

Evaluation and Management of Otitis Media in Children

Pages with reference to book, From 351 To 353

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Otitis media is one of the most frequent causes for physician visits by children. Over two-thirds of all children will experience at least one episode of otitis media during the first 3 years of life. Most of the cases usually occur during the winter.

Etiology

Streptococcus pneumomae is the most common pathogen, followed by haemophilus influenzae and Moraxella (Bronhamella) catarrhalis.

Pre disposing risk factors

A. Intrinsic factors

1. Male gender
2. Cleft palate
3. Anatomic/physiologic abnormality of the eustachian tube
4. Immune deficiency
5. Allergy

B. Extrinsic factors

1. Child care facilities
2. Large families
3. Exposure to passive smoking
4. Bottle feeding while supine

Types of otitis media Acute otitis media:

Fluid in the middle ear accompanied by signs or symptoms of ear infection¹ (bulging ear drum usually accompanied by pain and fever, or perforated ear drum often with purulent discharge).

Diagnostic criteria for AOM²

AOM is characterized by middle ear effusion (seen on examination and/or confirmed by pneumatic otoscopy) with either (1) signs of local inflammation (e.g. redness, bulging) or (2) typical symptoms (e.g. otalgia, otorrhea, irritability, restlessness, poor feeding, fever). The TM is usually full or bulging (indicated by decreased mobility on pneumatic otoscopy) and usually appears red, yellow or cloudy. Tympanometry is usually not always to establish the diagnosis of AOM, pneumatic otoscopy is highly recommended and should be used routinely.

Otitis media with effusion - OME Fluid in the middle ear without signs or symptoms of ear

Diagnostic criteria for OME²:

1. Tympanic membrane opaque or yellow
2. Tympanic membrane neutral or retracted
3. Decreased mobility
4. Air fluid level behind tympanic membrane

Chronic otitis media with effusion - Come (Serous or non suppurative otitis media)³

1. Intact tympanic membrane
2. Middle ear effusion behind intact tympanic membrane for more than 2-3 months
3. No acute clinical signs or symptoms
4. Tympanic membrane is not red or bulging
5. May be asymptomatic except for hearing loss

Chronic suppurative otitis media - CSOM³

1. Perforated tympanic membrane
2. Purulent discharge for more than 6 weeks

Persistent AOM²

Persistent AOM is defined as continued findings of AOM within 6 days after a course of antibiotics is completed.

