



Lecture 31: Emergency series

# ENT EMERGENCIES

Mr Joseph Manjaly,  
MBChB BSc DOHNS FRCS (ORL-HNS)

**Consultant ENT Surgeon**

 @earsurgeonjoe

Sat (06/06), 5PM BST

# Today's guest speaker

**BITE** Medicine  
Watch

Lecture 31

## ENT EMERGENCIES

### Mr Joseph Manjaly

*Consultant ENT Surgeon*  
MBChB BSc DOHNS FRCS (ORL-HNS)

Joe Manjaly is a Consultant ENT surgeon at UCLH's Royal National ENT Hospital in central London. He trained on the London North Thames ENT Specialty Registrar programme, followed by an advanced fellowship in Otology & Auditory Implantation at Cambridge University Hospitals. He now superspecialises in ear and hearing problems and is part of UCLH's cochlear implant team who restore hearing for profoundly deaf babies and adults.



 @earsurgeonjoe

## Emergency scenario: 1

### History

A 30-year-old male presents to A&E minors with a nose bleed. He has haemophilia A. He has tried holding the bridge of his nose for 20 minutes but the bleeding has not stopped.

Which of these has no place in the management of nasal bleeding?

- A) Ice
- B) Merocel tampon
- C) Pinching the bony nasal bridge for 20 mins
- D) Umbilical clamp
- E) Urinary catheter

**B**



## ▶ Epistaxis (Nosebleeds)

- Common ENT emergency
- Common condition – 10% of the population
- Epistaxis may be **fatal**

# ▶ Epistaxis

- Preparation
- Eye protection
- Mask
- Headlight
- Apron
- Gloves



# ▶ Epistaxis

## Take a quick history

Estimate amount of loss

### History

- Side of bleed, Anterior or Posterior (into throat)
- Shortness of breath, lethargy
- Previous episodes/surgery/trauma

### PMH

- HTN, Dyscrasia, Falls, Heart Disease

### Drugs

- Aspirin, Warfarin, Clopidogrel, Steroids

### Social

- Fit for discharge, Live alone, Distance from Hospital



# ▶ Epistaxis Management

## ABC

- **Airway:** clots in mouth need suctioning
- **Breathing:** respiratory rate. Give Oxygen
- **Circulation:** pulse, BP, estimate blood Loss, prevent further loss with compression, ice on forehead, back of neck and in mouth
- Oxygen, IV Access, FBC, Clotting and Group & Save
- Saline/Gelofusin Drip
- Consider diazepam and antihypertensives



## ▶ Nasal examination

- Get a good view with thudicums speculum, head mirror, and suction
- Use vasoconstrictor such as adrenaline/lidocaine-soaked cotton wool to stem bleeding before treatment



# ▶ Silver Nitrate Cautery



## ▶ Nasal packing

### Anterior:

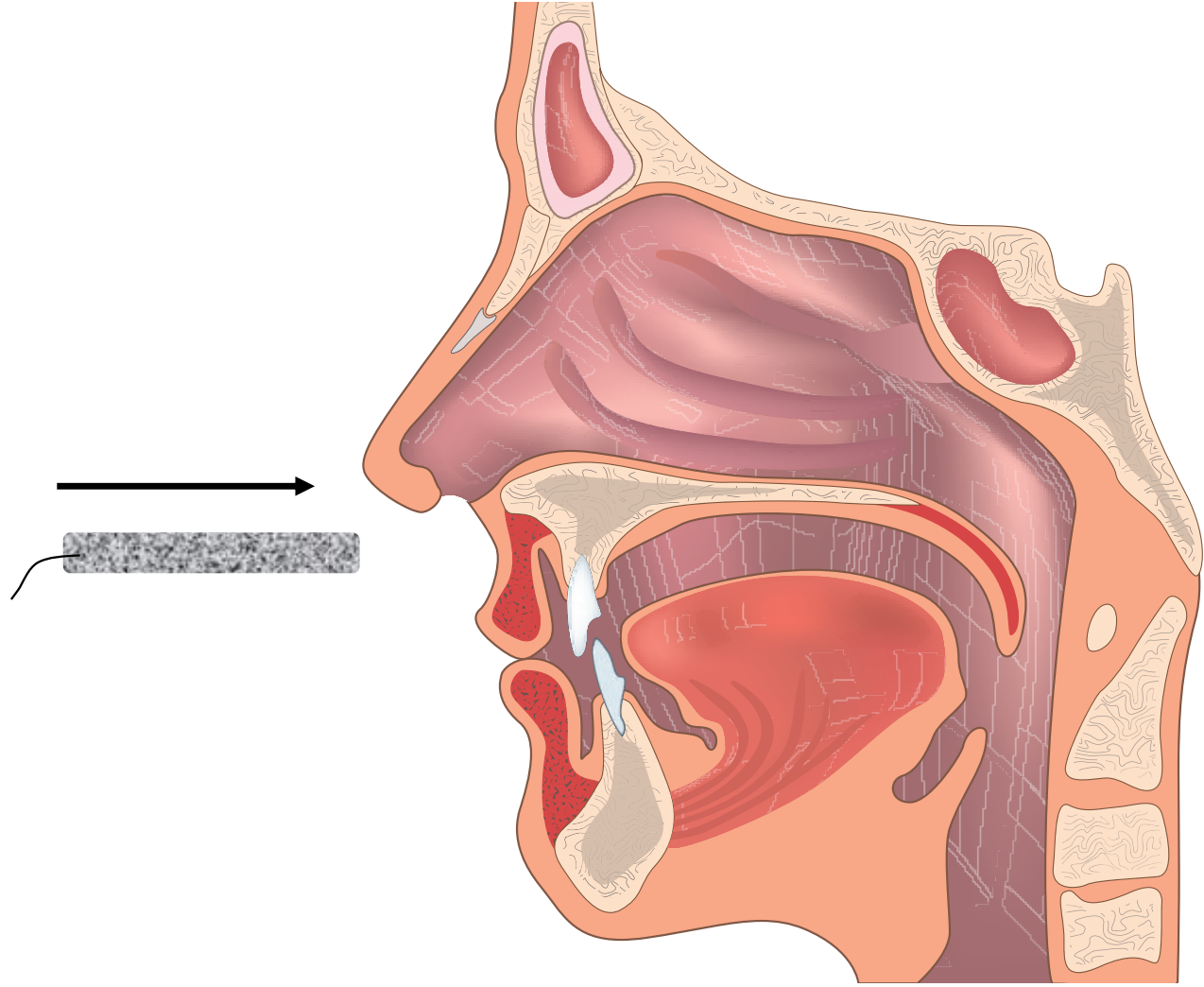
- Merocel nasal tampons
- Rapid Rhinos
- BIPP/ ribbon gauze
- Kaltostat/Surgicel

### Posterior:

- Foley balloon catheter



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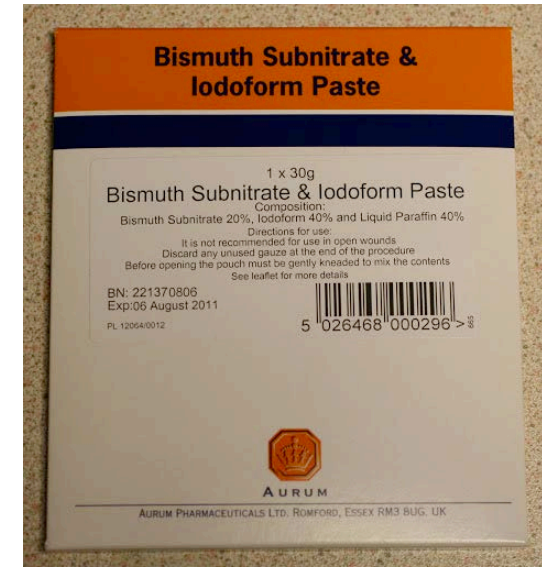


