Canadian Family Medicine Clinical Card

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Otitis Media

APPROACH

- Use the largest speculum that fits in the ear; erythema of tympanic membrane (TM) alone is non-specific (common during fever or in crying child)
- Usually starts as viral; either resolves spont. or becomes secondary bacterial infxn. (*S. pneumoniae*, *H. influenzae*, *M. catarrhalis*, occasionally GAS, *S. aureus*)
- Appropriate clinical diagnosis and treatment relies on understanding established definitions in research and clinical practice guidelines:
  - **Acute Otitis Media (AOM):** an infection of the middle ear, which includes purulent fluid. Also referred to as "ear infection". Diagnosis requires:
    - ❑ Effusion (i.e. air-fluid level, bulging TM, or decreased mobility) AND
    - ❑ Inflammation (i.e. otalgia not caused by otitis externa, tugging at ears, or parental suspicion) AND
    - ❑ Acute onset
  - **Middle Ear Effusion (MEE):** presence of fluid in the inner ear without signs of symptoms of acute ear infection. 90% of children have MEE before school age, (mean of 4 episodes/year). Largely undetected as it is asymptomatic and resolves spontaneously. Also referred to as "otitis media with effusion (OME)", "ear fluid", and "serous", "secretory", or "nonsuppurative otitis media".
    - up to 40% of children have MEE up to one month post-AOM

⚠ If mastoiditis (pain/swelling behind the ear), vertigo, or facial paralysis present, urgent referral to ENT +/- ID consult.

TREATMENT for Clinically Confirmed Otitis Media

- No treatment required for MEE, but perform hearing test if effusion persists ≥3mo, or sooner if hearing loss, developmental delay, or craniofacial abnormality (e.g. Down syndrome, cleft palate)
- AOM can often be managed with supportive care (analgesia, antipyretics); no role for decongestants or antihistamines (unless allergies suspected)
  - empiric antibiotic treatment should be initiated as below:

Treat all high-risk children: ❑ <6 mo ❑ Craniofacial abN, Downs ❑ Underlying hearing impairment, cochlear implant ❑ CVS/resp dz, immunocomp.	- Amoxicillin 45mg/kg/d PO div BID-TID + Amoxicillin-clavulanate (7:1) 45mg/kg/d PO div BID-TID x 10d - **Penicillin allergy:** Ceftriaxone 50mg/kg IM/IV daily x 3d
Treat >6 mo if any of: ❑ Ruptured TM* ❑ Bilateral AOM in child ≤23mo* ❑ High fever (>39°C) ❑ Unwell for ≥48hrs ❑ Severely ill (irritable, poor feeding/sleeping) ❑ Adult	- **Pediatric:** Amoxicillin 45mg/kg/d PO div TID or 90mg/kg/d PO div BID x 5d (if<2y or daycare or recent antibiotic exposure in last 3 mths) - **Non-severe penicillin allergy:** Cefuroxime-axetil 30mg/kg/d PO div BID x 5d * **Treat x 10d if:** ruptured TM or child <2 y.o. or recurrent AOM - **Adults:** Amoxicillin 1g PO TID x 5d - **Penicillin allergy:** Doxycycline 200mg PO once, then 100mg PO BID x 5d

IMPORTANT: Alternative anti-bx required if no improvement after 48-72hrs.

Otherwise, hold off on antibiotics and reassess for effusion in 24-48hrs if:
- ❑ Worsening symptoms
- ❑ Caregiver preference
- ❑ Concerns about the caregiver's ability to judge if child needs reassessment

Key References: Le Saux N, Robinson JL, Canadian Paediatric Society, Infectious Diseases and Immunization Committee. Management of acute otitis media in children six months of age and older. *Paediatr Child Health*. 2016;21(1):39-50. Rosenfeld RM, Shin JJ, Schwartz SR, et al. Clinical practice guidelines otitis media with effusion (update). *Otolaryngol Head Neck Surg*. 2016;154(1 Suppl):S1-S41.