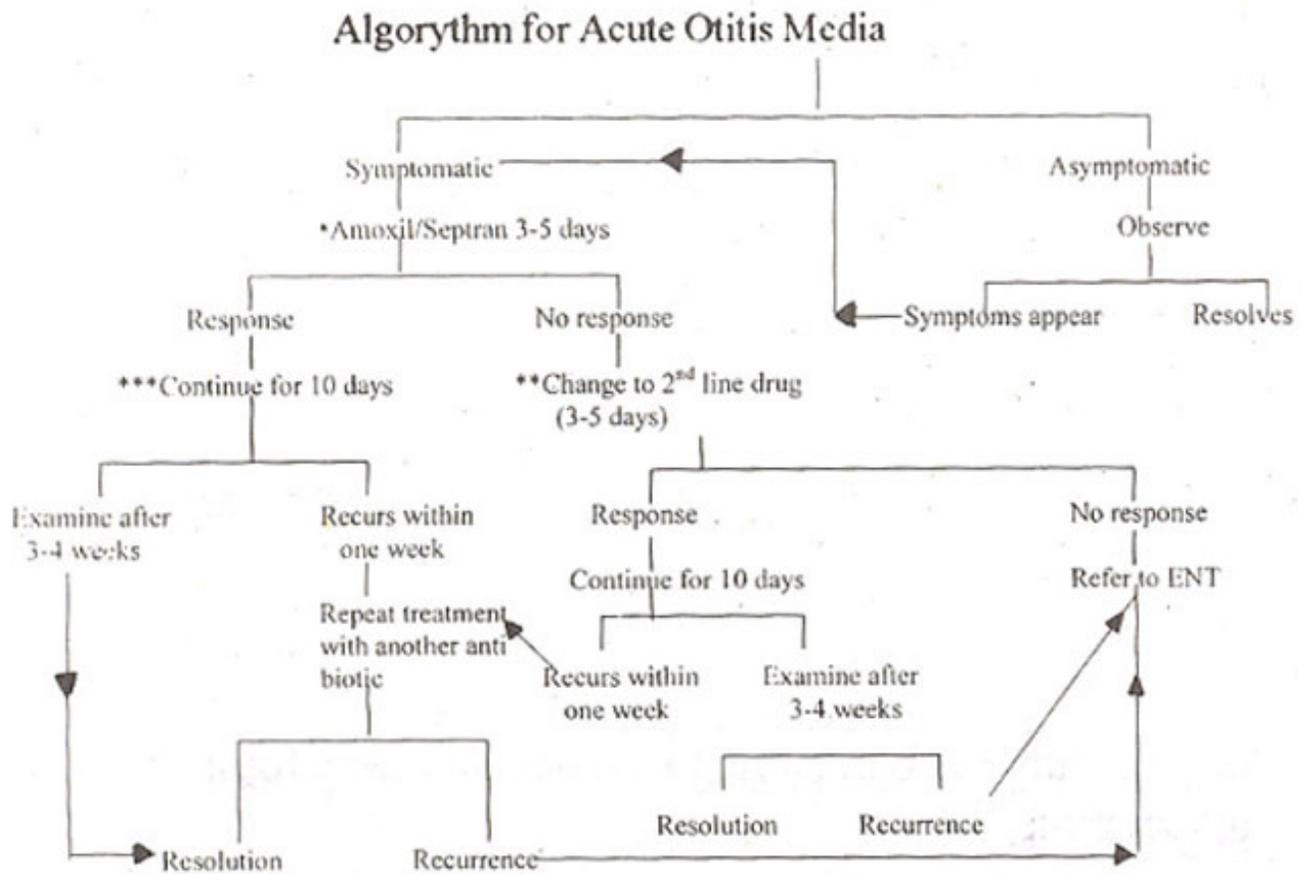
A second course of therapy with a different antibiotic

Consider prophylaxis Prophylactic treatment should be considered in a child

1. having recurrent AOM, with Amoxil 20 mg/kg/day, usually Persistence for 2-6 months². Antibiotic prophylaxis should be started after Refer to ENT the therapeutic course of antibiotics is completed is indicated.

Resistant AOM²

Resistant AOM is defined as persistence of moderately severe symptoms (pain and fever) after 3 to 5 days of antibiotic therapy with findings of continued pressure and inflammation behind the tympanic membrane.