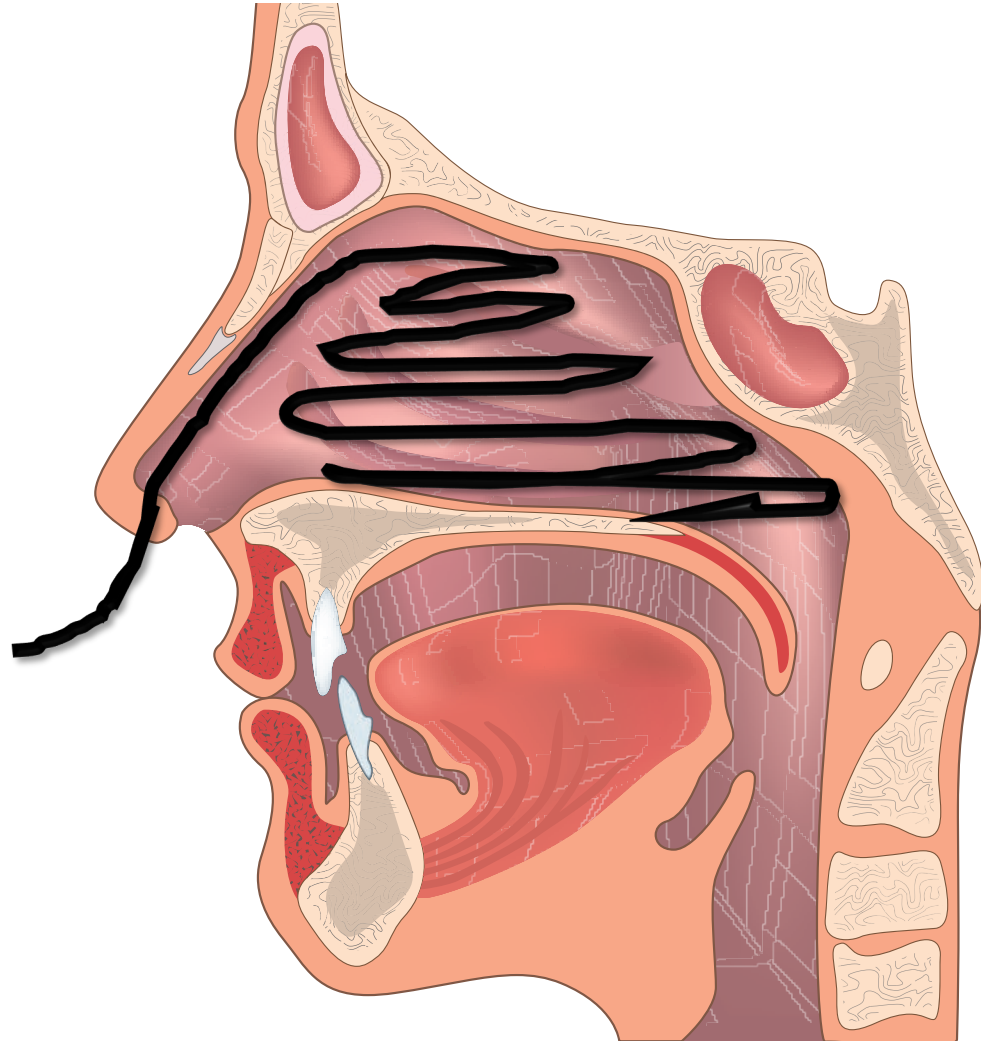
**B**

# Nasal packing

## BIPP

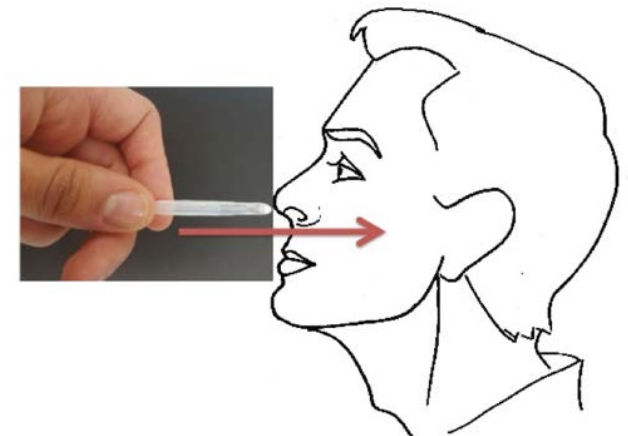
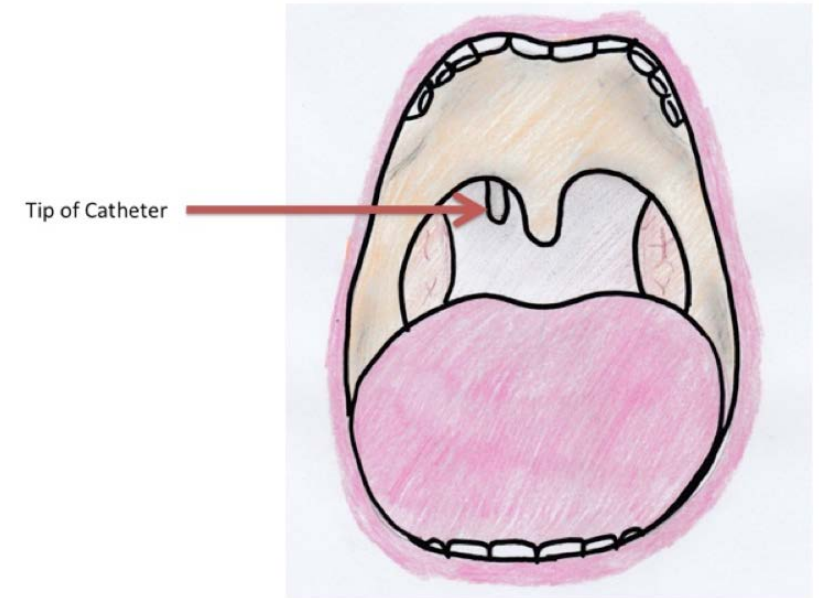
- Bismuth
- Iodoform
- Paraffin
- Paste



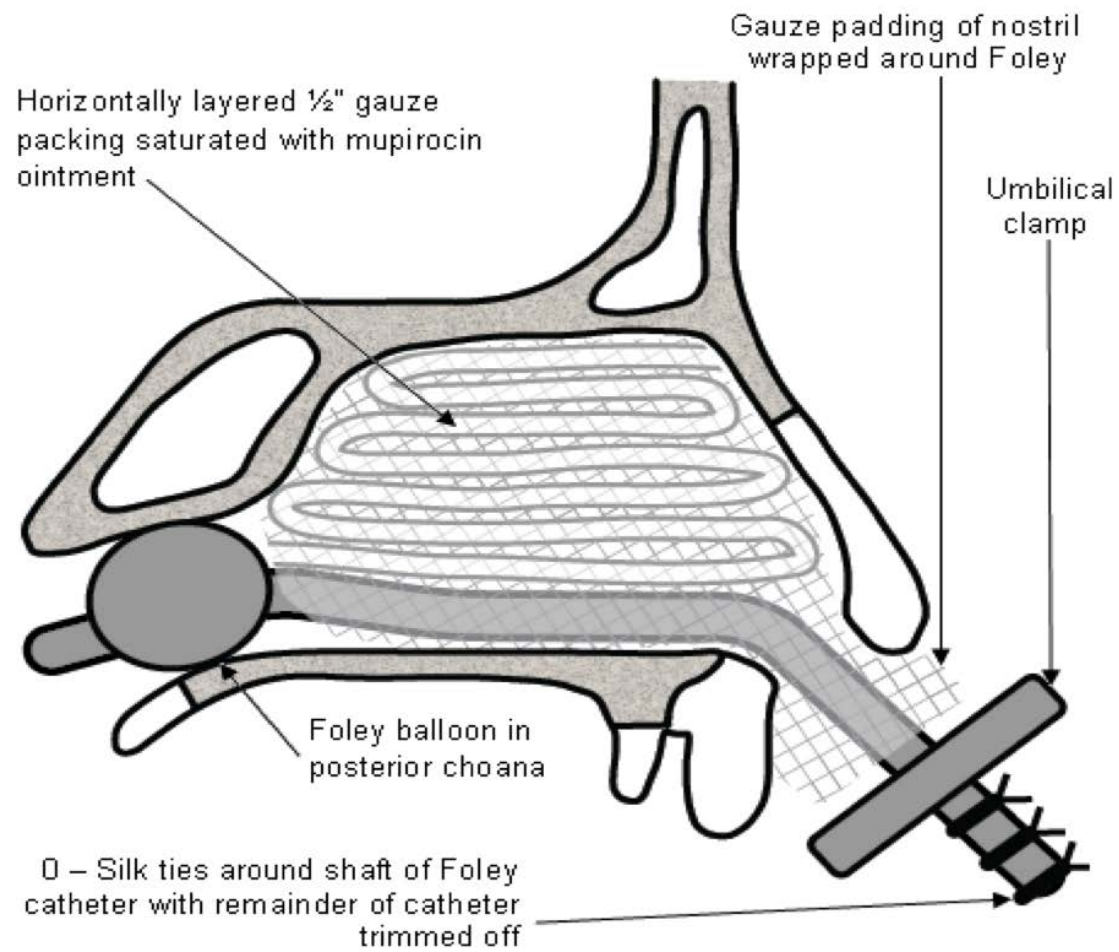


## Nasal packing

- Foley balloon catheter
- Gauze to protect nasal cartilage
- Umbilical clamp
- Consider antibiotic cover



