Otitis Media

Definition of otitis media

- Otitis media is a very common middle ear infection seen in kids; the vast majority will have at least one episode. It is rare in over-5s.
- The majority can be managed on an outpatient basis with/without oral antibiotics.

Causes of otitis media

- Young age (smaller, less tortuous Eustachian tube with more patency)
- Children with older siblings or who have repeated respiratory infections are at more risk
- Parental smoking increases risk

Clinical features of otitis media

- Earache in older patients; tugging/pulling at ear in children
- Non-specific symptoms
    - Poor feeding, irritability, cough, rhinorrhoea
- Often co-incident with LRTI
- High fever (may give febrile convulsions)

Examination in otitis media

- Severe bulging eardrum or new onset ear discharge (purulent and not due to otitis externa) often associated with relief of symptoms (acute otitis media – AOM)
- Mild bulging TM/very red TM requires correlation with symptoms from history
- Hearing loss (but not usually detected in a young, crying child)
- Examination can be tricky in very young children under 6 months

Hospital admission with otitis media

- Admission required
    - Under 3 months and fever >38
    - Complicated AOM e.g. mastoiditis, facial palsy
- Consider admission
    - Under 3 months
    - 3-6 months and fever >39
    - Systemically very unwell

Treatment of otitis media as an outpatient

- Pain relief
    - Ibuprofen or paracetamol – alternate between the two if distress not helped by single agent.
- Antibiotics
    - The evidence for this is mainly from studies in high-income countries. (Venekamp 2014)
    - 82% of children settle without antibiotics.
    - For every 20 children treated with antibiotics, one will experience reduction in pain between days 2-7.
    - For every 33 children treated, 1 tympanic membrane perforation will be prevented.
    - For every 11 children treated, 1 episode of contralateral AOM will be prevented.
    - However, for every 14 children treated, 1 child will experience adverse effects of vomiting, diarrhoea or rash.
- A safe strategy would be to give immediate antibiotics to the following:
    - 4 days or more of symptoms
    - Systemically unwell
    - Significant comorbidities
- Consider immediate antibiotics in:
    - Children under 2 with bilateral OM
    - Patients with perforation or discharge
- Otherwise consider delayed prescription after 3-4 days or if symptoms worsen:
    - The first line is amoxicillin (5 days) or erythromycin/clarithromycin if pencillin allergic.
    - In ruptured eardrum, see at 3 weeks, again at six weeks if no resolution, and refer on if still unresolved
- Also refer those with more than 4 episodes in six months

See: Venekamp RP, Sanders S, Glasziou PP, Del Mar CB, Rovers MM. Antibiotics for acute otitis media in children. *Cochrane Database of Systematic Reviews* 2013, Issue 1. Art. No.: CD000219. DOI: 10.1002/14651858.CD000219.pub3.