Indian Academy of Pediatrics (IAP)

STANDARD TREATMENT GUIDELINES 2022

Acute Pharyngitis/Acute Tonsillopharyngitis

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Acute Pharyngitis/Acute Tonsillopharyngitis

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Introduction

Acute pharyngitis/acute tonsillopharyngitis is inflammation of the pharynx.

Definitions

Acute Tonsillitis/Acute Pharyngitis/Acute Tonsillopharyngitis

Patients with acute sore throat with/without dysphagia are classified under one of these diagnoses.

Recurrent Acute Tonsillitis

It is defined as repeated episodes of acute tonsillitis with asymptomatic periods in between the episodes.

Carrier State

It is defined by a positive pharyngeal culture of group A beta-hemolytic *Streptococcus pyogenes* (GABHS), without any acute symptoms or evidence of an antistreptococcal immunologic response.

Recurrent Streptococcal Tonsillitis

When an individual has seven cultures proven episodes in 1 year, or five infections in 2 consecutive years, or three infections each year for 3 years consecutively.

Causative Agents

Viruses constitute majority of causative agent (70–95%). Group A beta-hemolytic *Streptococcus* is most common pathogen among bacteria.

Group A Streptococcal Pharyngitis

Common in children aged 5–11 years. Nearly 11–15% children aged ≥5 years act as asymptomatic carriers of group A streptococcal (GAS). Mostly present during winter and spring season.

Clinical Features

- ☑ Sudden onset of a sore throat
- ☑ Discomfort and pain while swallowing
- ☑ Fever.

Examination

Erythema, edema, exudates, or an enanthem (ulcers and vesicles) along with lymphadenitis. A child with clinical signs of acute upper airway obstruction should be assessed for:

- ☑ Hydration status
- ☑ Fever
- ☑ Oral/pharyngeal ulcers (coxsackie virus)
- ☑ Tonsillar exudates
- ☑ Tender anterior cervical lymphadenopathy
- ☑ Hepatosplenomegaly [Epstein–Barr virus (EBV)]
- ☑ Scarlet-fever type rash-blanching, sandpaper-like rash, usually more prominent in skin creases, flushed face/cheeks with perioral pallor (GAS).

Red Flags

- ☑ Unwell/toxic appearance
- ☑ Respiratory distress
- ☑ Stridor
- ☑ Trismus
- ☑ Drooling
- ☑ "Hot potato" voice (muffled voice associated with pharyngeal/peritonsillar pathology)
- ☑ Torticollis
- ☑ Neck stiffness/fullness.

In the acutely unwell looking child consider alternative diagnosis and/or complications of GAS pharyngitis.

Complications

The complications of GABHS pharyngitis include:

- ☑ *Local suppurative complications*: Parapharyngeal abscess, peritonsillar and retropharyngeal abscess, and sepsis.
- ☑ *Nonsuppurative illnesses*: Acute rheumatic fever, acute post-streptococcal glomerulonephritis, post-streptococcal reactive arthritis and possible pediatric autoimmune neuropsychiatric disorders associated with *S. pyogenes* (PANDAS) or childhood acute neuropsychiatric symptoms (CANS).

Diagnosis

- ☑ Diagnosis is mostly clinical.
- ☑ Patient's history, clinical symptoms, and laboratory values all should be taken into consideration to distinguish between viral and bacterial origin **(Table 1)**.

TABLE 1: Distinguish between viral and bacterial origin.

Group A streptococcal infection	***Viral infection***
Sudden onset of sore throat, presentation in winter or early spring	Conjunctivitis and viral exanthema
Age 5–15 years, history of exposure to streptococcal pharyngitis	Coryza
Fever and headache	Cough
Palatal petechiae and anterior cervical adenitis	Diarrhea
Patchy tonsillopharyngeal exudates	Hoarseness
Tonsillopharyngeal inflammation	Discrete ulcerative stomatitis

Group A beta-hemolytic *Streptococcus pyogenes* pharyngitis is confirmed using a positive rapid antigen detection test (RADT).

Diagnosis

Rapid Antigen Detection Test

Point of care test, high specificity (98.4%), sensitivity (89.7%), and diagnostic accuracy (96.4%), if RADT positive then throat swab culture is not necessary.
If RADT is negative and a strong clinical suspicion of GAS pharyngitis, throat swab culture is indicated.

- ☑ Antistreptococcal antibody titers are not recommended routinely.
- ☑ Diagnostic testing is not recommended if clinical features strongly suggest a viral etiology.
- ☑ Routinely performed blood tests and blood cultures are not indicated.

Modified Centor or McIsaac score should be taken into account to consider ordering a rapid test or throat swab **(Table 2)**.

TABLE 2: McIsaac score (modified Centor score).

Symptom	***Score***
Body temperature (in the history) > 38°C	1
No cough	1
Cervical lymph node swelling	1
Tonsillar swelling or exudation	1
Age (years)	
3–14	1
15–44	0
≥45	–1

If score 0 and 1: Do not test for strep and do not treat
Score 2: Treat, if rapid strep test is positive
Score 3: Two options, treat if rapid strep test is positive or treat empirically
Score 4: Treat empirically

Treatment Regimens for Group A Streptococcal Infection

TABLE 3: Treatment regimens for group A streptococcal (GAS) infection.

