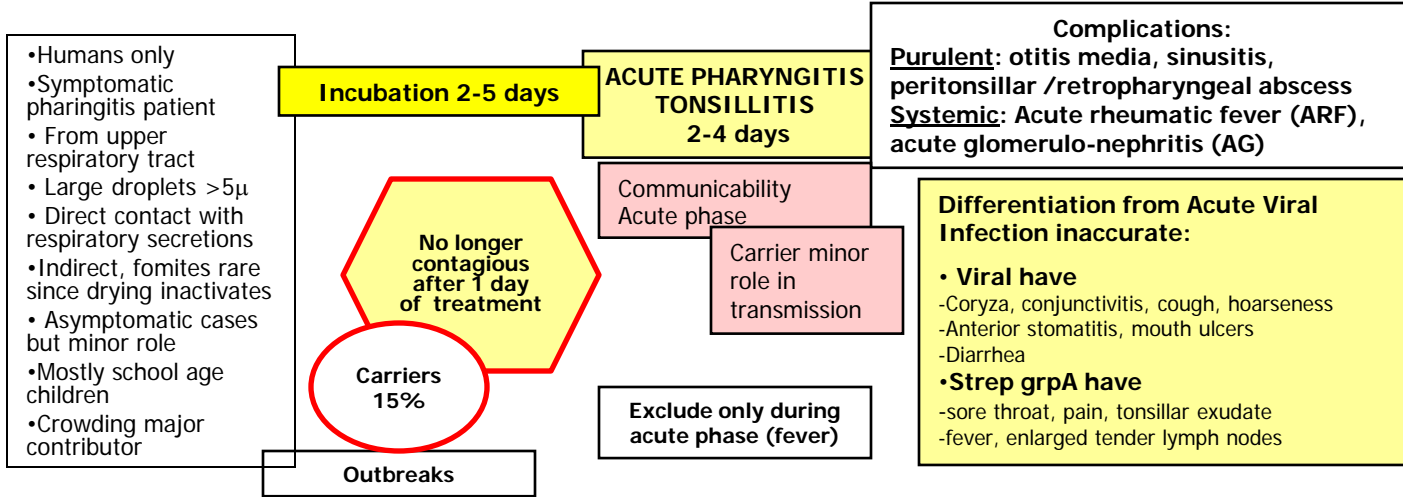


Streptococcal Grp A (GAS) Upper Respiratory Tract Infection (URTI)

Epidemiology,



Diagnosis

- Streptococcus Group A β hemolytic = Streptococcus pyogenes; Gram positive cocci, chains, clear hemolysis (β) on blood agar, bacitracin sensitive on blood agar
- 120 distinct serotypes (based on M protein) and genotypes (M protein gene sequence)

Indications for testing

- Children >3yrs, rare before 3
- **Acute symptoms**, outbreaks, symptomatic family or day care associates

Testing Contacts

- Not recommended for asymptomatic household contacts except if ARF or AG
- Not recommended in day care or schools (15% healthy carriers)

Lab Diagnosis

- **Culture:** Swab posterior nasopharynx and tonsils
 -culture on sheep blood agar, (24-48hrs)
 -confirmation on colonies by latex agglutination, fluorescent AB, coagglutination or precipitation
 -False negative 10%; false positive common among carriers who have intercurrent viral URTI
- **Rapid tests:** extraction of Grp A carbohydrate antigen from throat swab
 -Negative results must be confirmed by culture;
 -Positive tests do not need confirmation

Treatment, Prophylaxis

Indications for treatment

- Acute URTI with positive rapid or culture
- Relapse BUT avoid continuous re-treatment (probably patient became carrier)
- Management of chronic "relapses" difficult
- NOT for repeat acute URTI probably due to viral infection
- NOT for asymptomatic with positive tests except if ARF or AG risk in family or group
- Carriers in confirmed GAS pharyngitis in family or small confined group: avoid long term

Post treatment test of cure

- Not recommended
- Except for high risk of ARF or AG

Treatment

- Penicillin V, amoxicillin, ampicillin effective in 24hrs with 10 days treatment to prevent ARF
- Benzathine penicillin
- Cephalosporin 1 oral acceptable
- Erythromycin /Clarithromycin 10 days or azithromycin 5 days but resistance to macrolides common
- No tetracyclines, no sulfonamides, no fluoroquinolones

Treatment of carriage

- Not recommended
- Except for high risk of ARF or AG
- Standard penicillin treatment poor
- Cephalosporins, amoxicillin-clavulanate, clindamycin 10 days
- Rifampin last 4 days

Control

- Test symptomatic URTI
- Treat confirmed cases
- Exclude only during acute phase (fever)
- Test symptomatic contacts and treat positive
- Expect 50% asymptomatic children carriers and 20% adult carriers during outbreak
- Do NOT treat asymptomatic carriers except rarest continuous positive in family /confined group