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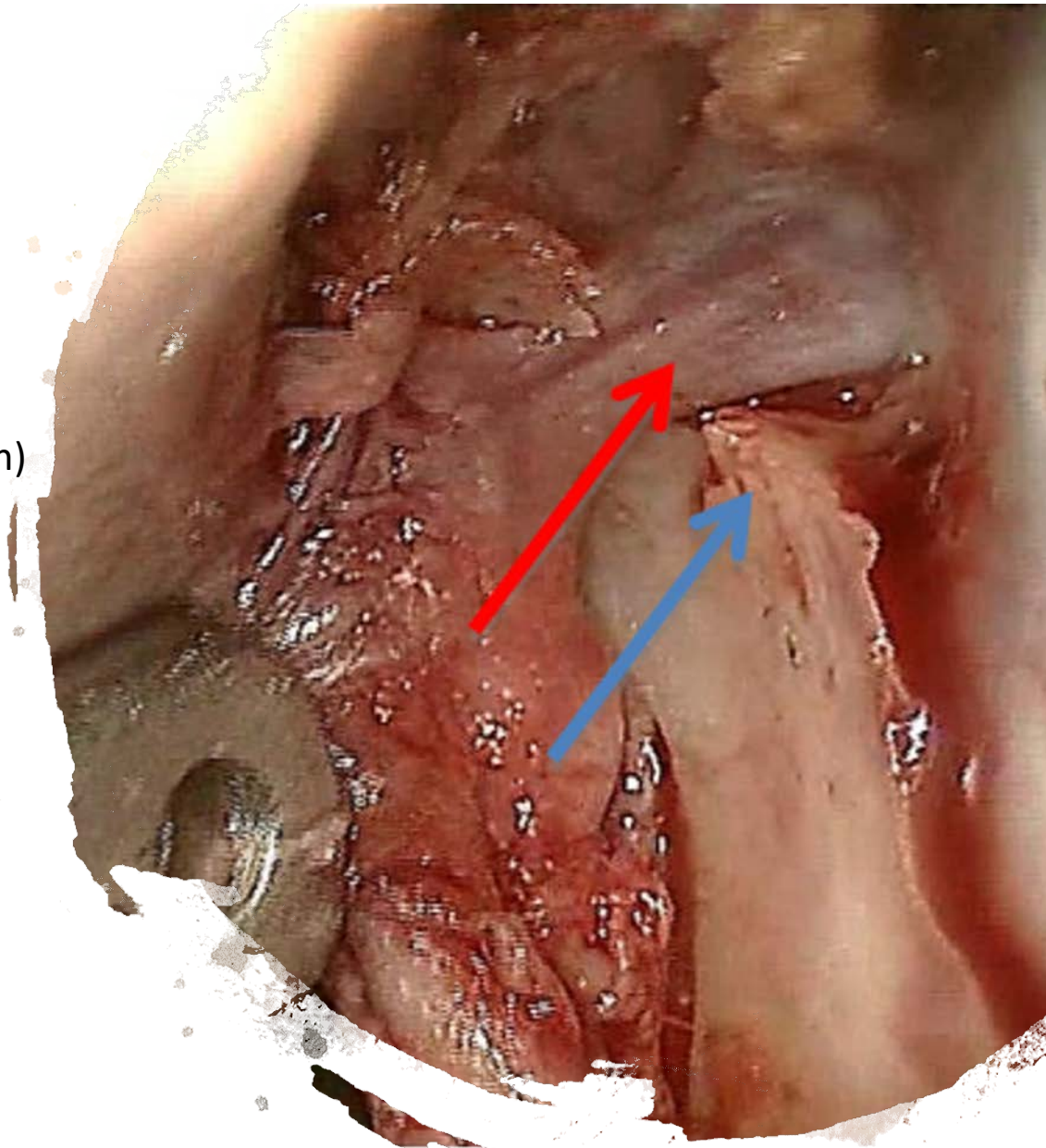


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## Surgical Intervention

If packing fails to control haemorrhage

- EUA & cautery/septoplasty/nasal packing
- Arterial ligation
  - Sphenopalatine (Endoscopic)
  - Anterior/posterior ethmoidal (Lynch-Howarth)
  - Maxillary (Caldwell-Luc)
  - External carotid



## Question

A 1-year old child presents with unilateral brown nasal discharge over the last day.

- No eye signs
- Haemodynamically normal
- Not co-operative with further examination

**What is the next appropriate step?**

- A) Oral antibiotics
- B) IV antibiotics
- C) Lateral facial X-ray
- D) Refer to ENT clinic within 2 weeks
- E) Flexible nasendoscopy

**B**







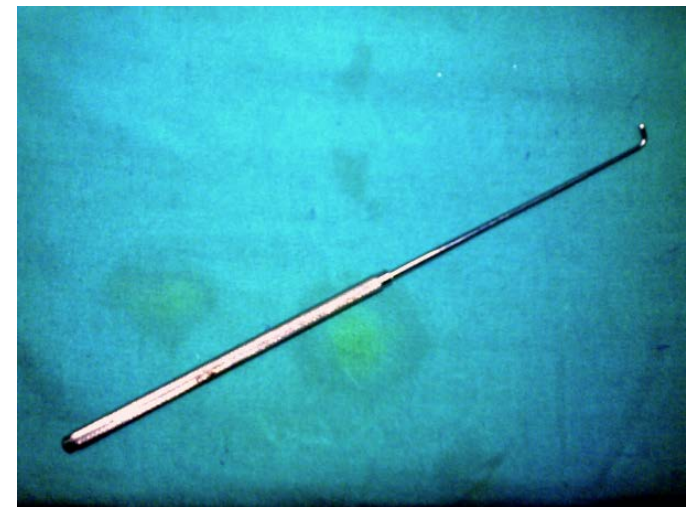
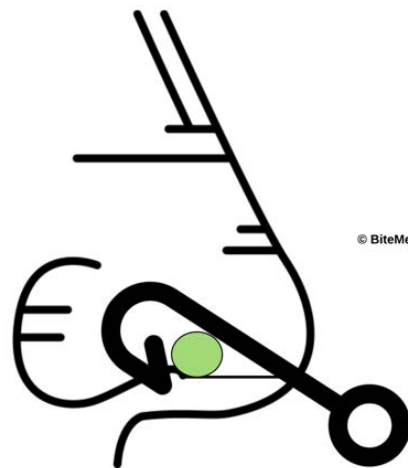
**B**

## ▶ Foreign body in nose

Usually peas, beads and “Smarties” in children...and adults!

