Acute rhinosinusitis

90-98% of cases are viral. Antibiotics may NOT help even if cause is bacterial.

Diagnosis

Symptoms of acute bacterial rhinosinusitis are:
- Severe (>3-4 days): such as a fever ≥39°C (102.2°F) and purulent nasal discharge or facial pain.
- Persistent without improvement, such as nasal discharge or daytime cough, headache for at least 10 days beyond the onset of viral upper respiratory symptoms; or
- "Double worsening": such as worsening or new onset fever, daytime cough, headache, or nasal discharge within 10 days after initial improvement of a viral URI.

Halitosis, fatigue, headache, decreased appetite, but most physical exam findings are non-specific and do NOT distinguish bacterial from viral causes.

Imaging tests are no longer recommended for uncomplicated cases.

Management

If bacterial, consider watchful waiting for up to 3 days if NOT severe or worsening and with reliable follow up.

If mild/moderate and no risk factors for resistance:
- amoxicillin/clavulanate 45 mg/kg/day PO of the amoxicillin component in 2 divided doses (max 1.75 g/day) x 10-14 days.
- (Some experts recommend amoxicillin.)
- amoxicillin/clavulanate 90 mg/kg/day PO of the amoxicillin component in 2 divided doses (max 4g/day) x 10-14 days.
- Type 1 penicillin allergy:
  - levofloxacin 10-20mg/kg/day oral q 12-24 hours
  - Non-type I penicillin allergy:
  - clindamycin 30-40 mg/kg/day PO in 3 divided doses plus (cefixime 8 mg/kg/day PO in 2 divided doses or cefpodoxime 10 mg/kg/day PO in 2 divided doses) x 10-14 days.
- Macrolides (such as azithromycin) are NOT recommended due to high levels of S. pneumoniae antibiotic resistance (~40%).

Acute otitis media (AOM)

4-10% of children with AOM treated with antibiotics experience adverse effects.

Diagnosis

Definitive diagnosis requires either:
- Moderate or severe bulging of tympanic membrane (TMM or TM) or new onset otitis media (OM) due to otitis externa.
- Mild bulging of the TM and recent (<48h) onset of otalgia (tugging, rubbing of the ear in a nonverbal child or intense erythema of the TM).

AOM should NOT be diagnosed in children without middle ear effusion (based on pneumatic otoscopy and/or tympanometry).

Severe AOM: moderate or severe otalgia or otalgia for ≥48 hours, or temperature ≥39°C (102.2°F).

Management

Treat with antibiotics:
- AOM <6 mo
  - Age 6-23 mo with unilateral AOM
  - Severe AOM, regardless of age
  - Consider watchful waiting (if reliable follow-up):
    - Age 6-23 mo with unilateral AOM
    - ≥2 yo with unilateral or bilateral AOM
- If mild/moderate and no risk factors for resistance:
  - amoxicillin 80-90 mg/kg/day PO in 2 divided doses (max 2 g/dose).
  - If severe or risk factors for resistance (recent beta-lactam therapy, purulent conjunctivitis, or history of recurrent AOM unresponsive to amoxicillin):
    - amoxicillin/clavulanate 80-90 mg/kg/day and 6.4 mg/kg/day PO in 2 divided doses (max 2 g/dose).
- Non-type I penicillin allergy:
  - cefdinir 14 mg/kg/day IM daily or in 2 divided doses
  - Duration of treatment:
    - ≤2 yo or severe symptoms: 10 days
    - 2-5 yo, mild/moderate symptoms: 7 days
    - ≥6 yo, mild/moderate symptoms: 5-7 days

Resources

Antimicrobial stewardship is based on the “three Ds”, the right drug, the right dose and the right duration. To learn more about the 7 core elements of antimicrobial stewardship, visit http://www.health.ri.gov/healthcare/about/antimicrobials/.

For more information, call RIDOH’s Center for Acute Infectious Disease Epidemiology at 401-222-2577. To learn more about RIDOH’s Antimicrobial Stewardship and Environmental Cleaning Task Force, visit http://www.health.ri.gov/partners/taskforces/antimicrobials/.

For more information and to download free patient education resources from RIDOH, visit http://health.ri.gov/antibiotics

For more information and to download free patient education resources from CDC, visit https://www.cdc.gov/antibiotic-use/

To order free patient resources from CDC, visit https://www.cdc.gov/public/CDPPubs/CDCInfoOnDemand.aspx and select “Antibiotic Use”.

