

AAP Releases Guideline on Diagnosis and Management of Acute Bacterial Sinusitis in Children One to 18 Years of Age

Guideline source: American Academy of Pediatrics

Evidence rating system used? Yes

Literature search described? Yes

Guideline developed by participants without relevant financial ties to industry? No

Published source: *Pediatrics*, July 2013

Available at: <http://pediatrics.aappublications.org/content/132/1/e262.full>

Coverage of guidelines from other organizations does not imply endorsement by AFP or the AAFP.

A collection of Practice Guidelines published in AFP is available at <http://www.aafp.org/afp/practguide>.

Approximately 6% to 7% of children presenting with respiratory symptoms have acute sinusitis. This practice guideline from the American Academy of Pediatrics (AAP), which updates the 2001 guideline, discusses diagnosis and management of acute bacterial sinusitis in children one to 18 years of age.

Recommendations

Acute bacterial sinusitis can be diagnosed in children with an acute upper respiratory infection that persists (nasal discharge or daytime cough for more than 10 days with no improvement), that gets worse (worsening or new nasal discharge, daytime cough, or fever after improving at first), or that is severe (concomitant fever of at least 102.2°F [39°C] and purulent nasal discharge for at least three consecutive days).

Plain radiography, contrast-enhanced computed tomography, magnetic resonance imaging, and ultrasonography should not be performed to differentiate acute bacterial sinusitis from viral upper respiratory infection. However, contrast-enhanced computed tomography of the paranasal sinuses or magnetic resonance imaging with contrast media should be performed in children thought to have orbital or central nervous

system complications. The most common orbital complications of acute bacterial sinusitis involve children younger than five years who have ethmoid sinusitis. These complications should be suspected in a child with a swollen eye, especially if there is also proptosis or if extraocular muscle function is impaired. Intracranial complications (e.g., subdural and epidural empyema, venous thrombosis, brain abscess, meningitis) are less common, but more serious, and have higher morbidity and mortality rates than orbital complications. These complications should be suspected in a child with a severe headache, photophobia, seizures, or other focal neurologic findings.

Antibiotics should be prescribed in children with severe, worsening, or persistent acute bacterial sinusitis. Outpatient observation for three days is also an option in children with persistent illness. Amoxicillin alone or in combination with clavulanate is the first-line antibiotic choice. Intravenous or intramuscular ceftriaxone (Rocephin), 50 mg per kg once, can be given to children who are vomiting, who cannot take oral medications, or who are not likely to take the initial antibiotic doses as prescribed. After clinical improvement, the treatment can be changed to oral therapy. Children with hypersensitivity to amoxicillin (type 1 and non-type 1) can be treated with cefdinir (Omnicef), cefuroxime (Ceftin), or cefpodoxime. Surveillance studies have shown resistance of pneumococcus and *Haemophilus influenzae* to trimethoprim/sulfamethoxazole and azithromycin (Zithromax), indicating that they should not be used to treat acute bacterial sinusitis in persons with penicillin hypersensitivity. Recommendations regarding the ►

optimal duration of treatment vary from 10 to 28 days. Alternatively, it has been recommended that patients be treated for seven days after symptoms subside, which provides for individualized treatment, at least 10 days of treatment, and avoiding continued treatment in asymptomatic patients.

If acute bacterial sinusitis is confirmed in a child whose symptoms are getting worse or who is not improving after 72 hours, the antibiotic may be changed (if the child is already taking an antibiotic) or started (if the child is being observed). If a parent indicates that the child's illness is getting worse (initial signs or symptoms progressing, or new signs or symptoms occurring) or not improving (signs and symptoms persist) after 72 hours of treatment, management decisions should be reevaluated.

There are no recommendations regarding adjuvant therapy for acute bacterial sinusitis, although intranasal corticosteroids, saline nasal irrigation or lavage, topical or oral decongestants, mucolytics, and topical or oral antihistamines may be options. One Cochrane review found no appropriately designed studies to establish the effectiveness of decongestants, antihistamines, and nasal irrigation for acute sinusitis in children.

Only a few high-quality studies on the diagnosis and treatment of acute bacterial sinusitis in children have been published since the 2001 guideline was released. Therefore, evidence on which to base recommendations is limited, and further research is needed in many areas.

LISA HAUK, Senior Associate Editor, *AFP Online* ■

Save time and money with AAFP Member Advantage.

Choose from a number of fully vetted products and services at special rates or offers – exclusively for AAFP members.

See how your AAFP membership keeps getting more valuable at aafp.org/memberdiscounts.



AMERICAN ACADEMY OF
FAMILY PHYSICIANS

AAFP MEMBER
ADVANTAGE

Bank of America

TRANSFIRST[™]
First In Secure Electronic Payments

Budget

AVIS

Wolters Kluwer
Health

UpToDate

medfusion

Mobile Solutions Center
Handheld Products for Healthcare Professionals