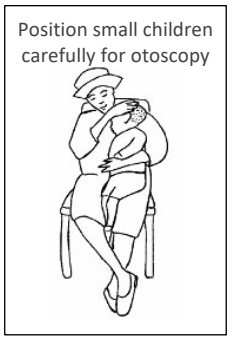
Otitis media

Key facts

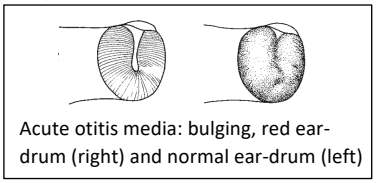
- Common cause of fever in children
- Most cases of otitis media will get better within 3d without antibiotics, but it can take up to 7d
- Antibiotics have minimal impact on recurrence, short-term hearing loss or eardrum perforation
- Managing pain and giving information are very important



Patient assessment

- Ear examination is an important part of examination to look for source of fever in young children; ensure good positioning of small children.
- ***Inspection*** – position of the ear ; ***Palpation*** – mastoid, tragus, lymph nodes

- ***Otoscopy*** – Start with the less painful ear. Gently pull the pinna upwards and backwards in adults, straight backwards in small children. The otoscope should be held in your right hand for the patient's right ear and vice versa for the left ear. Hold the otoscope like a pencil and rest your hand against the patient's cheek for stability. This will prevent damage to the ear if there is sudden movement. Advance the otoscope under direct vision. Be gentle with the otoscope and ensure movements are slow and considered otherwise you will cause discomfort.


Acute otitis media: bulging, red ear-drum (right) and normal ear-drum (left)

- ***Findings*** – in acute otitis media, the ear-drum will be red, inflammed, bulging and opaque, or perforated with a discharge.

TREATMENT OF ACUTE OTITIS MEDIA

- Systemically unwell
- Signs of serious complication (meningitis or mastoiditis)

→ Discuss with consultant

- Age <2y with bilateral otitis media
- Underlying comorbidities
- Any age with ***acute discharge*** secondary to perforation (<2 week duration)

→ **HIGHER RISK**
Immediate antibiotics

- Age >2y, no discharge
- Age <2y with only one ear affected, no discharge

→ **LOWER RISK**
No antibiotics
OR delayed prescription to use in 3d if no improvement or if symptoms worsen

	DRUG	DOSE	DURATION
First line If penicillin allergy/intolerance	**Amoxicillin** **Erythromycin**	High dose: 80mg/kg divided BD (max 1g BD) Child 1m-7y: 40mg/kg divided 12 hourly Adult and child > 8yrs: 500 – 1000mg BD	5-7 days
Second line *(worsening symptoms on first-line taken for at least 2-3d)*	**Amoxicillin/Clavulanic acid**	High dose: 80mg/kg amoxicillin component, divided BD (max 1g BD)	5-7 days

Other aspects of management

- Discuss findings and likely duration of illness
- Self-care – regular analgesia
- Safety-net – seek medical attention if red flag symptoms or if symptoms ongoing beyond expected time-frame
- Useful patient info at: https://nairobientclinic.com/ear-infections-acute-otitis-media-in-children/
- Do not recommend decongestants or antihistamines – no evidence of benefit
- If discharge – very important to keep the ear dry – review in 2w to check tympanic membrane

Referral to ENT

- Any child with > 1m hearing loss
- Any child with frequent ear infections and a speech delay

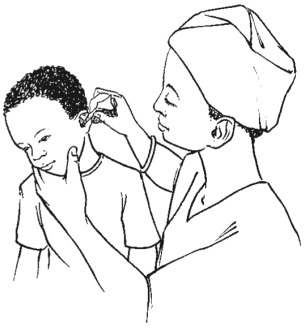
How to do a 'delayed prescription of antibiotics'
Write a paper prescription (add fill date in 2-3 days and expiry date 5-10 days time), explain that antibiotics are not required at present and that we expect the infection to get better on its own, but incase symptoms continue/worsen, they can fill the prescription at a pharmacy after a predetermined period (e.g. 3d)

Chronic otitis media with perforation (chronic ear discharge; chronic suppurative otitis media)

History: Ear discharge for ***>2 weeks,*** often on and off. Not usually with a fever or with pain.

Examination: Not very painful, ear canal not inflammed, pus visible +/- perforation of the tympanic membrane (this may not be visible if pus++)

Treatment:
1. If a large perforation seen, advise referral to ENT
2. If perforation not obvious or ENT referral not possible, advise to keep the ear dry:
   - Show the carer how to wick the ear with a gauze
   - Prescribe gauze
   - Recommend that they clean the ear three times each day until there is no pus
   - Explain that they must not put anything into the ear apart from the gauze
   - Explain not to get the ears wet at all with bathing or washing
3. Ciprofloxacin drops: 1-2 drops twice daily for 2 weeks;
   oral antibiotics are not indicated!
4. Review after 2 weeks, or sooner if problems


Wicking the ear dry with gauze

Follow up: If ongoing problems recommend ENT review
If referral not possible - advise continued wicking with clean gauze (check technique), consider swab for culture, switch to gentamicin drops (for pseudomonas cover): 1 drop twice daily for 1-2 weeks; once ear is dry only use antibiotic drops for flare-ups and continue to avoid getting ear wet

References
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