15.11 Passport Health Plan Acute Pharyngitis Clinical Practice Guideline

This guideline is intended to assist the practitioner in clinical decision-making and attempt to define clinical practices that apply to most patients in most circumstances. The treating practitioner should make the ultimate decision regarding the care of a particular patient.

Goals of Treatment

- Increase patient/caregiver knowledge of effective treatment of Pharyngitis and eliminate the inappropriate use of antistreptococcal antibiotics.
- Increase the use of first-line medications for patients with Pharyngitis.
- Reduce the excessive antibiotic treatment through decreased empirical treatment of patients with Pharyngitis.

Clinical Highlights

1. Diagnosis of group A beta streptococcal (GABS) pharyngitis should be made by laboratory testing rather than clinically. (Annotations # 9,10)
2. Patients diagnosed with GABS pharyngitis should be treated with penicillin or cephalexin. (Annotation #12)
3. Patients who are diagnosed with GABS pharyngitis should be educated on strep pharyngitis including the importance of following the prescribed medication regimen, use of home remedies to relieve symptoms, actions to take if symptoms worsen, and the importance of eliminating close contact with family members or visitors to the home while GABS may be contagious. (Annotation #13)
4. If laboratory testing indicates that sore throat is not caused by GABS, patients need to be educated on ineffectiveness of antibiotic treatment, use of home remedies to relieve symptoms, and actions to take if symptoms worsen. (Annotation #14)

Algorithm Annotations

1. ***Patient > 3 Years Old with Symptoms of Group A Beta Streptococcal (GABS) Pharyngitis***
   Symptoms typically associated with GABS pharyngitis:
   - Sudden onset of sore throat
   - Exudative tonsillitis
   - Tender anterior cervical adenopathy
   - History of fever
   - Headache
   - Abdominal pain
   - No rhinnorrhea, cough or hoarseness

   Symptoms sometimes associated with GABS pharyngitis:
   - Vomiting
   - Malaise
   - Anorexia
   - Rash or urticaria

   Patients with recent strep exposure may be more likely to have GABS pharyngitis.

2. ***Assessment of Serious Symptoms***
   This guideline is not intended to supersede or preclude clinical judgment.

- Stridor
- Respiratory distress (not due to congestion)
- Air hunger
- Drooling
- Inability to swallow liquids
- Trismus (inability to open the mouth fully)
- Severity of symptoms judged worrisome at triage.

3. See Provider Based on Severity of Symptoms

The patient should be seen or evaluated by a physician immediately if serious symptoms are present.

4. Assessment of Complicating Factors

This guideline applies to patients in generally good health with none of the following risk factors. Patients with these conditions may be included in this guideline after consultation with a provider:

- Chronic illness/disease (congestive heart failure, Chronic Obstructive Pulmonary Disease, sickle-cell disease, etc.)
- History of rheumatic fever
- HIV positive
- Patient on chemotherapy
- Immunocompromised/Immunosuppressed
- Asthma
- Diabetes mellitus
- Pregnant
- Patient started antibiotics prior to diagnosis
- Sore throat for > 5 days duration
- Persistent infection/treatment failure – recurrence of symptoms within 7 days of completing antiobiotic therapy. Possible reasons: medication noncompliance, repeat exposure, antibiotic resistance, copathagen
- Recurrent streptococcal pharyngitis – recurrence of culture postive GABS pharyngitis more than 7 days but within 4 weeks of completing antibiotic therapy.
- Smokers

5. Consult Provider

Triage staff must consult provider to determine a patient's appropriateness to follow this guideline.

6. Assess for Symptoms of Viral Upper Respiratory Infection (VURI)

Symptoms of a (VURI) include:

- Nasal congestion and discharge
- Cough
- Hoarseness

GABS pharyngitis is unlikely with symptoms of congestion, cough or hoarseness.

7. Assess if Patient is taking Antibiotics for other Condition(s)

Patients currently on anti-streptococcal antibiotics are unlikely to have streptococcal pharyngitis and likely do not have the disease. Antibiotics not reliably anti-streptococcal include sulfa medications (Septra ®, Bactrim ®, Gantrisin ®), nitrofurantoin (Macrodantin ®) and tetracycline.