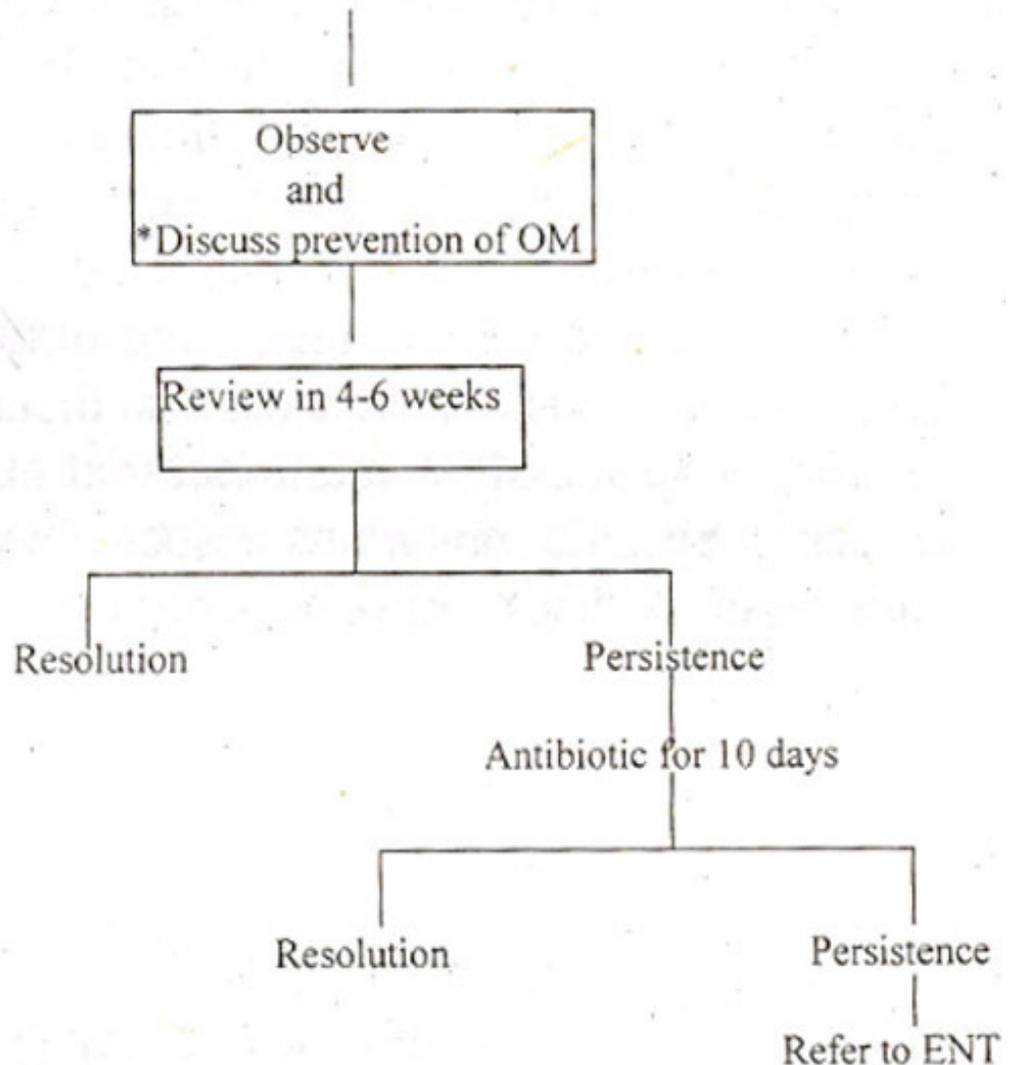


- * First line therapy consists of Amoxil (50 mg/kg/day) or Septran (10 mg/kg/day of trimethoparim)²
- ** Second line antibiotics include Augmentin, clarithromycin and Cefuroxim².
- *** Duration of antibiotic therapy is 10 days^{2,3,4}

N.B. Anti-histamines with or without decongestants and otic drops do not alter the course of or cure AOM^{1,3,5}.

A second antibiotic should be tried; the alternative first-line medication may be an appropriate choice. Otolaryngologic referral may be indicated if significant pain and fever continue for 4 to 5 days while the patient is taking the second medication or if complications occur.

ALGORITHM FOR OTITIS MEDIA WITH EFFUSION



Recurrent AOM²

Three or more episodes in 6 months or during respiratory infection season, or four or more episodes in a year.

Risk factors for recurrent AOM:

- Cleft palate, craniofacial abnormalities and Down syndrome (very high risk).
- First episode occurring at an early age (<6 months).
- History of recurrent AOM in a sibling or parent.
- Day-care attendance
- Exposure to tobacco smoke
- Recurrent AOM that fails to respond to medical management with either (1) failure of prophylaxis (recurrence twice during a 2 to 6 month period or (2) high risk of recurrence.
- Refractory AOM with moderate to severe symptoms unresponsive to at least two antibiotics.
- Bilateral or unilateral OME persisting for at least 3 months with a hearing threshold of 20 dB or worse.
- Development of advanced middle ear disease involving tympanic membrane atrophy, retraction pockets, ossicular erosion, or cholesteatoma.

- An impending or actual complication of OM, such as mastoiditis, facial nerve paralysis, lateral sinus thrombosis, meningitis, brain abscess, or labyrinthitis.

References

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4. Mandel E, Casseibrant M, Rockette H, et al. Efficacy of 20-versus 10 days antimicrobial treatment for acute otitis media. Pediatrics, 1995;96:5- 13.
5. Rosenfeld JA, Clarity G. Acute otitis media in children. Primary care, 1996;23:677.99.