Pediatric Care

Outpatient Treatment Recommendations for Common Infections: Summary of Guidelines

The quick initiation of antibiotics to treat infections has been proven to save lives; however, antibiotics can have serious side effects, including adverse drug reactions and Clostridium difficile infection. Unnecessarily prescribed antibiotics place patients at-risk for serious adverse events and provide patients with no clinical benefit. The misuse of antibiotics has also contributed to an increase in antibiotic resistance, which has become one of the most serious threats in public health. The Centers for Disease Control and Prevention estimates more than two million people are infected with antibiotic-resistant organisms, resulting in approximately 23,000 deaths annually.

Summary of Guidelines for Common Infections:

Recommendations

Outpatient Treatment

Pediatric Care

1

Type 1 penicillin allergy:
- penicillin non-susceptible S. pneumoniae
- within 30 days, recent hosp, under immunized with PCV, ≥10%
- If severe or risk factors for resistance (age <2yo, daycare, antibiotics
- in the previous 30 days, recent beta-lactam therapy, purulent conjunctivitis, or history of resistant AOM unresponsive to amoxicillin):
  - amoxicillin/clavulanate 80-90 mg/kg/day and 6.4 mg/kg/day PO in 2 divided doses (max 2 g/dose).
- Non-type I penicillin allergy:
  - cefdinir 14 mg/kg/day IM daily or in 2 divided doses
  - Duration of treatment:
    - ≤2 yo or severe symptoms: 10 days
    - 2-5 yo, mild/moderate symptoms: 7 days
    - ≥6 yo, mild/moderate symptoms: 5-7 days

For more information and to download free patient education resources from RIDOH, visit http://health.ri.gov/antibiotics

For more information and to download free patient education resources from CDC, visit https://www.cdc.gov/antibiotic-use/

To order free patient resources from CDC, visit https://www.cdc.gov/public/CDPPubs/CDCInfoOnDemand.aspx and select “Antibiotic Use".

August 2018
**Pharyngitis (sore throat)**

Only children with symptoms/findings of sore throat, fever, lymphadenopathy, tonsillar exudates should be tested. During winter and spring, up to 20% of asymptomatic children can be colonized with GAS, leading to false positives from rapid-testing and increases in unnecessary antibiotic exposure. Streptococcal pharyngitis is primarily a disease of children 5-15 yr and is rare in preschool children.

**Diagnosis**

Clinical features alone do NOT distinguish between GAS and viral pharyngitis. Children with sore throat plus 2 or more of the following features should undergo a rapid test:

- Lack of cough
- Tonsillar exudates
- History of fever
- Swollen and tender anterior cervical lymphadenopathy
- Age younger than 15 yr

Testing should generally NOT be performed in children younger than 3 yo in whom GAS rarely causes pharyngitis and rheumatic fever is uncommon. In children and adolescents, negative rapid antigen tests should be confirmed with a throat culture or PCR; positives do NOT require a follow up culture. If using rapid PCR test, then backup is not required for negative test.

**Management**

Antibiotics are NOT helpful and should NOT be used. Focus on symptomatic relief.

**OTC cough and cold medications are NOT recommended for use in symptomatic relief.**

**Bronchiolitis**

Initial antibiotic treatment should be based on local antimicrobial susceptibility patterns.

Suggested agents:

- **clarithromycin 15 mg/kg/day PO (max 500 mg) in 2 divided doses**
- **azithromycin 12 mg/kg/day PO (max 500 mg) daily x 10 days**
- **clindamycin 21 mg/kg/day PO (max 900 mg) in 3 divided doses x 10 days**
- **amoxicillin 12 mg/kg/day PO (max 500 mg) daily x 5 days**
- **clarithromycin 15 mg/kg/day PO (max 500 mg) in 2 divided doses x 10 days**

Immediate type I penicillin allergy:

- **clindamycin, clarithromycin, or azithromycin as above**

See references for more details, additional treatment options, and other important information.

**Pharyngitis**

**Common cold or non-specific upper respiratory tract infection**

**Diagnosis**

Usually nasal discharge begins as clear and changes throughout the course of the illness. Fever, if present, occurs early in the illness.

**Management**

Antibiotics are NOT helpful and should NOT be used. Focus on symptomatic relief.

**Colds usually last around 10 days.**

**Urine tract infections (UTIs)**

**Diagnosis**

In infants, fever and or strong-smelling urine are common. A definitive diagnosis requires both a urinalysis suggestive of infection and at least 50,000 CFUs/mL of a single uropathogen from urine obtained through catheterization or suprapubic aspiration. Diagnosis cannot be made from urine collected in a bag.

Urine test for all children 2-24 mo with unexplained fever is no longer recommended.

**Management**

Antibiotic prophylaxis to prevent recurrent UTIs is NOT recommended.

**References**