Should be removed as theoretical risk of aspiration

Use a Hook (or suction), may need EUA



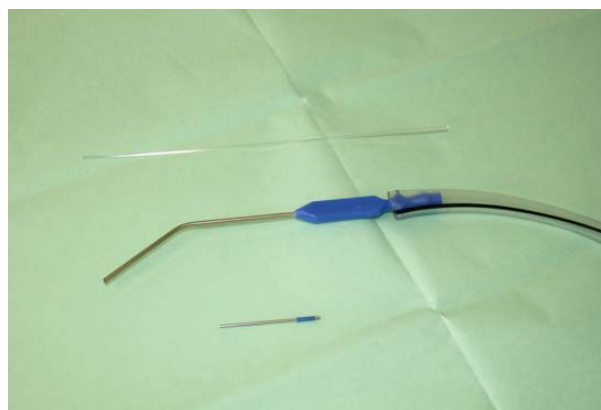
▶ **Foreign body in ear**



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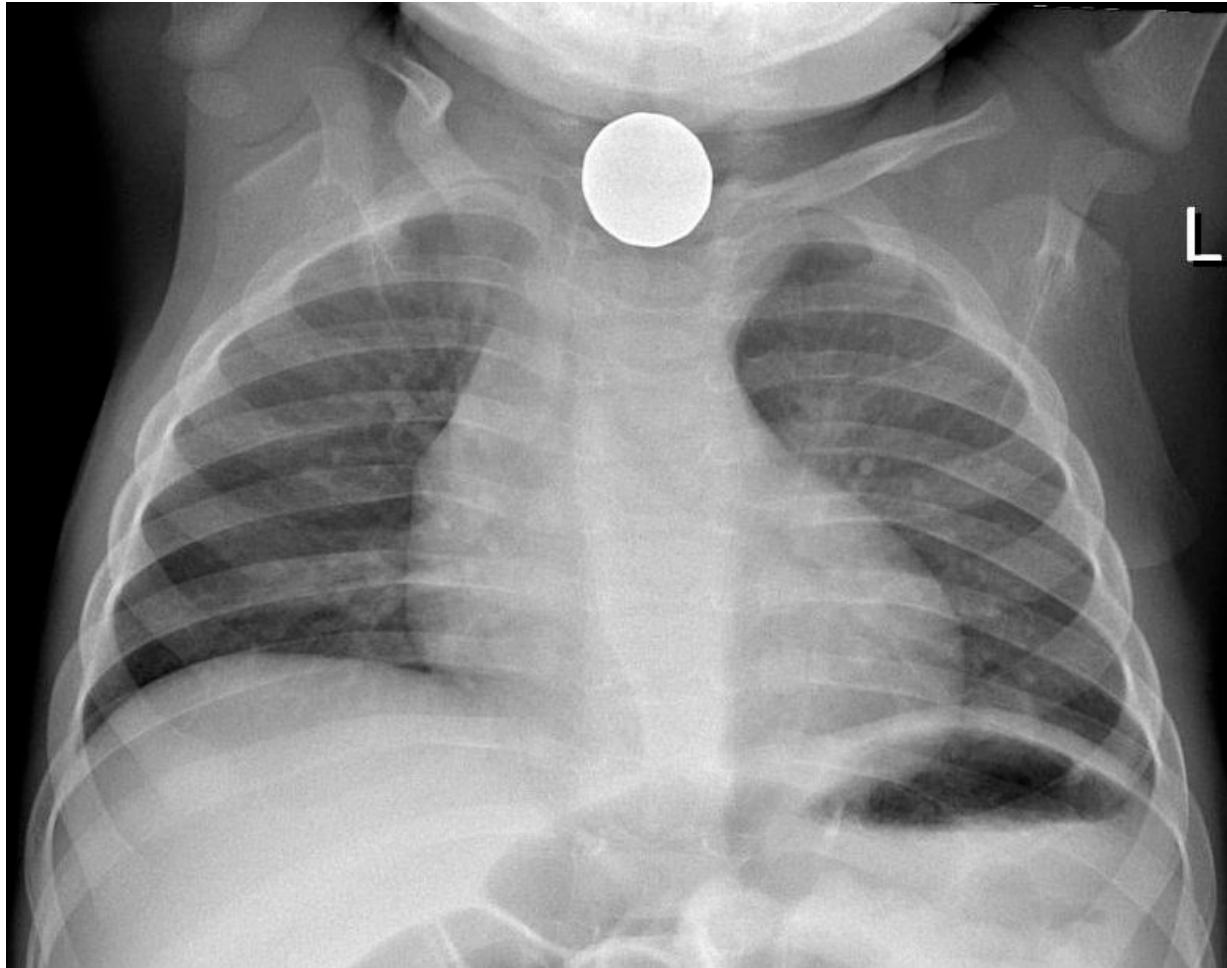
## Foreign body in ear

- Do no harm
- Get a good view
- Use a hook and suction
- You only get one go in children!
- Drown insects with olive oil
- May need short GA and EUA



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▶ Foreign body in throat



**B**

## ▶ Foreign body in throat

### Approach:

- History
- Examine oral cavity and tonsils carefully
- Flexible nasendoscopy
- **Lateral soft tissue neck** or **AP & Lateral CXR** can be helpful
  - \*\* Beware - not all bones radio-opaque\*\*
- Pharynx- typically fish or chicken bone
- Oesophagus
  - **In adults:** food bolus
  - **In children:** coins, batteries etc.
- Can localize site accurately if above hyoid



▶ **Not all fish bones are opaque on xray!**

Readily visible	More difficult to see	Not visible at all
Cod	Monkfish	Herring
Haddock	Plaice	Kipper
Cole fish	Grey Mullet	Salmon
Lemon sole	Red Snapper	Mackerel
Gurnard		Trout
		Pike



## ▶ Foreign body in throat

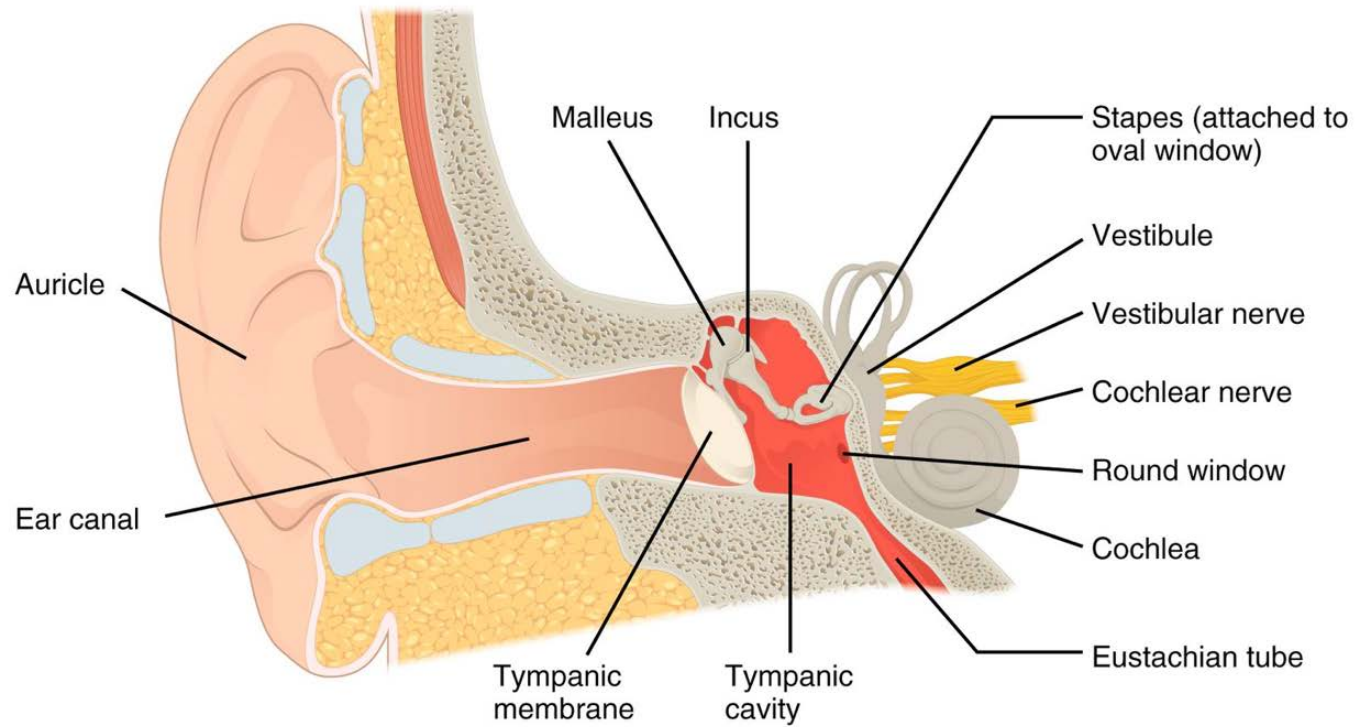
- Soft foreign body **can be treated conservatively** (unless persistent or airway obstruction)
- Sharp objects & batteries **must be urgently removed**





**B**

# Common Ear infections



# Common Ear infections: Otitis Externa

## History:

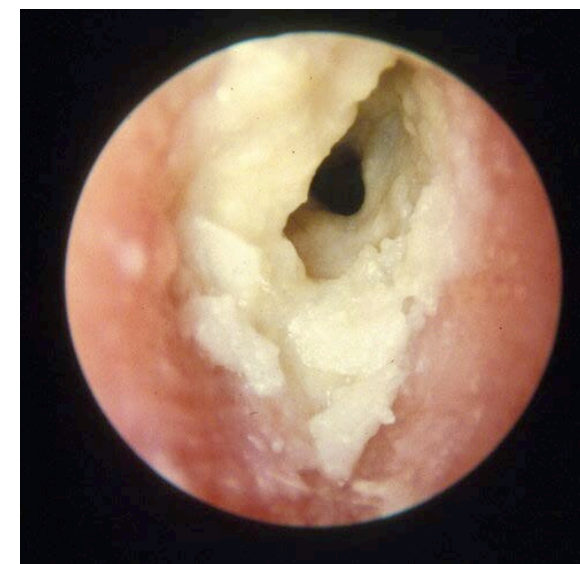
- Otolgia, Deafness, Discharge

## Pathogens:

- *Pseudomonas aeruginosa*
- *Staph aureus*
- *Candida sp*
- *Aspergillus*

## Treatment

- Aural Toilet (hoover out the debris!)
- Antibiotic + steroid drops
- **Keep ear dry**



