CPG Suite General Disclaimer
These CPGs were written for use in the RVEEH speciality Emergency Department. They should be used under the guidance of an ENT or Ophthalmology registrar, and certain medications / procedures should only be undertaken by speciality registrars. If you require clinical advice, please contact our admitting officer for assistance:

Fungal otitis externa CPG

SEE ALSO: Bacterial otitis externa, skull base osteomyelitis, cholesteatoma

DESCRIPTION – Inflammation of all layers of ear canal epithelium secondary to fungal infection

HOW TO ASSESS:

Red Flags:

- Consider skull base osteomyelitis or neoplastic aetiology if:
  - Symptoms persisting despite management
  - Longstanding, severe pain out of proportion with signs
  - Associated cranial nerve signs e.g. facial nerve palsy
  - History of diabetes
- Consider pinna cellulitis or perichondritis if inflammation involves pinna
- More aggressive management in patients with immunodeficiency

On History:

- Otorrheoa
- Otalgia
- Pruritis of the ear canal
- Decreased hearing
- History of swimming, cotton bud use
- Recent topical therapy for bacterial otitis externa

On Examination:

- Evidence of fungal disease in ear canal e.g. spores, hyphae
- Oedematous ear canal
- Pain on pulling pinna
- Tenderness on otoscopy

On Investigation:

- Microbiology swab if not resolving after initial presentation
- Consider investigation for diabetes

Acute Management:

Intact tympanic membrane and ear canal patent

1. Aural toilet
2. Locacorten Vioform® (flumethasone pivalate 0.2 mg/mL and clioquinol 10 mg/mL) ear drops 3 drops TDS for 10 days

or

Otocomb® or Kenacomb® ear drops (triamcinolone acetonide 1mg/ml, neomycin sulphate 2.5mg/ml, gramicidin 0.25mg/ml, nystatin 100,000 units/ml) 3 drops TDS for 10 days

Note: Otocomb/Kenacomb® ear drops are viscid and can themselves occlude the ear canal and can therefore reduce hearing. Additionally, their appearance can mimic active infection making assessment of otitis externa resolution more difficult.

or

Otocomb Otic® or Kenacomb Otic® ointment may also be instilled into the ear canal using an ear suction cannula attached to a 2.5 ml Luer lock syringe. This option may be beneficial in those where compliance with medication may be an issue. However, subsequent aural toilet of residual ointment after 10 days by suction clearance may be needed.

3. Oral analgesia e.g. paracetamol, ibuprofen
4. General practitioner (GP) review after above therapy at 7-10 days
5. If symptoms and signs persist, perform a microbiology swab, continue topical drops and await microbiology results to consider revision of topical therapy.

Tympanic membrane perforation present

1. Aural toilet
2. There is currently no licensed antifungal topical therapy available in this scenario.

   Clotrimazole cream 1% (or ointment) or Otocomb Otic® / Kenacomb Otic® may be instilled into the ear canal using an ear suction cannula attached to a 2.5 ml Luer lock syringe. Take caution in not instilling clotrimazole / Otocomb Otic® / Kenacomb Otic® through the perforation and into the middle ear space.
3. Review in one week for aural toilet and reassessment of ear canal
4. GP review one week later to ensure infection settled

Canal occluded due to oedema

1. Insert Pope ear wick
2. Saturate wick with 5 drops Locacorten Vioform® ear drops then commence 3 drops TDS
3. Outpatient review after 2 days
4. Remove wick and if improving and tympanic membrane seen and intact, continue drops until GP review after 10 days. If tympanic membrane perforation present, instil Clotrimazole cream 1% to ear canal.
5. If symptoms and signs persist, perform microbiology swab, aural toilet and review for revision of topical therapy

Note: Systemic antibiotics are not indicated unless there is evidence of co-existing pinna cellulitis, perichondritis or otitis media

Follow up:

- Urgent ENT opinion, if red flags. Arrange ENT review if symptoms persist despite above management regimen or if tympanic membrane perforation persists beyond three months.
- No ear patient should be discharged from RVEEH without tympanic membrane being visualized.

Discharge instructions:

- In order to reduce water entering the affected ear, advise patients to block external auditory meatus with cotton wool ball (while being careful not to insert cotton wool deep into canal) followed by Vaseline® on surface of the cotton wool when showering. Also, advise against swimming until the ear infection has resolved and has been cleared by clinical examination.
- Advise against inserting foreign objects into the ear canal e.g. cotton buds/hair clips as these can traumatise the ear canal skin and cause otitis externa.

Additional notes

- There are multiple controversies in the management of otitis externa when a tympanic membrane perforation is present. In particular, there are no topical antifungal drops that are currently licensed in this scenario, owing to the potential for ototoxicity.
- The suggestion of topical ointment is intended to minimise the risk for ototoxicity by aiming to avoid any antifungal preparation entering the middle ear.
- Similarly, when the tympanic membrane is not visible owing to canal oedema, the possibility exists for there to be an underlying perforation. In this scenario, Locacorten Vioform® may be applied after insertion of a Pope ear canal wick, as transmission to the middle ear is minimal.

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