8. Education

When a patient currently on antibiotics (other than sulfa, tetracycline, nitrofurantoin or other non-strep antibiotics) is taking the medication as prescribed and develops a sore throat, chances are that the sore throat is caused by something other than GABS. Treatment failure for GABS is rare. Education will be needed on home remedies for sore throats.

Home remedies include:

- Take acetaminophen or ibuprofen. Do not use aspirin with children and teenagers because it may increase the risk of Reyes Syndrome.
- Gargle with warm salt water (1/4 tsp of salt per 8 oz glass of water).
- Adults or older children may suck on throat lozenges, hard candy or ice. Gargling with ice water can be soothing.
- Eat soft foods. Drink cool beverages or warm liquids.
- Suck on flavored frozen desserts (such as popsicles).

The patient should be instructed to call back if the symptoms worsen or if they persist beyond 5-7 days.

9. Perform Rapid Stress Test (RST) or Strep Culture (STCX)

RST and STCX both require proper collection technique by trained professionals and must be performed according to the Federal Clinical Laboratory Improvement Act (CLIA) regulations. Poor collection procedures reduce accuracy of either test. RST must also be performed according to the manufacturer's guidelines. An appropriately performed throat swab touches both tonsillar pillars and the posterior pharyngeal wall. The tongue should not be included. Backup STCX is needed if RST is negative. The best yield is obtained by using separate swabs for RST and STCX.

If RST is not available, STCX should be performed. Generally treatment should be delayed until STCX results are available. Results are usually available within 24 hours or slightly less, but may require incubation for longer periods of time. Some clinicians choose to initiate treatment prior to culture result availability, but a full course of treatment should not be prescribed until culture results confirm the presence of GABS.

A less satisfactory strategy is empiric treatment. Using complex clinical scoring systems or in patients with the complete constellation of classic strep symptoms, empiric treatment may be justified, but has significant limitations. If full course treatment is initiated without intent to rely on the test results, laboratory testing is redundant and wasteful. Rountinely culturing and prescribing antibiotic treatment for asymptomatic family members is not recommended. Routinely reculturing patients after treatment with antibiotics is not recommended.

10. Strep Culture (STCX) Results

Whether or not the test is positive, patients and their families want to know results as soon as possible so that they can appropriately plan for their needs.

- If negative, they need educational information and a planned course of action if they do not recover in a reasonable time frame or if they become more ill.
- If positive, patients want to be started on medication as quickly as possible, primarily as a comfort or convenience issue to reduce contagion. Rheumatic fever prophylaxis is likely satisfactory if started within a week of the positive culture; however, patients and parents may perceive any delay in initiation of treatment as poor service.

11. Treatment (see Table I)

Primary episodes

- In the Passport network, Amoxicillin appears to be the preferred drug of choice for strep pharyngitis.
- Penicillin is recommended for streptococcal pharyngitis. Amoxicillin offers no microbiologic advantage as compared to the narrower spectrum penicillin. Although the taste of amoxicillin suspension is preferable to PCN suspension, providers can consider promoting the benefits of BID versus TID dosing, low cost, narrow spectrum and the excellent therapeutic record of PCN for strep pharyngitis to patients and parents to encourage its use.

- Intramuscular (IM) penicillin may be advisable if the possibility of poor compliance is a concern.
- In PCN-allergic patients if the adverse reaction was not anaphylaxis, cephalexin is still a reasonable choice.
- Although broader spectrum PCNs, such as ampicillin and amoxicillin, are often used for treatment of GABS pharyngitis, they offer no microbiologic advantage over the narrower spectrum PCN.
- There is some evidence that GABS are becoming resistant to macrolide antibiotics. Local resistant patterns should be included in the consideration for an alternative antibiotic choice in PCN allergic patients.
- Please refer to Table I for additional information.

