NM Northwestern Medicine

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OUTPATIENT STEWARDSHIP TIP SHEET

Acute Sinusitis

Most cases of acute sinusitis (>90%) are due to a virus and present as part of an upper respiratory tract infection
Secondary bacterial infection of the sinuses following a viral infection is uncommon (0.5 to 2% in adults; 5% in children)
Differentiating viral from bacterial sinusitis depends on symptom severity & duration and clinical course

<table>
<tr><th></th><th>Acute Viral Sinusitis</th><th colspan="2">Acute Bacterial Sinusitis</th></tr>
<tr><td>Symptoms & Clinical Findings</td><td colspan="3">Typical: Purulent (cloudy) nasal drainage with nasal congestion or obstruction and/or facial pain, pressure or fullness
Other features: fever, headache, otalgia, ear pressure, ear fullness, halitosis, dental pain, cough, fatigue, hyposmia or anosmia
On exam: tenderness to percussion over sinuses</td></tr>
<tr><td>Characteristics</td><td>1. Symptom duration typically 7 to 10 days with improvement towards end of the course
2. Fever, if present, is likely to subside after 24-48 hours
3. Typical course of nasal discharge:
• initially clear & watery
• then purulent (thick/colored/opaque) at about 4-5 days into illness
• resolves with clear discharge</td><td colspan="2">SEVERE SINUSITIS includes these 3 presentations:
1. Persistent symptoms ≥10 days without clinical improvement
2. Severe symptoms (fever ≥39°C/102.2°F) with purulent nasal discharge for 3 to 4 days at onset of illness
3. "Double sickening" – worsening symptoms (new fevers, headache, or increase in nasal discharge) following typical viral URI course consisting of 5 to 6 days of illness with improvement towards end of course</td></tr>
<tr><td>Diagnosis</td><td colspan="3">Verify symptoms and exam are consistent with acute sinusitis then focus on symptom duration and improvement/worsening
The diagnosis of viral vs. bacterial sinusitis should be made based on disease severity, duration & progression
If there is symptomatic improvement at some point in the illness course, antibiotic therapy is NOT indicated
Radiographic confirmation and/or culture is not recommended</td></tr>
<tr><td>Treatment</td><td>Antibiotic therapy for acute nonsevere sinusitis is NOT recommended</td><td>Adult & Adolescent
Standard Antibiotics
Amoxicillin-clavulanate
Without certain conditions: 875 mg-125 mg BID for 5 days
With certain conditions:* 2000 mg-125 mg BID for 5 days

Penicillin Allergy (see NM Allergy Considerations first):
Doxycycline
100 mg BID for 5 days
OR
Levofloxacin
500 mg QD for 5 days

*Certain conditions: Age >65 years, antibiotic use over prior month, hospitalization over prior 5 days, immune system compromise & presence of comorbidities</td><td>Pediatric
Standard Antibiotics
Amoxicillin-clavulanate
<40 kg: 90 mg/kg/day divided BID for 10 days
Use ES suspension 600 mg-42.9 mg/5 mL
(maximum dose (amox): 4 g/day)
(dose based on amox component)

Penicillin Allergy (see NM Allergy Considerations first):
Combination Therapy
<40 kg:
Clindamycin 30 mg/kg/day divided TID for 10 days
(maximum dose: 900 mg/day)
PLUS
Cefixime 8 mg/kg/day divided BID for 10 days
(maximum dose: 400 mg/day)

Penicillin AND Cephalosporin Allergy (see NM Allergy Considerations first):
Levofloxacin (first-line)
<40 kg & <5 years: 20 mg/kg/day divided BID for 10 days
<40 kg & ≥5 years: 10 mg/kg/day QD for 10 days
(maximum dose: 750 mg/day)
OR
Doxycycline (second-line)
>8 years old: 4.4 mg/kg/day divided BID for 5 days
(maximum dose: 200 mg/day)</td></tr>
<tr><td>Adjunctive Measures</td><td colspan="3">Cough suppressants (benzonatate, dextromethorphan, etc.)
Antihistamines, e.g., diphenhydramine (age <65 years), cetirizine, fexofenadine, loratadine
Decongestants such as phenylephrine
Saline nasal irrigation (use sterile or boiled water ONLY) & humidified/steamed air
Acetaminophen or NSAIDs for fever and discomfort</td></tr>
</table>

Key Points for Counseling Patients

1. A virus won't respond to antibiotics and will improve on its own
2. Colored or cloudy nasal discharge is seen in both viral and bacterial infections
3. If antibiotic therapy is prescribed and symptoms fail to improve after seven days, seek medical attention
4. Seek medical care if severe headache, neck stiffness, photophobia, vision changes or mental status changes arise
5. **Consider Transfer to ED** if severe immunocompromise and/or ill-appearing poorly-controlled diabetic

ADSP Northwestern Medicine Antimicrobial and Diagnostic Stewardship Program

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