Nasal Foreign Body Removal

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 Ophthalmology or 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:

A foreign body is any material lodged in the nasal cavity

Red Flags:

- Suspect associated orbital cellulitis: periorbital oedema, decreased visual acuity, decreased colour vision, relative afferent pupillary defect (RAPD), double vision and ophthalmoplegia, proptosis
- If unilateral consider tumour, fungal sinusitis or dental aetiology
- Symptoms and signs of neurological deficits e.g. confusion, reduced level of consciousness,
- Meningitis (nuchal rigidity, photophobia, fever)
- Be aware of potential rapid deterioration in the presence of systemic comorbidities (e.g. type 1 diabetes mellitus, immunosuppression)

How to Assess:

History:

- Demographics: usually in the paediatric population or patients with mental health problems or developmental disabilities
- Witnessed or reported foreign body insertion in the nose
- Offensive smell noted by patient or carer
- Unilateral, suppurative or mucopurulent fetid nasal discharge
- Unilateral nasal obstruction and epistaxis
- If there has been a foreign body for some time there may be associated vestibulitis or possibly sinusitis

Examination:

- Position the patient in an upright position, head slightly tilted backwards (this will require cooperation or the carer to hold the child)
- Vasoconstrictive agent as a drop or spray may aid if there is mucosal swelling: Co-phenylcaine Forte (lignocaine 5mg, phenylephrine 0.5mg per 0.1mL spray)

Adults, children over 12 years	5 sprays per nostril
Children 8 to 12 years	3 sprays per nostril
Children 4 to 8 years	2 sprays per nostril
Children 2 to 4 years	1 spray per nostril
Children under 2 years	Do not administer

- For children, lift the tip of the nose or use an ear speculum to better see the foreign body
- For adults, anterior rhinoscopy first with Thudicum or Killian nasal speculum, then flexible nasal endoscope (FNE) or 0 degree rigid endoscope if a foreign body is suspected but not seen
- A foreign body is usually found below the inferior turbinate, or anterior to the middle turbinate
- Associated findings:
    - Mucosal erosion
    - A button battery may cause destruction of the nasal septum, followed by synechiae with stenosis of the nasal cavity

Acute Management:

- Early involvement of the ENT registrar for advice and supervision of the procedure
- Consider curved hooks or wax curettes for rounded objects: for soft material such as sponge rubber in the nose use cupped forceps, nasal packing forceps or small artery forceps
- Unskilled attempts may result in an adverse outcome: there is the risk of inhalation if the foreign body falls backwards; marked epistaxis or multiple failed attempts may lead to the need for examination under general anesthesia (EUA)
- EUA should be considered if adequate examination is not possible – e.g., due to lack of cooperation
- If requiring EUA, patient should be kept fasted, for operation as soon as possible
- If there is mucosal erosion evident following removal of the foreign body, consider Bactroban or Otocomb ointment BD topically for 1 week

- A button battery in the nose is an emergency, and if it cannot be removed in the Emergency Department the patient should be taken to theatre immediately
- Antibiotics are not usually required unless there is also vestibulitis. The offensive odour will go once the foreign body is removed

Follow up:

- Usually not required unless there was a button battery
- Rhinology clinic in 2 weeks may be necessary in the following circumstances:
  - Mucosal erosion
  - Infection of surrounding structures e.g., vestibulitis or rhinosinusitis

Evidence Table

Author(s)	Title	Source	Level of Evidence (I – VII)
Baluyot ST	Foreign bodies in the nasal cavity.	Foreign bodies in the nasal cavity, In Otolaryngology	VII
McMaster WC	Removal of foreign body from the nose.	JAMA	VI
Kalan A	Foreign bodies in the nasal cavities: a comprehensive review of the aetiology, diagnostic pointers, and therapeutic measures.	Postgraduate medical journal.	V
McRae D	Button batteries in the ear, nose and cervical oesophagus, a destructive foreign body.	J Otolaryngol	VI
Myer CM	Nasal obstruction in the paediatric patient.	Pediatrics	VII
Walby AP	Foreign bodies in the ear or nose.	Scott-Brown’s otolaryngology	VII

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 Melynk 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.

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