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# ▶ Microsuction

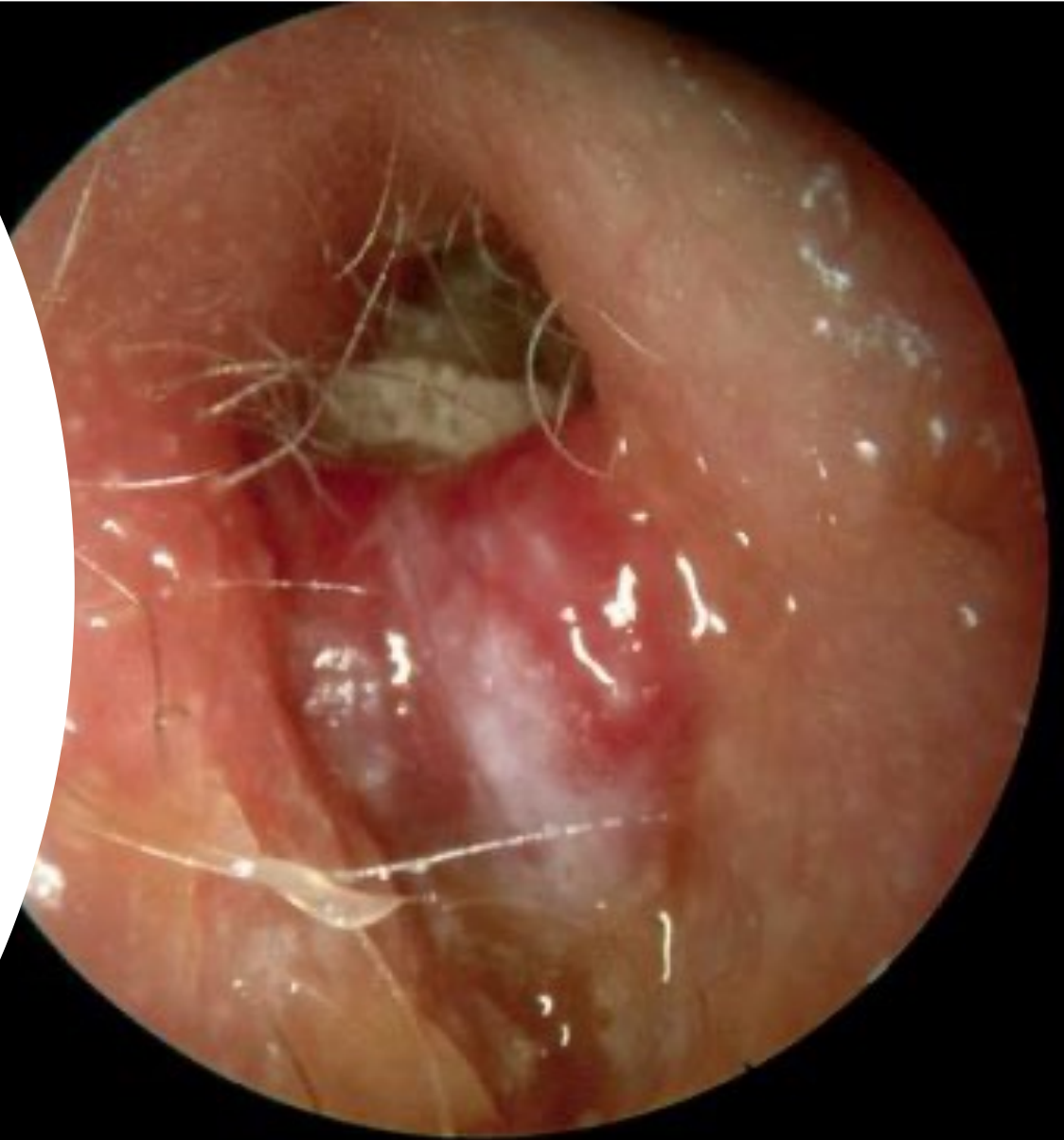


► Pope wick



## ► Necrotising Otitis Externa

- Skull base osteomyelitis
- Potentially fatal
  
- Think about this diagnosis in the immunocompromised patient
  
- Suspicious features:
  - Night pain
  - Granulations in ear canal
  - Non-resolving otitis externa
  
- Complications:
  - Sinus thrombosis
  - Meningitis
  - Cerebral abscess
  - Aspiration due to palsies



# Necrotising Otitis Externa

- Admit
- CT
- Inflammatory markers
- **MDT Management**
  - Microbiology/ID/OPAT: IV antibiotics until resolution of pain and inflammatory markers
  - Diabetic control
  - Additional therapy based on palsies
    - SLT
    - Physio
    - Ophthalmology



# ▶ Common Ear infections: Acute Otitis Media

Very common in children

## Symptoms

- Otolgia, pyrexia, otorrhoea
- Crying
- Tugging ear
- Poor feeding
- Restlessness

Most will recover with analgesia alone

## Antibiotics important in certain cases to avoid complications:

- Under 2 years old (Under 3 months old -> admit)
- Bilateral
- Symptoms of local complications (facial weakness, dizziness, visual change, neck swelling)
- Severe or recurrent
- If no resolution after 3 days

NICE guidelines (July 2018 - most recent)



