**Pharyngitis: Management Considerations**

### Clinical Pearls

- Pharyngitis is usually self-limiting (4-5d; up to ≤10d), and the majority of cases do NOT require antibiotics as they are viral infections (80-90% in adults, >70% in children).
- A validated clinical decision rule e.g. **modified Centor score** can help identify low risk patients who do not require diagnostic testing (see below) or antibiotics.
- For confirmed Group A Streptococcus (GAS) pharyngitis, **penicillin for 10d is the drug of choice**.
- Patients should not use the following antibiotics unless confirmed GAS & confirmed type I reaction to penicillin, due to narrow spectrum, adverse events e.g. allergy, or if immunocompromised. Table 3. Empiric Drug Regimens of Choice & Susceptibility Concerns

### Overview

- Etiology: viral 85-95% of adults (>70% of children), therefore, majority do NOT require antibiotics; minority bacterial Group A Streptococcus (GAS).
- A validated clinical decision rule e.g. **modified Centor score**, FeverPAIN can be used to help identify low-risk patients who do not require diagnostic testing or antibiotics.
- **Exclusion**: confirmed Centor score may not accurately predict risk during epidemics or in high-risk groups e.g. hx of rheumatic fever, valvular heart disease, immunosuppression.
- Use clinical judgment & consider testing (RADT/throat swab) more broadly.
- Diagnostic testing (RADT, culture) are **not recommended if**: - A modified Centor score of ≤1 (see right, Table 1) - sxs of a viral infection rhinorrea, cough, oral ulcers, hoarseness (IDSA '12, strong, high) - < 3y, unless other risk factors e.g. outbreak, sibling with GAS (IDSA '12, strong, moderate) - asymptomatic contact of patient with GAS pharyngitis (IDSA '12, strong, moderate)
- RADT useful for ruling in a diagnosis when results are positive. Back-up throat cultures recommended to confirm negative RADT in some kids (e.g. 5-15 years of age) & may be used in others. Note: low incidence of GAS in adults.

### An Approach to Treatment

- **80-90% of adults (>70% of children)** do NOT require antibiotics as infection likely viral.
- **Possible strategies**: watchful waiting, delayed ABX, empiric ABX (stop if throat swab negative).
- Use validated clinical decision tool (Table 1) to determine risk of GAS infection. If ≤2, RADT or throat swab.
- **Patients with a positive throat swab should receive an antibiotic** (see Table 3) to decrease 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 and given for 10 days in confirmed GAS will prevent rheumatic fever (IDSA '12, strong, moderate).
- Risk of acute rheumatic fever is rare in the general population in Canada (0.1 to 2 cases per 100,000), but may be higher remote Indigenous communities or immigrants from endemic areas e.g. Philippines.

### Table 1. Modified Centor (or Mccsac) Score

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temp &gt; 38°C (&gt;100.5 °F) oral temp used in Centor score (adults)</td>
<td>1</td>
</tr>
<tr>
<td>Absence of cough</td>
<td>1</td>
</tr>
<tr>
<td>Swollen, tender anterior cervical nodes</td>
<td>1</td>
</tr>
<tr>
<td>Tonsillar swelling or exudate</td>
<td>1</td>
</tr>
<tr>
<td>Age 3 years to 14 years</td>
<td>1</td>
</tr>
<tr>
<td>Age 15 to 44 years</td>
<td>0</td>
</tr>
<tr>
<td>Age ≥ 45 years</td>
<td>-1</td>
</tr>
</tbody>
</table>

#### Score Risk of GAS Infection Suggested Management

-1 to 0 1 to 2.5% Symptomatic treatment. No RADT, culture, or ABX needed.
-2 5 to 10% RADT or throat swab for culture. If positive for GAS co antibiotic.
-3 11 o 17% No antibiotic.
-4 28 to 35% Diagnostic testing or antibiotics.
-≥ 5 51 to 53% Majority of cases are viral.

### Table 2. Symptom Management

**SYSTEMIC ANALGESICS**

- **e.g. Ibuprofen PROFUL, g OTC**
  - Peds: 5-10 mg/kg po q6-8hr PRN (maximum=40mg/kg/day)
  - Adults: 400mg q6-8hr PRN (maximum=2.4-3.2g/day)
- **Acetaminophen TYLENOL, g OTC**
  - Peds: 10-15mg/kg po q4-6hr PRN (maximum=75mg/kg/day)
  - Adults: 1000mg q4-6hr PRN max=4g/d
- **Benzocaine CEPACOLES, CHLORASEPTIC X OTC**
  - 10mg lozenge 2q PRN
- **Phenol CHLORASEPTIC X OTC**
  - 5 sprays q2hr PRN

**LOZENGES**

- **Warm liquids** e.g. warm salt water, tea gargle or drink
- **Benzymade** ESEPTYL, PHARIXIA, g 15ml gargle/rinse q1.5-3hr PRN S38/150mL X →

Not recommended for symptom management: corticosteroids (Δ). However, opinions vary (e.g. may consider dexamethasone 10mg adults or 0.6mg/kg peds po x 1 dose). BMJ '17 (weak, moderate).

