ACUTE OTITIS MEDIA DIAGNOSIS AND MANAGEMENT

OTOSCOPIC TYMPANIC MEMBRANE EVALUATION

- Distinguish between normal middle ear status and otitis media with effusion (OME) or acute otitis media (AOM) using pneumatic otoscopy or tympanometry. The pneumatic otoscope is the standard tool used to diagnose otitis media.
- Avoid unnecessary antibiotic use since OME is not an infectious process.
- Normal tympanic membrane (TM) is translucent, pearly gray, and has a ground-glass appearance.
- Evaluate the following criteria:
  - contour (normal, retracted, full, bulging)
  - color (gray, yellow, pink, amber, white, red, blue)
  - translucency (translucent, semiopaque, opaque)
  - mobility (normal, increased, decreased, absent)

DIAGNOSTIC CRITERIA

- Should not diagnose AOM if middle ear effusion (MEE) not present.
- Diagnose AOM if the child
  - has moderate-to-severe bulging of the TM **OR**
  - has new onset otorrhea not due to acute otitis externa (AOE)
- May diagnose AOM if the child
  - has mild bulging of TM **AND**
  - has recent onset (<48h) of otalgia **OR**
  - has intense TM erythema

MANAGEMENT OF OTALGIA

- Management of pain should be addressed during first 24hrs regardless of antibiotic use and continued as long as needed.
  - First-line option: acetaminophen or ibuprofen
  - Topical local anesthetics (eg, benzocaine, procaine, lidocaine): additional, but brief benefit over acetaminophen in patients >5yrs old
  - Topical naturopathics: comparable to amethocaine/phenazone drops in patients >6yrs old

INITIAL ANTIBIOTIC MANAGEMENT OF AOM

<table>
<tr><th rowspan="2">Age</th><th colspan="2">Severe Symptoms[1]</th><th colspan="2">Nonsevere Symptoms[2]</th></tr>
<tr><th>Unilateral AOM</th><th>Bilateral AOM</th><th>Unilateral AOM</th><th>Bilateral AOM</th></tr>
<tr><td>6–23mos</td><td colspan="2" rowspan="2">Antibiotic therapy</td><td rowspan="2">Antibiotic therapy OR observation with close follow-up[3]</td><td>Antibiotic therapy</td></tr>
<tr><td>≥24mos</td><td>Antibiotic therapy OR observation with close follow-up[3]</td></tr>
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MANAGEMENT OF AOM

- Prescribe amoxicillin for AOM if decision to treat has been made **AND**
  - has not received amoxicillin in the past 30 day **OR**
  - has no concurrent purulent conjunctivitis **OR**
  - is not allergic to penicillin
- Prescribe antibiotic with additional beta-lactamase coverage for AOM if decision to treat has been made **AND** the child
  - has received amoxicillin in the last 30 days **OR**
  - has concurrent purulent conjunctivitis **OR**
  - has history of recurrent AOM unresponsive to amoxicillin
- Reassess patient if symptoms worsen or fail to respond to initial antibiotic therapy within 48–72hrs. Determine if change in therapy is necessary.
- If recurrent AOM[4]
  - prophylactic antibiotics not recommended
  - may offer tympanostomy tubes for recurrent AOM

PREVENTION OF AOM

- Annual influenza vaccine in children ≥6mos[5]
- Pneumococcal conjugate vaccine[5]
- Encourage exclusive breastfeeding for ≥6mos
- Avoid tobacco smoke exposure

NOTES

[1] Presenting with moderate or severe otalgia, otalgia ≥48hrs, or temp ≥39°C (102.2°F).

[2] Presenting with mild otalgia <48hrs and temp <39°C.

[3] 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 48–72hrs of AOM onset.

[4] Recurrent AOM is defined as the occurrence of 3 episodes in a 6-month period or the occurrence of 4 episodes in a 12-month period that includes at least 1 episode in the preceding 6mos.

[5] Refer to Recommended Immunization Schedule for Persons Age 0 Through 18 Years, United States 2014; http://www.cdc.gov/vaccines/schedules/hcp/imz/child-adolescent.html.

REFERENCES

Liberthal AS, Carroll AE, Chonmaitree T, et al. Clinical practice guideline: the diagnosis and management of acute otitis media. *Pediatrics* 2013;131:e964-e999.

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