Clinical Practice Guideline for the Management of Acute Otitis Media in Children 2 months – 12 years

Diagnosis

The clinical diagnosis of acute otitis media requires bulging of the tympanic membrane or other signs of acute inflammation and middle ear effusion. A diagnosis of AOM also can be established if there is acute purulent otorrhea and otitis externa has been excluded. AOM should not be diagnosed when pneumatic otoscopy and/or tympanometry do not show middle ear effusion.

Recommendations for Initial Management of Uncomplicated AOM

<table>
<thead>
<tr>
<th>Age</th>
<th>Otorrhea with AOM(^a)</th>
<th>Unilateral or Bilateral AOM(^a) with Severe Symptoms(^b)</th>
<th>Bilateral AOM(^a) without Otorrhea</th>
<th>Unilateral AOM(^a) without Otorrhea</th>
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</thead>
<tbody>
<tr>
<td>6 mo to 2 y</td>
<td>Antibiotic therapy</td>
<td>Antibiotic therapy</td>
<td>Antibiotic therapy or additional observation</td>
<td>Antibiotic therapy or additional observation</td>
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<tr>
<td>≥2 y</td>
<td>Antibiotic therapy</td>
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\(^a\) Applies only to children with well-documented AOM with high certainty of diagnosis (see Diagnosis section).

\(^b\) A toxic-appearing child, persistent otalgia more than 48 h, temperature ≥39°C (102.2°F) in the past 48 h, in a nonverbal child, ear holding, tugging, or rubbing suggesting pain or if there is uncertain access to follow-up after the visit.
c. This plan of initial management provides an opportunity for shared decision-making with the child’s family for those categories appropriate for additional observation. If observation is offered, a mechanism must be in place to ensure follow-up and begin antibiotics if the child worsens or fails to improve within 48 to 72 h of AOM onset.

d. AOM management should include pain evaluation and treatment.

**Recommended Antibiotics for (Initial or Delayed) Treatment and for Patients Who Have Failed Initial Antibiotic Treatment**

Clinicians should prescribe amoxicillin for AOM when a decision to treat with antibiotics has been made and the child has not received amoxicillin in the past 30 days or the child does not have concurrent purulent conjunctivitis or the child is not allergic to penicillin.

Clinicians should prescribe an antibiotic with additional β-lactamase coverage for AOM when a decision to treat with antibiotics has been made and the child has received amoxicillin in the past 30 days or has concurrent purulent conjunctivitis or has a history of recurrent AOM unresponsive to amoxicillin.

Clinicians should reassess the patient if the caregiver reports that the child’s symptoms have worsened or failed to respond to the initial antibiotic treatment within 48 to 72 hours and determine whether a change in therapy is needed.
<table>
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<tr>
<th>Initial Immediate or Delayed Antibiotic Treatment</th>
<th>Antibiotic Treatment After 48–72 h of Failure of Initial Antibiotic Treatment</th>
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<tbody>
<tr>
<td><strong>Recommended First-line Treatment</strong></td>
<td><strong>Alternative Treatment (if Penicillin Allergy)</strong></td>
</tr>
<tr>
<td>Amoxicillin (80–90 mg/kg per day in 2 divided doses); treatment duration for &lt; 2y/o = 10 days; older than 2 = 5-7 day duration</td>
<td>Cefdinir (14 mg/kg per day in 1 or 2 doses) x 10 days OR Cefzil (cefprozil) 15mg/kg/dose PO BID x 10 days; max single dose = 500 mg</td>
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<td>OR</td>
<td>OR</td>
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<tr>
<td>Amoxicillin-clavulanateα (90 mg/kg per day of amoxicillin, with 6.4 mg/kg per day of clavulanate [amoxicillin to clavulanate ratio, 14:1] in 2 divided doses) same treatment duration as amoxicillin</td>
<td>day in 2 divided doses)</td>
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<tr>
<td>Ceftriaxone (50 mg/kg, up to 1g/day IM per day for 1 or 3 d)</td>
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</table>

α. May be considered in patients who have received amoxicillin in the previous 30 d or who have the otitis-conjunctivitis syndrome.

β. Perform tympanocentesis/drainage if skilled in the procedure, or seek a consultation from an otolaryngologist for tympanocentesis/drainage. If the tympanocentesis reveals multidrug-resistant bacteria, seek an infectious disease specialist consultation.

c. Cefdinir, cefuroxime, cefpodoxime, and ceftriaxone are highly unlikely to be associated with cross-reactivity with penicillin allergy on the basis of their distinct chemical structures. See text for more information.
- In children with recurrent AOM, tympanostomy tubes, but not prophylactic antibiotics, may be indicated to reduce the frequency of AOM episodes
- Clinicians should recommend Pneumococcal Conjugate vaccine and annual Influenza vaccine to all children according to updated schedules
- Clinicians should encourage exclusive breastfeeding for 6 months or longer as appropriate

References

Acute Otitis Media Guidelines; Medscape; American Academy of Pediatrics (AAP) Sep 25, 2019

The Diagnosis and Management of Acute Otitis Media; Pediatrics volume 131, No. 3, March 1, 2013

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