### Table 3. Empiric Drug Regimens of Choice & Susceptibility Concerns

| FIRST LINE | - Majority of cases are viral. - Only use antibiotics in confirmed bacterial pharyngitis. | - See Symptom Management following page. |

#### Penicillin V PEN-VK, g

- **Peds**: 572 kg, 40mg/kg/day + BID or TID x10 days (maximum 750mg/day)
- **≥ 27 kg & Adults**: 300mg TID x 10 days, or 600mg BID x 10 days

#### Amoxicillin AMOXIL, g

- **Peds**: 40-50mg/kg/day + BID x10 days (maximum 1000mg/day) or 50mg/kg/day daily x10 days (max 1g/d)
- **Adults**: 500mg BID x 10 days

#### PENICILLIN ALLERGY: TYPE IV HYPERSENSITIVITY (e.g. rash)

- **Cephealin KEFLEX, g**
  - Peds: 25-50mg/kg/day + BID or QID x10 days (maximum 1000mg/day)
  - Adults: 250mg QID x 10 days, or 500mg BID x 10 days

#### PENICILLIN ALLERGY: TYPE I HYPERSENSITIVITY (i.e. anaphylaxis)

Do not use the following antibiotics unless confirmed GAS & confirmed type I reaction to penicillin, due to concerns with ↑ resistance to macrolides & adverse events e.g. C. diff.

#### Clindamycin DALACIN C, g

- **Peds**: 20mg/kg/day + TID x10 days (maximum 900mg/day)
- **Adults**: 300mg TID x 10 days

#### Clarithromycin BIAXIN, g

- **Peds**: 15mg/kg/day + BID x10d (max=500 mg/d)
- **Adults**: 250mg BID x 10 days

#### Azithromycin ZITHROMAX, g

- **Peds**: 12mg/kg/day daily x5 days, or 20mg/kg/day daily x3 days (max 500mg/d)
- **Adults**: 500mg Day 1, 250mg Days 2-5, or 500mg daily x3 days

#### Erythromycin

- **Peds**: 40mg/kg/day + BID or TID x10 days (maximum 2000mg/day)

#### Macrolide considerations:

- Clarithromycin x10d was superior to azithromycin x 5 days for bacterial eradication (NNT=9) in adults, but equivalent for clinical cure.
- Azithromycin 3 vs 5 days: no head-to-head trials. Both regimens provide same total dose over the course of therapy (i.e. 60mg/kg x 1.5g), but may have different adverse events.
- Erythromycin ethyl succinate 5mg/mL suspension via compounding pharmacy, ~$100/100mL. Other products D/C.

Management of Recurrent Pharyngitis: avoid continuous long-term antibiotic tx (i.e. repeated courses or prophylaxis). Concerned as to whether or not asymptomatic carriers with recurrent pharyngitis need to be identified.
Pharyngitis: Management Considerations

Management Considerations

Pharyngitis caused by

Clinical Q&A

Treatment Evidence Summary

- Meta-analysis comparing 5 vs 10 days of penicillin (2 RCTs, n=309) concluded short courses were inferior in achieving bacterial cure, OR 0.29 (CI 95% 0.13-0.63).  

- RCT (n=433) found 5d of penicillin non-inferior to 10d in achieving clinical cure. 

Penicillin vs Cephalosporins vs Macrolides: penicillin remains the antibiotic of choice

- There is no clinically relevant difference in symptom resolution between antibiotics.

- Penicillin has the most evidence for preventing complications; has a narrow spectrum; is efficacious, safe, inexpensive; & there is no documented resistance to GAS.

Clinical Q&A

What is the risk of acute rheumatic fever?

- In Canada, the current prevalence of acute rheumatic fever is 0.1 to 2 cases per 100,000.
  - The incidence in some remote, Canadian Indigenous communities may be higher (i.e. Northern Ontario 8.33/100,000).
  - The risk may also be higher in immigrants from endemic areas, e.g. Philippines, China.

- It is difficult to estimate the risk of acute rheumatic fever due to untreated pharyngitis:
  - the majority of studies comparing antibiotics versus placebo were conducted prior to the 1960s (higher rate of acute rheumatic fever, and in young males from the US Armed Forces)
  - bacterial versus viral etiology was often not confirmed
  - newer studies have either no documented cases or did not assess this outcome

- In an effort to balance unnecessary antibiotic use with preventing rheumatic fever:
  - use the modified Centor score to identify patients who require a throat swab/RADT
  - wait to prescribe antibiotics until the results of the throat swab are available
  - starting antibiotics within 9 days of symptom onset prevents acute rheumatic fever
  - if antibiotics are started empirically, discontinue if throat swab is negative
  - children are at a greater risk of complications (e.g. otitis media, peritonsillar abscess, rheumatic fever); may initiate antibiotics sooner

- A full 10 day course of penicillin is recommended for confirmed GAS pharyngitis.

Pharyngitis caused by Chlamydia trachomatis

- It is rare that Chlamydia trachomatis causes pharyngitis, but rates appear to be ↑.

- Risk factors include: age 15 - 24 years, sexually active, engagement in oral sex.

- In Saskatchewan, Chlamydia trachomatis screening requires a different lab requisition.

- Treatment: doxycycline 100mg po BID x 7days, or azithromycin 1g x 1 dose.

Management of Recurrent Pharyngitis

- Potential causes: recurrent pharyngitis due to inadequate eradication, new infection, viral infection in an asymptomatic carrier ~20% of the population are GAS carriers.

- Controversial as to whether or not asymptomatic carriers with recurrent pharyngitis need to be identified.

  - Identification may help avoid antibiotics in those with recurrent viral pharyngitis.

  - Avoid identifying asymptomatic carriers without recurrent pharyngitis.

- Consider age, season, signs/symptoms to rule out viral etiology (see modified Centor score).
References – Pharyngitis - RxFiles.ca

Guidelines:

2019 Sanfords

2018 NICE Sore throat (acute): antimicrobial prescribing (published January 2018). Available at: https://www.nice.org.uk/guidance/ng84


2012Bugs & Drugs


General:

Antibiotics:

Rheumatic Fever:


**Symptom Management**


