



QUEENSLAND
eye
INSTITUTE
CLARITY FOR LIFE

Corneal Foreign Body Removal



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CORNEAL FOREIGN BODY REMOVAL

Corneal foreign body removal is a quick and safe procedure when performed with appropriate equipment and expertise. This brochure will act as a guide to assist you in the procedure.

HISTORY

Assess for a history that is high risk for corneal perforation. In particular:

- Not wearing eye protection
- A high velocity injury such as power tool use, grinding metal or hammering metal on metal
- A significant reduction in visual acuity

ANAESTHETIC

Instil topical anaesthetic to facilitate visual acuity testing and examination.

EXAMINATION

- Measuring IOP is NOT vital in this situation and must be avoided if there is suspicion of a penetrating injury
- Document the best corrected visual acuity in both eyes
- Examine the unaffected eye thoroughly as there may be an occult foreign body
- Look for foreign bodies in the fornices and under everted lids
- Look for signs of
 - Penetration
 - Hyphaema
 - Eccentric or teardrop pupil
 - Positive Seidel's Sign
 - Very flat or shallow anterior chamber
 - New cataract
 - Significant conjunctival chemosis
- Assess the depth of the corneal foreign body
- Vertical linear abrasions are suggestive of a sub-tarsal foreign body
- Document your findings thoroughly
- Document the position type and size of any foreign bodies
- Apply fluoresceine and re-examine the

affected eye with cobalt blue light looking for Seidel's sign

- Exclude other signs of penetrating eye injury (if these are present, see management below)

CONTRAINDICATIONS TO REMOVAL

- Uncooperative patient (eg children)
- Penetrating injury (see management below)
- Optimal equipment not available (including sharps disposal)
- Central or deep foreign body depending on your level of expertise

EQUIPMENT

- Sterile cotton bud if tarsal or conjunctival foreign body
- Sterile bevelled needle (23G - 30G)
- Small syringe (to hold the needle)
- Alger brush and ophthalmic corneal burrs (used as an alternative to using a needle or for rust ring removal)

POSITIONING

Give your patient 2 jobs:

1. Keep their head all the way forward in the slit lamp
2. Fixated on a point across the room (as determined by you) to keep their eyes still.

LIGHTING

- Ensure you have the brightest light that you need but to facilitate patient compliance and comfort, ensure this is not shining straight into the pupil
- Having the slit lamp beam at 45 degrees makes assessing corneal depth easier

SUB-TARSAL FOREIGN BODIES

Soak a sterile cotton bud in local anaesthetic and rest this on the tarsal plate for 10-20 seconds. Remove the foreign body using a cotton bud with a rolling motion.

REMOVING CORNEAL FOREIGN BODIES WITH A NEEDLE

- Perform the procedure using the ipsilateral hand to the patient's eye
- Mount the sterile needle of your choice (usually 23–30g) on a 3 or 5 mL syringe
- Place your elbow comfortably on the slit lamp table using a cushion if needed
- Stabilise your hand against the patient's cheek and / or forehead
- Use the middle and fourth finger to keep the lids open
- Start on low magnification
- Bring your needle into view
- Approach the cornea under appropriate magnification with the needle parallel to the eye
- Pick up or scoop the foreign object away from the cornea
- As you remove parts of the foreign body, remove them from the needle using the sterile inner part of the needle sheath
- Re-examine to confirm complete removal
 - Performs Seidel's test to look for perforation
- Consider using a bur if needed for rust ring removal. It is perfectly OK for some mild brown rust staining to remain as long as
 - it is stain only, not residual metal
 - it is not in the visual axis
- Document the procedure thoroughly including the size and location of the epithelial defect and the type of foreign body.
- Modifications to the above procedure if you are using a bur
 - Hold the burr as you would for a needle
 - Gently and briefly press the rotating burr against the foreign body
 - Assess and repeat as necessary
- Repeat until the foreign body is removed

MEDICATIONS

- Chloramphenicol drops 0.5% 4 times a day for 5 days or
- Ofloxacin 0.3% or Tobramycin 0.3% 6 times a day for 5 days (for contact lens wearers or if the foreign body was organic foreign body)

DISCHARGE INSTRUCTIONS

- Discuss appropriate safety eyewear if appropriate
- Keep the eye clean and avoid swimming for 5 days
- No contact lens wear for one week
- Routine review is not typically needed for low-risk patients
- Return for reassessment immediately if any
 - Pain or discomfort after 48 hours
 - Increase in pain, discomfort or photophobia
 - Deterioration in vision
 - Other concerns

