



وزارة الصحة
Ministry of Health

UPPER RESPIRATORY TRACT INFECTION GROUP A STREPTOCOCCAL (GAS) PHARYNGITIS PROTOCOL

Abbreviation

PO: oral
hr: hour
d: day
mg: milligram
kg: kilogram
GAS: Group A Streptococcal
RADT: Rapid Antigen Detection Test

Introduction

More than half of all antibiotics given to treat active infections in Primary care centres are prescribed for four three infections: Upper Respiratory Tract Infection Group A Streptococcal (GAS) Pharyngitis, Tonsillitis and Bronchitis (according to MOH hospitals reports) where there are important opportunities to improve the use of antibiotics. Availability of guidelines and system to monitor the adherence is most important strategies to ensure that the use of antimicrobial in Primary care centres setting is appropriately.

Purpose: To help the MOH Primary care centers during establishment of antibiotic Nudging Program at Primary care centers settings

Aim and scope: The guideline is intended to provide guidance on the safe and cost-effectiveness treatment of most common community acquired infections and to decrease the antimicrobial resistance in primary care centers

Targeted population: Immunocompetent patients who are diagnosed with Upper Respiratory Tract Infection Group A Streptococcal (GAS) Pharyngitis.

Targeted end users: Physicians, Pharmacists/clinical pharmacists, nurses, and laboratory specialist.

Setup: Outpatient setting

Methodology:

Phase I: In 2014 the Antibiotic committee under the General Administration of Pharmaceutical Care developed the antimicrobial guideline by reviewing and adopting international guideline (Infectious Disease Society of America, American Thoracic Society, American Society of Health-System Pharmacists and European Society of Clinical Microbiology and Infectious Diseases) to cover 20 infectious diseases.

Phase II: In 2016, collaboration with General Administration of infection control a group of infectious disease consultants reviewed this guideline

Phase III: In 2020-2021 The specific indications were agreed by Nudging program central team to be implemented and monitored in MOH primary health care centers. For this reason, the Group A Streptococcal (GAS) Pharyngitis guideline sections was updated by program coordinator pharmacists according to recent international guideline, literature and MOH formulary and then reviewed by clinical pharmacist and infectious disease consultant.

Conflict of interest:

This guideline developed based on valid scientific evidence, critical assessment of that evidence, and objective clinical judgment that relates the evidence to the needs of practitioners and patients. No financial relationships with pharmaceutical, medical device, and biotechnology companies.

Funding:

No fund was provided.

Updating:

First version of this guideline created in 2020-2021. The guidelines will be updated every 3 years or if any changes or updates released by international/national guidelines, pharmacotherapy references or MOH formulary.

Upper Respiratory Tract Infection Group A Streptococcal (GAS) Pharyngitis

- Group A Streptococcal (GAS) is the most common bacterial cause of acute pharyngitis
- 80-90% of adults (>70% of children) do NOT require antibiotics as infection likely viral.
- Pharyngitis is typically self-limiting (often 3-7 days: up to ≤10 days).
- The inappropriate use of antibiotics can have significant negative consequences both to individual patients and to public health. Patients with a positive throat swab should receive an antibiotic to decrease the risk of complications.
- The turn-around-time for throat swab results can take a few days. However, antibiotics started within 9 days of symptom onset in confirmed GAS will prevent rheumatic fever.
- If antibiotics are started empirically, ensure agent is discontinued if throat swab negative
- All patients with pharyngitis should be offered appropriate doses of analgesics and antipyretics, as well as other supportive care.

Tips to Reduce Antibiotic Use	
Tell patients that antibiotic use increases the risk of an antibiotic-resistant infection (offer educational hand-outs)	Recommend specific symptomatic therapy
Identify and validate patient concerns, provide reassurance	Spend time answering questions and offer a plan for follow-up if symptoms worsen

Epidemiologic and Clinical Features Suggestive of Group A Streptococcal and Viral Pharyngitis