Drug	***Dose/dosage***	***Duration***
Patients without penicillin allergy		
Penicillin V, oral	*Children:* 250 mg twice or thrice daily *Adolescents and adults:* 250 mg four times daily or 500 mg twice daily	10 days
Amoxicillin, oral	50 mg/kg daily in two to three divided dose (maximum = 1,000 mg) *Alternative:* 25 mg/kg twice daily (maximum = 500 mg)	10 days
Penicillin G benzathine, intramuscular	<27 kg: 600,000 U ≥27 kg: 1,200,000 U	Single dose
Patients with penicillin allergy		
Cephalexin, oral*	20 mg/kg/dose twice daily (maximum = 500 mg/dose)	10 days
Cefadroxil, oral*	30 mg/kg once daily (maximum = 1 g)	10 days
Clindamycin, oral	7 mg/kg/dose thrice daily (maximum = 300 mg/dose)	10 days
Azithromycin oral†	12 mg/kg once daily (maximum = 500 mg)	5 days
Clarithromycin oral†	7.5 mg/kg/dose twice daily (maximum = 250 mg/dose)	10 days

*Avoid in individuals with immediate hypersensitivity to penicillin.
†Resistance of group A *Streptococcus* to these agents is well-known and varies geographically and temporally.

Adjunctive Therapy

- ☑ Analgesic or antipyretic (e.g., acetaminophen and nonsteroidal anti-inflammatory drugs) can be considered to treat moderate-to-severe symptoms or control a high fever.
- ☑ Aspirin and adjunctive corticosteroids are not recommended.

Treatment Regimens for Group A Streptococcal Infection

Surgical Management

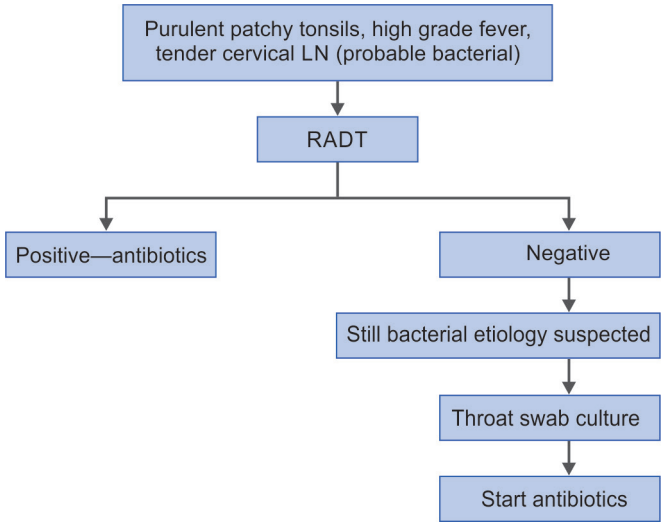
Tonsillectomy is indicated for the individuals who have experienced the following:

- ☑ More than six episodes of streptococcal pharyngitis (confirmed by positive culture) in 1 year.
- ☑ Five episodes of streptococcal pharyngitis in 2 consecutive years.
- ☑ Three or more infections of the tonsils and/or adenoids per year for 3 years in a row despite adequate medical therapy.
- ☑ Chronic or recurrent tonsillitis associated with the streptococcal carrier state that has not responded to beta-lactamase–resistant antibiotics.

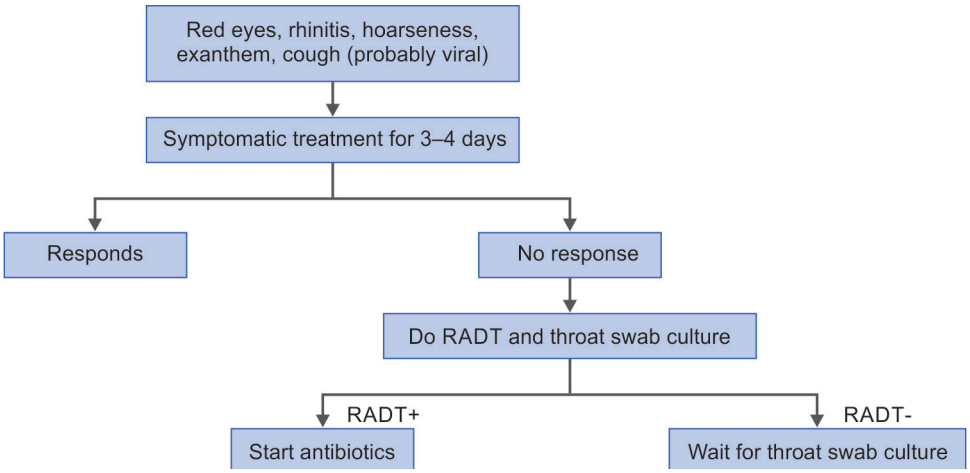
Tips to Reduce Antibiotic Usage

- ☑ Use history, clinical symptoms, modified Centor score, and RADT to distinguish between viral and bacterial illness.
- ☑ Patient with recurrent pharyngitis and laboratory evidence of GABHS may be chronic carriers and can have repeated viral infections hence antibiotics are not recommended in such cases.
- ☑ Effective communication regarding antibiotic resistance, specific symptomatic treatment, and a plan for follow-up, if symptoms worsen.

Flowchart 1: Approach to a case of acute tonsillopharyngitis.



Flowchart 2: Approach to suspected case of Viral Pharyngitis.



Further Reading

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