MEDICARE

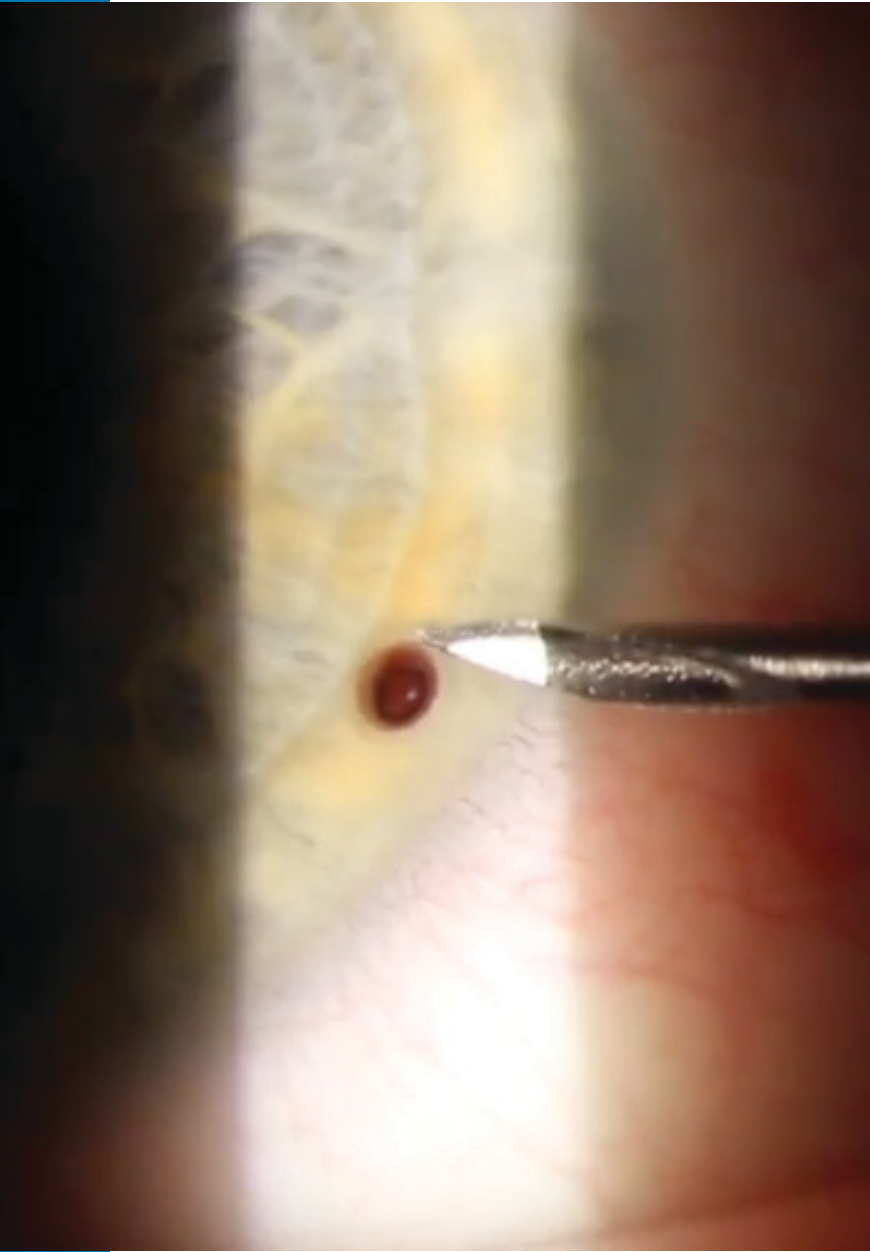
The Medicare item number 10944 may apply "Cornea, complete removal of embedded foreign body from - not more than once on the same day by the same practitioner (excluding aftercare)"

MANAGEMENT OF PENETRATING EYE INJURIES

- These need to be referred immediately
- Advise the patient not to eat or drink anything (they need to be fasting for theatre)
- Cover the eye with a plastic shield (no pads or pressure on the eye)
- Contact your local ophthalmologist or emergency department

Please scan the QR code to view a video about corneal foreign body removal





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