Persistent Infections/Treatment Failure

- Treatment of persistent infection should be directed toward eradication of both GABS and beta lactamase-producing protective organisms.
- Note: All episodes consist of clinical findings and positive lab tests within 7 days after completion of a course of antibiotic therapy.
- **Recommendations**:
  Cephalexin
  Clindamycin
  Amoxicillin/clavulanate

Table I: Antibiotic Treatment

Drug/Dosage	Advantage	Disadvantage
Penicillin V Potassium (PCN-VK) • < 23 kg (< 50lbs) 250 mg or 40 mg/kg daily (500-1000 mg total daily dose) given bid or tid x 10 days • > 23 kg (50 lbs) 500 mg bid or tid x 10 days or 250 mg bid or tid	• inexpensive • narrow spectrum of antimicrobial activity • low side effect profile • bid dosing	
Erythromycin • Estolate 20-30 mg/kg/day ÷ bid – qid x 10 days • Ethyl succinate or state (< 41 kg or 90 lbs) 40 mg/kg/day ÷ bid – qid x 10 days (> 41 kg or 90 lbs) 400 mg qid x 10 days	• equally effective as PCN in preventing all complications of GABS • all forms: no difference in cure rate	• GI upset • Resistance is increasing
Cephalexin • Pediatric 25-50 mg/kg/day ÷ bid x 10 days • Adults 500mg bid x 10 days	• equal cure rate vs oral PCN • bid dosing	• broader spectrum

Clindamycin • Pediatric 20 mg/kg/day ÷ tid x 10 days • Adults 450 mg/day ÷ tid x 10 days	• unaffected by beta lactamase • narrow spectrum • eradicates carrier status	• expensive • pseudomembranous colitis may occur up to several weeks after cessation of therapy • Stevens-Johnson syndrome
Amoxicillin • Pediatric <20 kg 40 mg/kg/day in divided doses bid or tid x 10 days • Adult > 20 kg 500 mg tid x 10 days	• Taste is preferred over PCN • found to have treatment response comparative to PCN V	

12. Educate on GABS Pharyngitis

When the strep screen is positive it is important for the patient or caregiver to understand the course of the illness and the importance of taking the complete course of antibiotics. They should be aware that the patient is contagious until they have been on the antibiotic for 24 hours, and that they should see improvement in acute symptoms within 48 hours. In order to prevent the occurrence of rheumatic fever, it is vital for patients to continue antibiotics for the full course of treatment even when they feel completely better. Patients of the care givers should call their health care provider if the patient is not feeling significantly better or if their symptoms persist or worsen after 48 hours, or if other members of the family show the same symptoms.

Home remedies include:

- Take acetaminophen or ibuprofen. Do not use aspirin with children and teenagers because it may increase the risk of Reyes Syndrome.
- Gargle with warm salt water (1/4 tsp of salt per 8 oz glass of water).
- Adults or older children may suck on throat lozenges, hard candy or ice. Gargling with ice water can be soothing.
- Eat soft foods. Drink cool beverages or warm liquids.
- Suck on flavored frozen desserts (such as popsicles).

Provide educational material and antibiotic chart for the patient to take home.
This information should include the importance of eliminating close contact with family members or visitors to the home while GABS may be contagious.

13. Educate on Non-GABS Pharyngitis and Home Remedies

If the RST or the STCX is negative, the patient needs to be educated on non-strep sore throats. This includes the duration of the symptoms, ineffectiveness of antibiotic treatment, and home remedies that will ease the symptoms. The patient should be instructed to call back if the symptoms worsen or if they persist beyond 5-7 days.

Home remedies include:

- Take acetaminophen or ibuprofen. Do not use aspirin with children and teenagers because it may increase the risk of Reyes Syndrome.
- Gargle with warm salt water (1/4 tsp of salt per 8 oz glass of water).
- Adults or older children may suck on throat lozenges, hard candy or ice. Gargling with

ice water can be soothing.
- Eat soft foods. Drink cool beverages or warm liquids.
- Suck on flavored frozen desserts (such as popsicles).

Provide educational material about non-strep causes of sore throats and home remedies for the patient to take home.

Based on the Institute for Clinical Systems Improvement Health Care Guideline: Acute Pharyngitis, Sixth Edition, May 2005 and American Academy of Pediatrics; Twice-Daily Oral Penicillin for Treatment of Streptococcal Pharyngitis: Less is Best; James W, Bass, Donald A. Person and Debora S. Chan; Pediatrics 2000; 105; 422-423 and Institute for Clinical Systems Improvement (ICSI) Diagnosis and Treatment of Respiratory Illness in Children and Adults Second Edition, January 2008.

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