## ► Complication of Acute Otitis Media: Mastoiditis

- Admit
- IV Antibiotics
- +/- CT Scan & Surgery

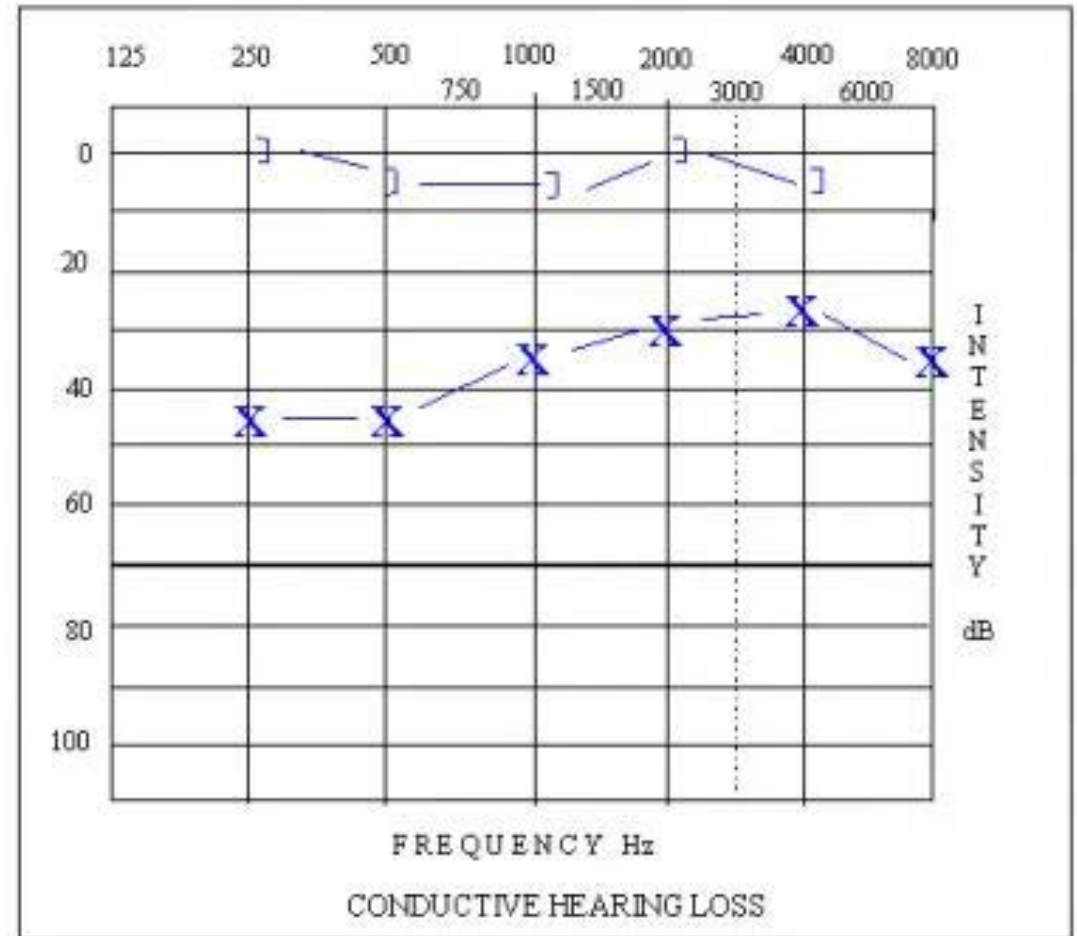


## Question

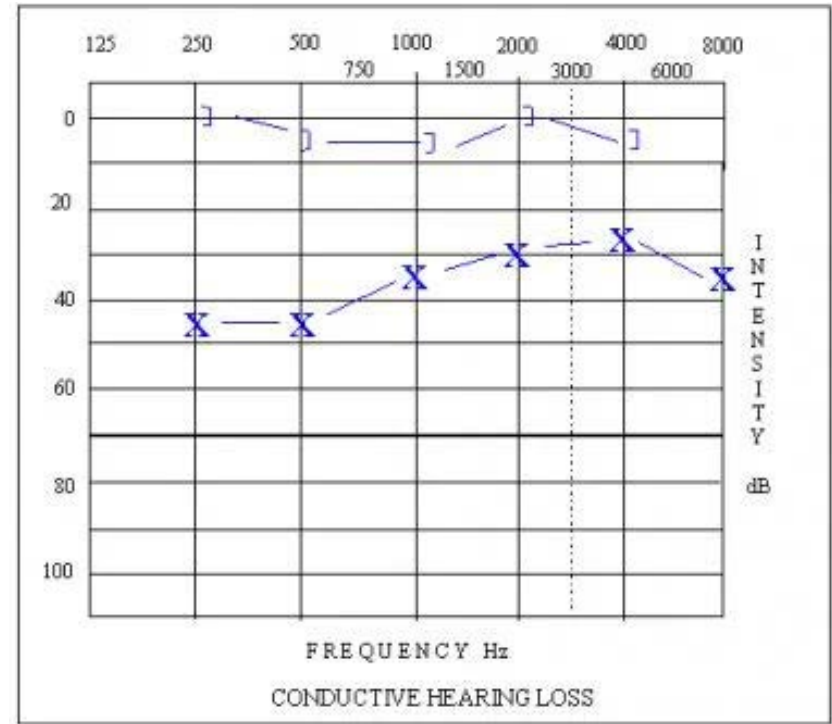
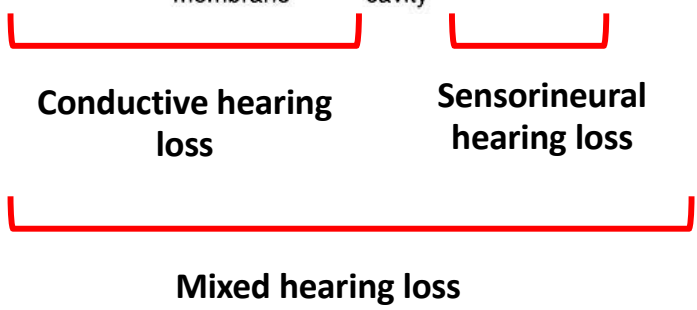
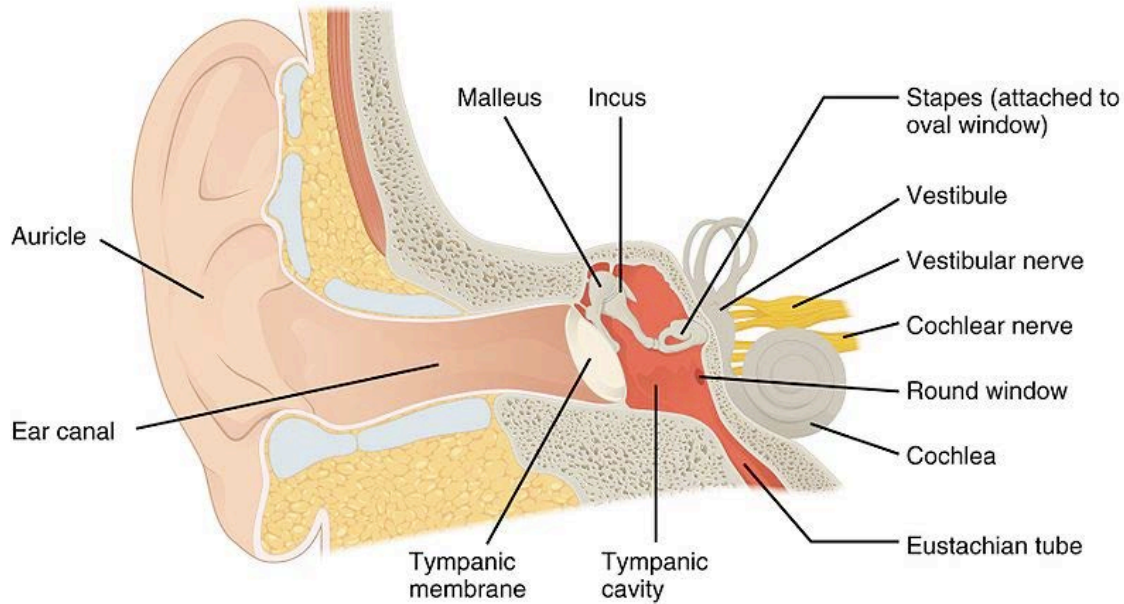
This is the pure tone audiogram of a 24-year-old patient.

What is the most accurate interpretation?

- A) Left conductive hearing loss
- B) Right conductive hearing loss
- C) Left mixed hearing loss
- D) Right conductive hearing loss
- E) Left sensorineural hearing loss



# Hearing Loss

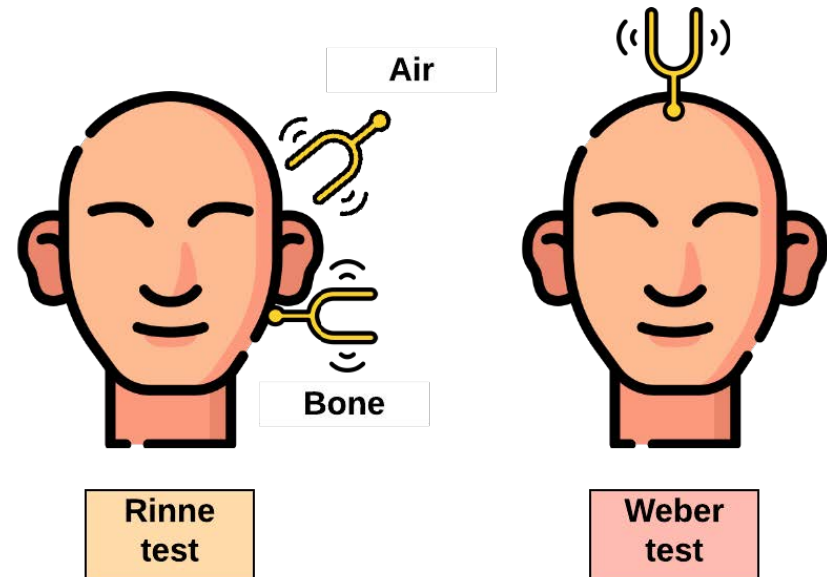


Modality	Ear	
	Right	Left
AC unmasked	○	×
AC masked	△	□
BC unmasked	<	>
BC masked	⌈	⌋
No response	♂	♀

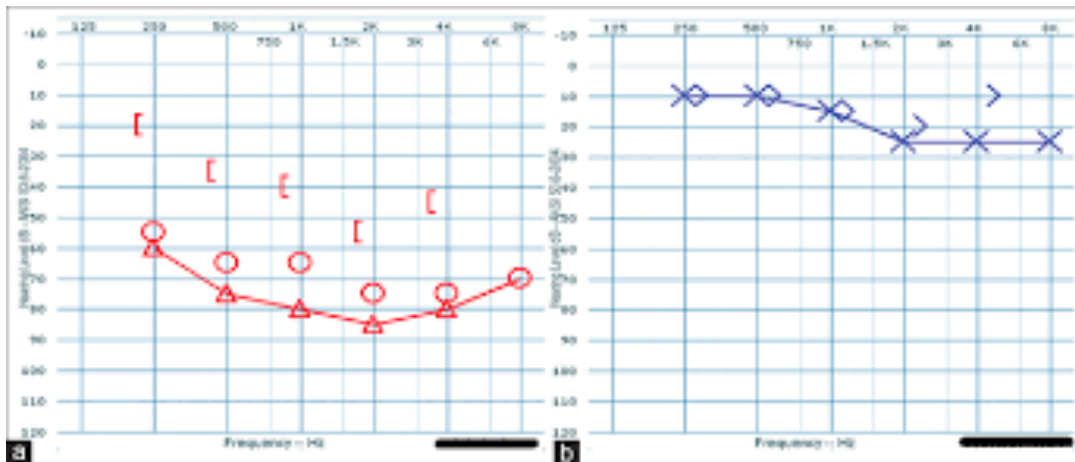
# Sudden Hearing Loss

## Conductive or sensorineural?

- If sensorineural → treat as an emergency
- High dose prednisolone 1 week
- Audiogram next working day
- +/- intratympanic steroid injection



Hearing loss	Rinne test (conduction)	Weber test (localisation)
None	Air > bone	Midline
Sensorineural	Air > bone	Normal ear
Conductive	Bone > air	Affected ear





**B**

## ▶ Fractured Nose

- Exclude septal haematoma
- No need for X-rays if simple nasal fracture
- Re-assess for deviation after 7 days once swelling subsided
- Only need to intervene if cosmetic deformity or nasal obstruction
- Closed / Open reduction
- Manipulate within 14 days



## ▶ Septal Haematoma



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## Question

It's Saturday evening. You could be outside having a BBQ but you've chosen to log onto a seminar instead.

Can you take any more of this?