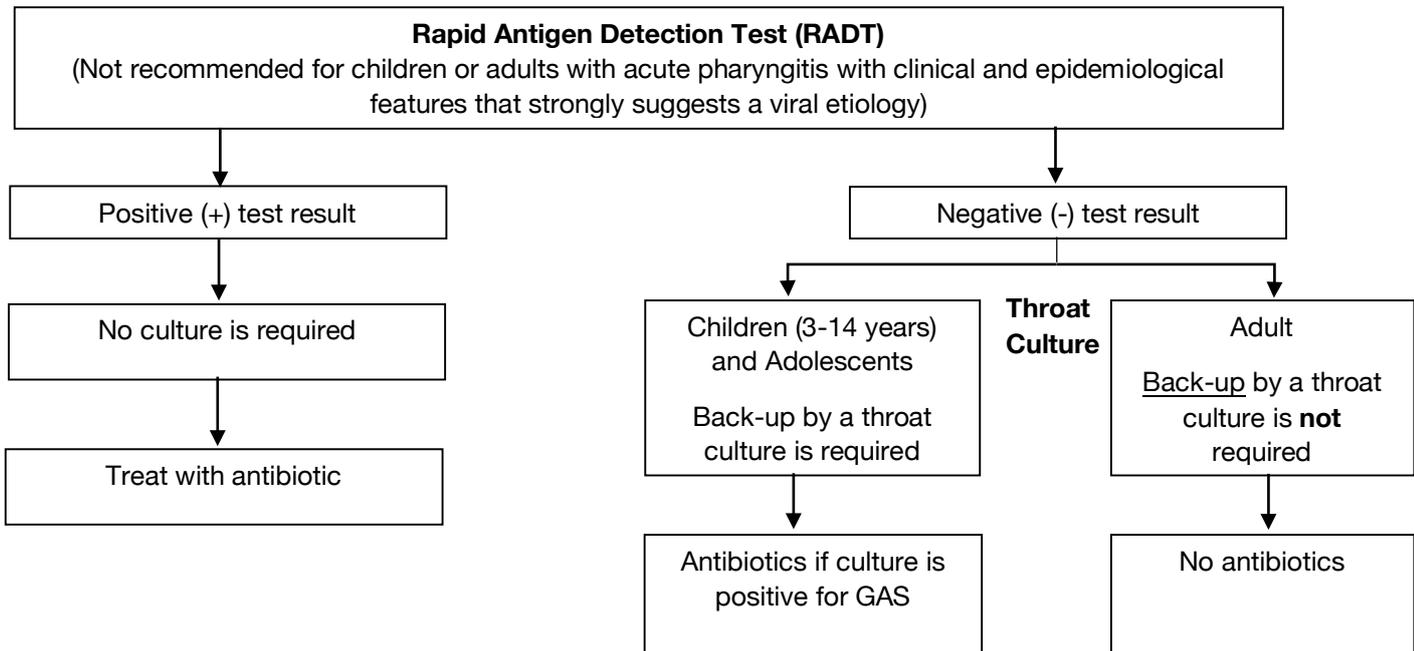
Group A Streptococcal	Viral
<ul style="list-style-type: none"> • Sudden onset of sore throat • Age 3–14 years • Fever • Headache • Nausea, vomiting, abdominal pain • Tonsillopharyngeal inflammation • Patchy tonsillopharyngeal exudates • Palatal petechiae • Anterior cervical adenitis (tender nodes) • Winter and early spring presentation • History of exposure to strep pharyngitis • Scarletiform rash 	<ul style="list-style-type: none"> • Conjunctivitis • Coryza • Cough • Diarrhea • Hoarseness • Discrete ulcerative stomatitis • Viral exanthema

Diagnosis of Group A Streptococcal Pharyngitis

- Modified Centor scoring system: used to calculate the risk of streptococcal pharyngitis and to decide whether RADT and antimicrobial therapy should be initiated in patients presenting with sore throat. Clinicians should consider performing RADT for those with scores > 1 if they are:
 - Children patients (3-14 years)
 - or at risk of complications (immunocompromised or frail)

Modified Centor criteria		Points
Absence of a cough, rhinorrhea, hoarseness and oral ulcer		1
Swollen and tender cervical lymph nodes		1
Temperature >38.0 °C (100.4 °F)		1
Tonsillar exudate or swelling		1
Age		
Children (3 to 14 years)		1
Adult (15 to 44 years)		0
45 years or older		-1
Total Score	Interpretation	
≤ 2 points	<ul style="list-style-type: none"> • Symptomatic treatment • No antibiotic or further testing 	
≥ 3 points	Antibiotic based on rapid antigen detection test (RADT) or culture	

- **Rapid Antigen Detection Test (RADT):** Not indicated for children <3 years old because of acute rheumatic fever is rare and the incidence of streptococcal pharyngitis and the classic presentation of streptococcal pharyngitis are uncommon in this age group with exception of household contact with confirmed GAS infection, may be considered for testing.



Empiric Drug Regimens of Choice

No Penicillin Allergy	
Penicillin V	Children: ≤ 27 kg: 250 mg orally twice daily or three times daily for 10 days (maximum 750mg/day) >27 kg & Adults: 250 mg orally every 6 hours times, or 500 mg orally every 12 hours or every 8 hours for 10 days
Amoxicillin	Children: 50 mg/kg/day orally every 24 hours 10 days (maximum 1000mg/day) Adults: 1000 mg oral every 24 hours for 10 days
Penicillin G benzathine	Children and Adult: < 27 kg: 600,000 U IM (single dose) ≥ 27 kg: 1,200,000 U IM (single dose)
Penicillin Allergy: Type IV Hypersensitivity (i.e., rash)	
Cephalexin	Children (>1 - 14 years): 25-50mg/kg/day orally in equal divided doses for 7-14 days (maximum 500mg/dose) Children ≥ 15 and Adults: 250mg orally every 6 hours for 7-14 days, or 500mg orally every 12 hours for 7-14 days Sever infection: Children (>1 - 14 years): 50-100 mg/kg/day orally in equal divided doses for 7-14 days Children ≥ 15 and Adults: 500mg orally every 6 hours for 7-14 days (max: 4g/day)
Penicillin Allergy: Type I Hypersensitivity (i.e., anaphylaxis)	
Do not use the following antibiotics unless confirmed GAS and confirmed type I reaction to penicillin, due to concerns with increase resistance to macrolides and adverse events e.g. C. difficile.	
Clindamycin	Children and Adult: 20mg/kg/day orally every 8 hours for 10 days (Maximum 1800mg/day)
Azithromycin	Children: 12 mg/kg/day orally every 24 hours for 5 days (Maximum 500mg/dose) Adults: 500 mg Day 1, then 250 mg orally every 24 hours on days 2 through 5, or 500 mg orally every 24 hours for 3 days
Clarithromycin	Children (≥ 6 months): 15mg/kg/day orally every 12 hours for 10 days Adults: 250 mg orally every 12 hours for 10 days

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