PEARLS for the MANAGEMENT of PHARYNGITIS

- The majority of pharyngitis cases do NOT require antibiotics as they are viral infections (80-90% in adults, >70% in children).
- Pharyngitis is typically self-limiting (often 3-7 days; up to ≤10 days).
- 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 10 days is the drug of choice. There is no documented GAS resistance to penicillin.
- Advise on treatments that will provide symptomatic relief: NSAIDs, acetaminophen, medicated throat lozenges, topical anesthetics, warm liquids.
- Patients should see their prescriber if: ❶ symptoms worsen, ❷ symptoms take longer than 3 to 5 days to resolve, &/or ❸ unilateral neck swelling develops.

PRE-TREATMENT CONSIDERATIONS

- Inapposite antibiotic use is driving resistance & leading to a crisis. Please examine your own prescribing practices.
- A validated clinical decision rule e.g. modified Centor, FeverPAIN score can be used to help identify low-risk patients who do not require diagnostic testing or antibiotics.

<table>
<thead>
<tr>
<th>Modified Centor (or McIssac) Score</th>
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<tbody>
<tr>
<td>Temperature &gt; 38°C (&gt;100.5 °F) oral temperature used in Centor score (adults)</td>
<td>1</td>
<td></td>
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<tr>
<td>Absence of cough</td>
<td>1</td>
<td></td>
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<tr>
<td>Swollen, tender anterior cervical nodes</td>
<td>1</td>
<td></td>
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<tr>
<td>Tonsillar swelling or exudate</td>
<td>1</td>
<td></td>
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<tr>
<td>Age 3 years to 14 years</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Age 15 to 44 years</td>
<td>0</td>
<td></td>
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<tr>
<td>Age ≥ 45 years</td>
<td>-1</td>
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Score | Risk of Streptococcal Infection | Suggested Management
---|---|---
1 to 0 | 1 to 2.5% | - Symptomatic treatment
1 | 5 to 10% | - No RADT, culture or antibiotic needed
2 | 11 to 17% | - RADT or throat swab for culture.
3 | 28 to 35% | - If positive for GAS ➔ antibiotic.
24 | 51 to 53% | |

Modified Centor score: sensitivity 94% (95% CI 92-97%), specificity 54% (95% CI 49-59%). Lower specificity leans towards false positives & over-treatment. RADT is useful for ruling in a diagnosis when test results are positive. Back-up throat cultures are recommended for negative RADT in children & may be considered in others.

- Diagnostic testing is not recommended if:
  - A modified Centor score of ≤1
  - Symptoms of a viral infection rhinorrhea, cough, oral ulcers, hoarseness IDSA 2012 (strong, high)
  - <3yrs, unless other risk factors e.g. sibling with GAS infection IDSA 2012 (strong, moderate)
  - Asymptomatic contact of patient with GAS pharyngitis IDSA 2012 (strong, moderate)
- Exceptions: the modified Centor score may not accurately predict risk of GAS during epidemics or in high-risk populations, e.g. individuals with a history of rheumatic fever, valvular heart disease, or immunosuppression. Use clinical judgment & consider testing (RADT/throat swab) more broadly.
PHARYNGITIS: Management Considerations

### Duration of Antibiotic Therapy:
- Confirmed bacterial pharyngitis should be treated with **10 days of antibiotics** exception: if azithromycin is used in penicillin allergic patients; other options available.
- Patients will likely have clinical improvement within the first few days of therapy, but 10 days of therapy is recommended for preventing acute rheumatic fever, & short courses are not as effective for treating the infection.
  - E.g. a 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).

### Symptom Management

#### Systemic Analgesics
<table>
<thead>
<tr>
<th>Medication</th>
<th>Dose</th>
<th>Notes</th>
</tr>
</thead>
</table>
| Ibuprofen  | ADVL, g | - Ibuprofen ↓ associated pain more than acetaminophen & placebo.  
- Reduces fever. |
| Acetaminophen | TYLENOL, g | - Less effective than NSAIDs for ↓ associated pain but more effective than placebo.  
- Reduces fever. |
| Phenol | CHLORASEPTIC | - No evidence, but anecdotally may provide relief from associated pain. |

#### Topical Medicated Lozenges
- Benzocaine CEPACOL ES, CHLORASEPTIC 10mg lozenge q2hr PRN
  - Alleviates throat pain if used frequently.  
  - Avoid in children due to: choking & methemoglobinemia concerns. |

#### Topical Medicated Sprays
- Phenol CHLORASEPTIC 5 sprays q2hr PRN
  - Little evidence, but anecdotally provide relief from associated pain. |

### Not recommended for symptom management: corticosteroids
- A Cochrane review of 9 RCTs (including 950 adults & 369 children) found po or IM corticosteroids, in addition to antibiotics and analgesics, ↓ pain relief at 24 hours (NNT~93 ~38% vs ~16%, high certainty evidence) and at 48 hours. AE were not different, but most did not study multiple corticosteroid doses were not studied & would likely lead to greater harms e.g. ↑glucose. de Cassan’2020
- Some may consider ↓ in duration of pain is not considered clinically significant, and NSAIDs/acetaminophen have less adverse events. Shared decision-making is required.

### Treatment Evidence Summary Cochrane’21

#### 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).
- Avoid continuous long-term antibiotic therapy (i.e. repeated courses or prophylaxis).

**Abbreviations:** NICE’18, IDSA’12 (weak, moderate); however, opinions vary (e.g. may consider dexmethasone 10mg po x 1 dose). BMJ’17 (weak) NNT=number needed to treat OR=odds ratio PRN=as needed RADT=rapid antigen detecting test RCT=randomized controlled trial RR=relative risk
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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