- A) My brain is fried, please stop. Why am I even geeking it up on a Saturday evening in the first place?
- B) Skip straight to the top decile question
- C) **Bring it on. Let's have some airway emergencies**
- D) Skip straight to info on why ENT is a great career choice
- E) Please come back another day with more ENT topics

**“Doctor, I’ve had a sore throat for days”**



# Tonsillitis

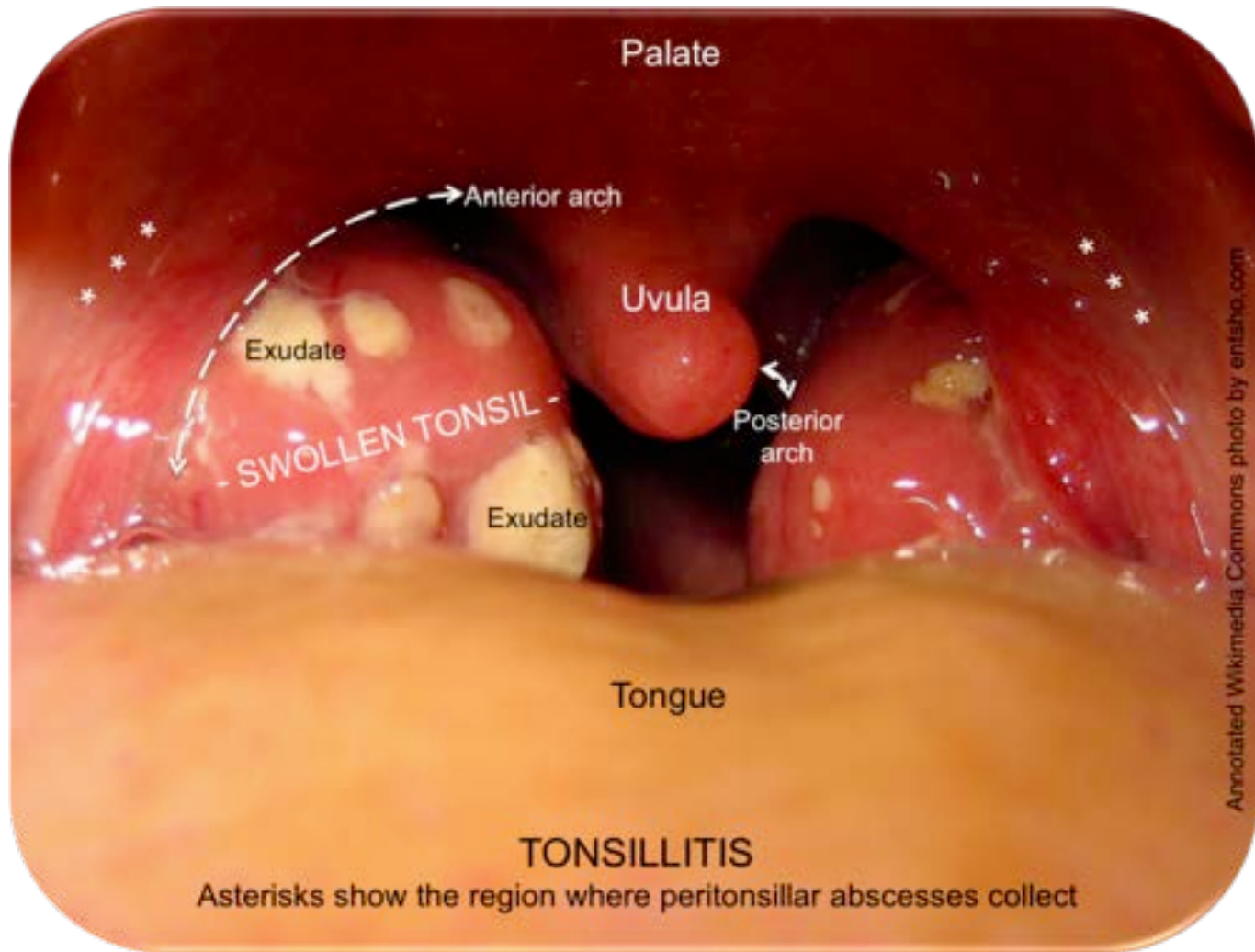
- If unable to eat & drink → ADMIT
- **Treatment:**
  - IV fluids
  - IV Abx (e.g. Benzylpenicillin & Metronidazole)  
(AVOID AMOXICILLIN OR AUGMENTIN!)
  - Analgesia
  - Consider Dexamethasone
- **Investigations**
  - FBC
  - Monospot



# Infectious Mononucleosis

- Mainly young adults
- EBV
- Prodrome 4-5 days of malaise & headache
- Clinically similar to tonsillitis but often:
  - Large cervical lymphadenopathy
  - Hepatosplenomegaly
  - Rash
  - Lymphocytosis
- Ix: Monospot/Paul Bunnell test (Beware False + ve)
- Tx: as tonsillitis +/- steroids
  - Avoid contact sports/exercise for 2-3 months

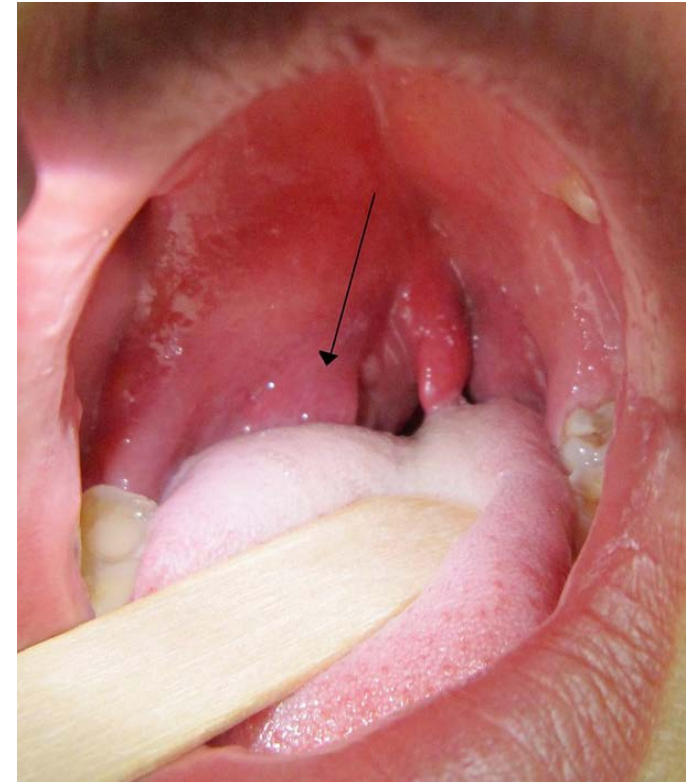




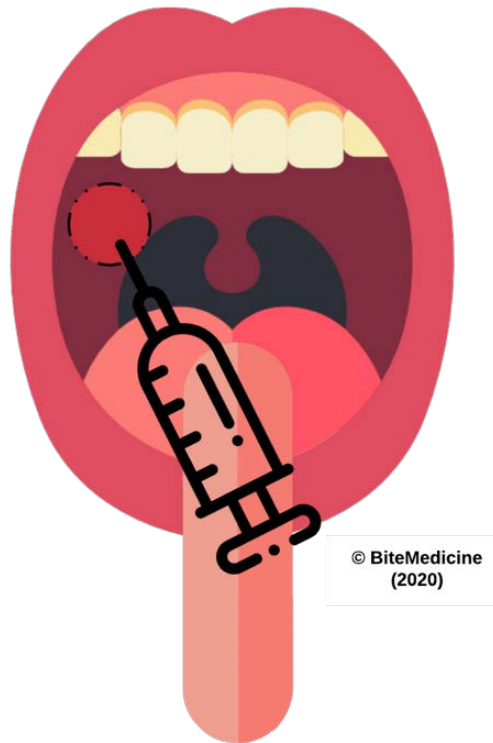
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## ▶ Peritonsillar abscess (Quinsy)

- Prodrome 2-3 days sore throat then pyrexia and marked odynophagia
- Clinically
  - Trismus
  - Uvula deviated to unaffected side
  - Palpable tender jugulodigastric lymph nodes
- Treatment similar to acute tonsillitis PLUS:
  - Needle aspiration/I+D of abscess required
- Beware the risk of airway obstruction
  - Consider draining overnight rather than waiting

