg two times per day x 5-10 days) may be used in a penicillin-allergic patient. Macrolides can also be used in penicillin-allergic patients (azithromycin Z-pak: 500 mg on day one, followed by 250 mg once daily x 4 days).
- Treatment with an appropriate antibiotic for 24 hours or longer generally eliminates a person’s ability to transmit group A strep. People with group A strep pharyngitis or scarlet fever should stay home from work, school, or daycare until they are afebrile and 24 hours after starting appropriate antibiotic therapy.
- Patients will receive a follow up call to report any culture results when available.
A follow up plan of care will be discussed with the patient in the event they feel their symptoms worsen or if they do not believe they are improving.

Antibiotics are prescribed unnecessarily to a substantial majority (approximately 75%) of patients with acute pharyngitis. The inappropriate use of antibiotics can have significant negative consequences both to individual patients and to public health. **Remember: Effective communication is more important than an antibiotic for patient satisfaction.**

<table>
<thead>
<tr>
<th>TIPS TO REDUCE ANTIBIOTIC USE</th>
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<tr>
<td>Tell patients that antibiotic use increases the risk of an antibiotic-resistant infection (offer educational hand-outs)</td>
<td>Recommend specific symptomatic therapy</td>
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<tr>
<td>Identify and validate patient concerns, provide reassurance</td>
<td>Spend time answering questions and offer a plan for follow-up if symptoms worsen</td>
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**PROGNOSIS AND COMPLICATIONS:**

Rarely, suppurative and nonsuppurative complications can occur after group A strep pharyngitis. Suppurative complications result from the spread of group A strep from the pharynx to adjacent structures. They can include:

- Peritonsillar abscess
- Retropharyngeal abscess
- Cervical lymphadenitis
- Mastoiditis

Other focal infections or sepsis are even less common.

Acute rheumatic fever is a nonsuppurative sequelae of group A strep pharyngitis. Post-streptococcal glomerulonephritis is a nonsuppurative sequelae of group A strep pharyngitis or skin infections. These complications occur after the original infection resolves and involve sites distant to the initial group A strep infection site. They are thought to be the result of the immune response and not of direct group A strep infection.
References

- Medscape Today @ http://emedicine.medscape.com/emergency_medicine
- Medscape: “Bacterial Pharyngitis”, 08 Feb 2019
- Centers for Disease Control and Prevention (CDC), Get Smart Campaign, Acute Pharyngitis in Adults information sheet @ www.cdc.gov
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