Cincinnati Children's
changing the outcome together

Otitis Media

FAST FACTS

90%

of children have otitis media before they're 5 years of age

2 million+

new cases of otitis media diagnosed annually

Otitis media is common in children, due to recurrent infections (recurrent acute otitis media—RAOM) or persistant fluid inadequately cleared through eustachian tubes (chronic otitis media with effustion—COME). Both conditions can cause significant problems such as ear pain, drainage, hearing loss, imbalance and recalcitrant fevers. RAOM is commonly treated with antibiotics, while COME is not.

ASSESSMENT

Perform a standard health history and physical exam (HPE).

HPE RED FLAGS

Situational History
- Purulent ear drainage not amenable to topical ear drops
- Decreased hearing
- Ringing in the ears
- Imbalance
- Failed hearing screen
- Speech delay
- 3+ episodes of RAOM in 6 months

Family History
- Hearing loss/disorder
- Craniofacial syndromes

Patient History
- Failed newborn hearing screen
- Trisomy 21
- Cleft palate
- Eustacian tube dysfunction
- Immunocompromised
- Developmental disorders that would affect speech and language
- Craniofacial disorders

Physical Exam
- Middle ear effusion that doesn't clear in 3 months
- Tympanic membrane perforation
- Cholesteatoma
- Tender mastoid (red and swollen)

MANAGEMENT/TREATMENT OF OTITIS MEDIA

Determine type of otitis media.

Chronic otitis media with effusion (COME)
- Treat with acetaminophen or ibuprofen for pain
- Do NOT treat with antibiotics or systemic steroids, or with antihistamines as primary treatment
- Obtain hearing test
- Reevaluate at 3 months to evaluate for resolution of effusion

Recurrent acute otitis media (RAOM)
- Treat with acetaminophen or ibuprofen for pain
- Treat with antibiotics

WHEN TO REFER

Refer patient to Cincinnati Children's ENT if:
- Patient fails in-office hearing tests
- Effusion is persistent >3 months
- 3 episodes of RAOM in 6 months
- Send to Cincinnati Children's Emergency Department for further evaluation if you are concerned about these possible complications of otitis media: mastoiditis, subperiosteal abscess, meningitis, and the like

If you have clinical questions about patients with either form of otitis media, email ENT@cchmc.org.

If you would like additional copies of this tool, or would like more information, please contact the Physician Outreach and Engagement team at Cincinnati Children's.

Tool developed by Cincinnati Children's physician-hospital organization (known as Tri-State Child Health Services, Inc.) and staff in the James M. Anderson Center for Health Systems Excellence. Developed using expert consensus and informed by Best Evidence Statements, Care Practice Guidelines, and other evidence-based documents as available. For Evidence-Based Care Guidelines and references, see www.cincinnatichildrens.org/evidence.

Otitis Media

Patient Presents

Standard Workup

- Situational History
- Family History
- Physical Exam

HPE RED FLAGS

Situational History

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Determine COME or RAOM

COME Red Flags? — Yes → Refer to ENT Specialist; No → COME Medical Therapy

RAOM Red Flags? — Yes → Refer to ENT Specialist; No → RAOM Medical Therapy

COME Medical Therapy

- Treat with pain control—acetaminophen or ibuprofen
- Observe
- Do NOT treat with antibiotics or systemic steroids
- Do NOT treat with antihistamines as primary treatment
- Obtain hearing test
- Reevaluate at 3 months to evaluate for resolution of effusion
- Refer to ENT if patient fails in-office hearing tests, effusion is persistent >3 months, concern for serious complications such as mastoiditis, subperiosteal abscess, meningitis or other

RAOM Medical Therapy

- Treat with pain control—acetaminophen or ibuprofen
- First-line treatment
  - Amoxicillin 90 mg/kg/day divided into 2 doses for 7–10 days
  - In amoxicillin-allergic patients—Second or third generation cephalosporins (if PCN allergy not severe), Azithromycin, or Clindamycin (20–30 mg/kg/day)
- If additional antibiotics needed:
  - Augmentin, cefdinir, cefpodoxime, ceftriaxone
- If failed high-dose amoxicillin and/or oral cephalosporins,
  - Ceftriaxone IM for 3 doses
- Refer to ENT if patient fails in-office hearing tests, 3 episodes of RAOM in 6 months, concern for serious complications such as mastoiditis, subperiosteal abscess, meningitis or other

Special circumstance while waiting for ear tubes, use prophylaxis for RAOM

- Once daily amoxicillin 45mg/kg/dose
- If PCN allergic, once daily Bactrim

For urgent issues, or to speak with the specialist on call 24/7, call the Physician Priority Link at 1-888-987-7997.