

## Perichondritis of the Pinna

**Disclaimer:** This Clinical Practice Guideline ('CPG') was written for use in The Royal Victorian Eye and Ear Hospital Emergency Department. It should be used under the guidance of an ENT registrar. If clinical advice is required, please contact the Eye and Ear Admitting Officer for assistance: EYE: +61 3 9929 8033; ENT: +61 3 9929 8032. Links to internal Eye and Ear documents cannot be accessed from the website CPG.

### Description:

Inflammation of the helix or tragus which may be secondary to trauma, burns, infection or foreign body such as ear piercing. Perichondritis may progress to cartilage necrosis and permanent deformity of the pinna if not treated promptly.

### Red Flags:

- Febrile or failure to improve on oral antibiotics
- If immunodeficient, more aggressive management may be required
- If fluctuant area present: underlying abscess or haematoma requires urgent surgical drainage
- If vesicles, rash or hearing loss: consider herpes zoster oticus or Ramsay-Hunt Syndrome
- Laceration, burn or necrotic tissue: surgical debridement may be required
- Consider relapsing remitting chondritis if:
  - Bilateral or recurrent perichondritis with/without history of chondritis involving joints, larynx, nose or eyes
  - Inflammation is lobule-sparing

### How to Assess:

#### History:

- Otalgia
- Swelling, redness, pruritus of pinna
- Risk factors: recent blunt or penetrating injury, ear piercing (more common in chondral sites), acupuncture, insect bite, immunocompromised

#### Examination:

- Erythema/oedema/tenderness of the pinna
- Foreign body (e.g. ear piercing) may be present
- Skin may be excoriated with crusting
- Ear canal may be swollen (i.e. perichondritis may be secondary to otitis externa)
- Inflammation may involve the face (i.e. concurrent facial cellulitis)

## Investigations:

- Microbiology swab of any crusting/wound discharge
- Consider viral PCR swab if suspicious for herpes zoster
- X-ray to rule out foreign body if history is suspicious (e.g. buried ear piercing)

## Acute Management:

- Remove any foreign bodies/piercings
- Clean any crusting with normal saline. If otitis externa is present, refer to the 'otitis externa' CPG for further management
- Antimicrobials

If febrile and systemically unwell, admit for piperacillin-tazobactam 4.5g IV 8 hourly

- This agent requires dose adjustment for renal impairment as described in Therapeutic Guidelines: Antibiotic [Table 2.80](#)
- Patients with a non-immediate hypersensitivity reaction to penicillins should receive ceftazidime 2g IV 8 hourly. Dose adjustment for renal impairment is required as described in Therapeutic Guidelines: Antibiotic [Table 2.80](#)
- Patients with a history of an immediate hypersensitivity reaction to penicillins should receive meropenem 1g IV 8 hourly. Dose adjustment for renal impairment is required as described in Therapeutic Guidelines: Antibiotic [Table 2.80](#)

If systemically well and admission is not required, ciprofloxacin 750mg orally 12 hourly for 1 week

- Covers most common pathogens *Pseudomonas aeruginosa* and *Staphylococcus aureus*
- Requires PBS approval
- Children <18 years: ciprofloxacin 10-15mg/kg (max 500mg) orally 12 hourly. Cartilage damage has not been demonstrated in humans and arthropathies due to quinolone use occur at similar rates in comparator groups

Oral flucloxacillin 500mg (25mg/kg for children) 6 hourly may be required if concurrent facial cellulitis. In penicillin hypersensitivity, cefalexin 500mg (25mg/kg for children) 6 hourly

Otocomb® (triamcinolone, neomycin, gramicidin, nystatin) ointment applied to excoriated skin three times a day

## Follow up:

- For mild cases, AENT outpatients for review in 1 week
- For more severe cases, discuss with ENT on-call

## Evidence Table

Author(s)	Title	Source	Level of Evidence (I – VII)
	Pseudomonas aeruginosa infections of the eye, ear, urinary tract, gastrointestinal tract, and central nervous system	UptoDate®	VII
Prasad HK, Sreedharan S, Prasad HS, Meyyappan MH, Harsha KS.	Perichondritis of the auricle and its management.	J Laryngol Otol. 2007 Jun; 121(6):530-4. Epub 2007 Feb 26.	VI
Liu Z.W, Chokkalingam P.	Piercing associated perichondritis of the pinna: are we treating it correctly?	The Journal of Laryngology & Otology. 2013; 127, 505–508.	IV, V
Adefurin A, Sammons H, Jacqz-Aigrain E, Choonara I.	Ciprofloxacin safety in paediatrics: a systematic review.	Arch Dis Child 2011; 96:874–80	V
Klug, T.E., Holm, N., Greve, T. et al.	Perichondritis of the auricle: bacterial findings and clinical evaluation of different antibiotic regimens	Eur Arch Otorhinolaryngol 2019; 276: 2199.	VI

## The Hierarchy of Evidence

The Hierarchy of evidence is based on summaries from the National Health and Medical Research Council (2009), the Oxford Centre for Evidence-based Medicine Levels of Evidence (2011) and Melynck and Fineout-Overholt (2011).

- I) Evidence obtained from a systematic review of all relevant randomised control trials.
- II) Evidence obtained from at least one well designed randomised control trial.
- III) Evidence obtained from well-designed controlled trials without randomisation.
- IV) Evidence obtained from well-designed cohort studies, case control studies, interrupted time series with a control group, historically controlled studies, interrupted time series without a control group or with case series.
- V) Evidence obtained from systematic reviews of descriptive and qualitative studies.
- VI) Evidence obtained from single descriptive and qualitative studies.
- VII) Expert opinion from clinician, authorities and/or reports of expert committees or based on physiology.

<b>Version Details:</b>	
CPG No:	CPG42.0
Responsible Executive:	Executive Director Medical Services
Review Officer:	Director Emergency Department
Contributor(s):	Unaccredited ENT Registrar, ENT Medical Officer, Otolaryngology and CPG working group
National Standard:	Comprehensive Care
Version Number:	1.0
Approval Date:	18/02/2021
Next Review Due:	18/02/2022