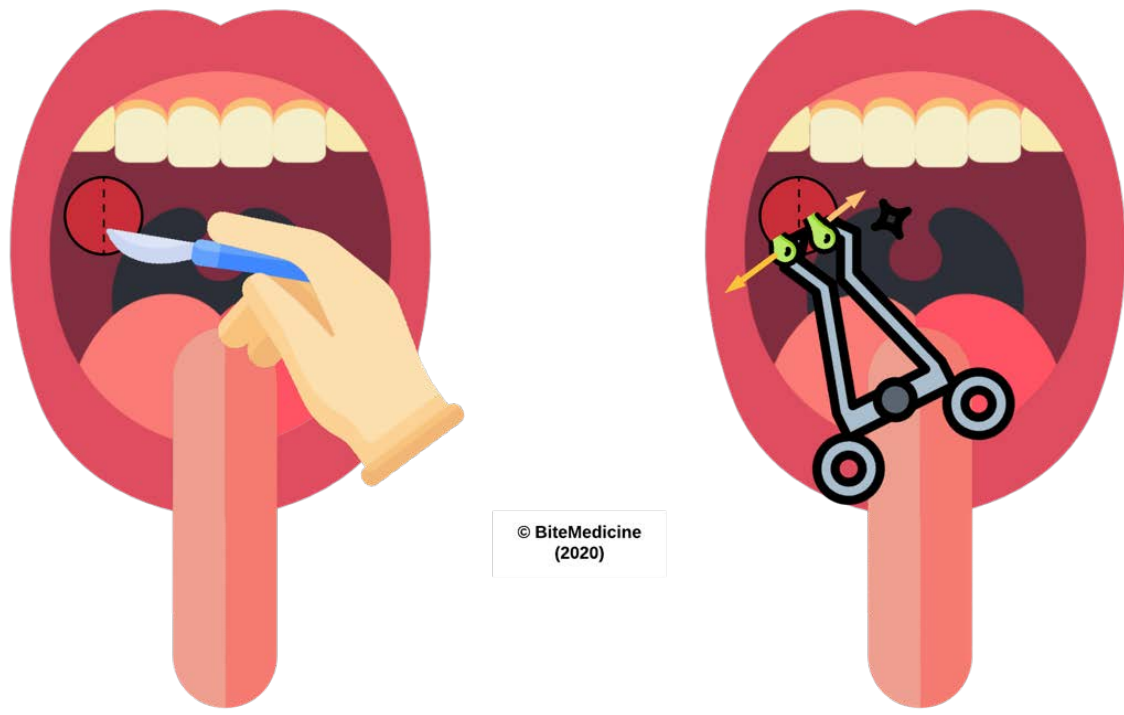


## ▶ Quinsy drainage



Use Xylocaine local anaesthetic spray and then aspirate pus with white 19G needle (approx ½ way between base of uvula and last upper molar)

# ▶ Quinsy drainage



© BiteMedicine (2020)

If pus aspirated infiltrate with local anaesthetic and incise and drain

Use guarded scalpel to restrict depth and then open up with forceps

## Bleeding after a Tonsillectomy...

Secondary haemorrhage rate 1-5% (usually 5-15 days after surgery)

If **ANY** history of blood, **ALWAYS ADMIT**

- 'Herald Bleed' may signify larger impending bleed
- Also admit if pyrexial or poor oral intake



# Post-tonsillectomy haemorrhage

- Always notify the ENT registrar
- **Examine throat**
  - Active bleeding?
  - Identifiable bleeding point?
  - Clot?
- ABC



# Post-tonsillectomy haemorrhage

## ABC

- Sit up
  - Suction
  - Regular observations
  - IV Access + FBC, G&S, Clotting
- 
- Involve Paeds +/- Anaesthetics early
- 
- Other measures:
    - Ice in mouth
    - Hydrogen peroxide gargles
    - Adrenaline guaze pressure to bleeding site



# Post-tonsillectomy haemorrhage

## If bleeding stopped:

- Continue conservative management
- Keep NBM until senior review
- Start IV Abx & fluids

## If bleeding continuous or heavy:

- Alert emergency theatre
- Consent for control of haemorrhage under GA





## Stridor

- Classically a bovine-like inspiratory noise associated with laryngeal obstruction
- More common in children because of the relatively small diameter of the airways
- **DIAGNOSIS TAKES SECOND PLACE TO MANAGEMENT**





# Acute airway obstruction

- **Rapid airway assessment**
  - Including flexible nasendoscopy (if appropriate)
- Contact senior colleague and senior anaesthetist
- Jaw thrust, head extension, simple airways
- Humidified Oxygen/Heliox
- IV steroids
- Adrenaline nebs
- Inform theatres → ? Intubate ? Surgical airway



# Causes of airway obstruction

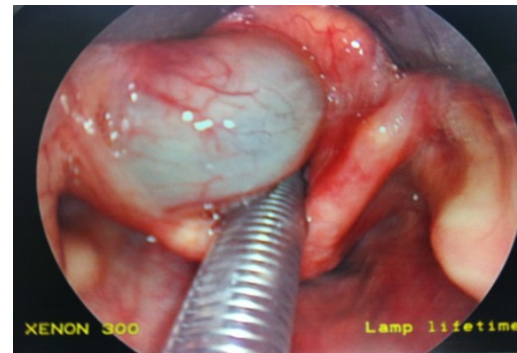
## Children

- Croup
- Acute epiglottitis
- Foreign body
- Laryngeal papilloma
- Congenital abnormalities
- Laryngomalacia



## Adults

- Laryngeal neoplasms
- Bilateral vocal cord palsy
- Croup
- Epiglottitis
- Trauma
- Foreign body
- Stenosis





# Reasons for a tracheostomy

- **Real upper airway obstruction**
  - Supraglottic
  - Glottic
  - Subglottic
  
- **Impending upper airway obstruction**

## Also:

- Prolonged ventilation
- Bronchial toilet



# Surgical tracheostomy

## 1. Position

- Supine
- Sandbag under shoulders
- Head on a head ring
- Neck extension
- Identify landmarks
- Check tracheostomy tube

## 2. Skin incision

- Skin infiltration
- ½ way cricoid & ss notch
- Thru' skin & platysma
- Anterior jugular veins
- Retract strap muscles
- Thyroid isthmus

Trachea

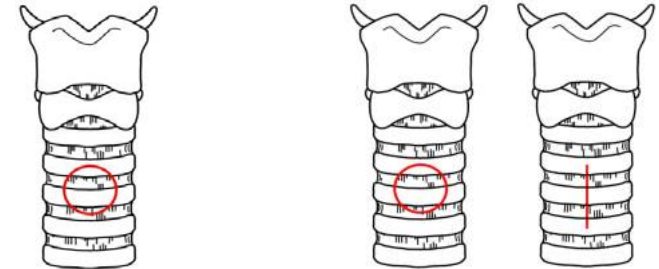


*N.B. Vertical incision if crash trache*

# Surgical tracheostomy

## 4. Division of thyroid gland

- Thyroid isthmus divided
- Identify cricoid
- Identify tracheal rings



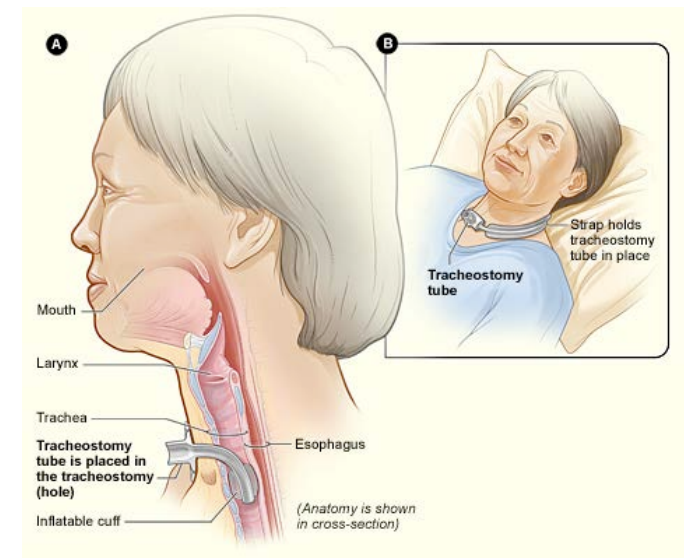
## 5. Tracheal window

- 2<sup>nd</sup>, 3<sup>rd</sup> or 4<sup>th</sup> ring
- NOT 1<sup>st</sup> ring or cricoid
- Window or vertical slit
- Stay sutures if needed



## 6. Tube insertion

- (Alert anaesthetist)
- (Withdraw ET tube)
- Insert tube
- Inflate cuff
- Secure tracheostomy
- Suture and dressings



## ▶ Top-decile question

One of my specialist areas within ENT is cochlear implantation.

Here is a video of a woman with profound deafness having her cochlear implant switched on and being able to hear.

**Which of the following would not currently be eligible for a cochlear implant on the NHS in the UK?**

- A. 8-month-old baby. Bilateral 90dB hearing loss
- B. 102-year-old male. Bilateral 80dB hearing loss.
- C. 8-year-old child. Bilateral 85dB hearing loss.
- D. 2-year-old child. Unilateral 95dB hearing loss.
- E. 24-year-old female. Bilateral 100dB hearing loss.



# ▶ Cochlear Implantation

NICE guidelines 2019

- **Bilateral** air conduction thresholds greater than **80dB at any two frequencies** between 0.5-4kHz
- Inadequate benefit from hearing aids
- MDT assessment – surgeons, audiology, SLT, radiology, psychology, AVM



## Why ENT?

- *Not all snot & wax!*
- *One of medicine's well-hidden best careers*
  
- *Patients young & old*
- *Wide variety of cases*
- *Make people better quickly!*
- *Gadgets*
- *Challenging surgery, emotional impact*
- *Look at the Consultants*



# ▶ References

- Slide 1: Video source: Cardiac arrest (BBC1, 1994) via YouTube
- Slide 5: <https://www.shutterstock.com/image-photo/female-doctor-nurse-wearing-scrubs-protective-1668187618>
- Slide 6: I, Welleschik / CC BY-SA (<http://creativecommons.org/licenses/by-sa/3.0/>).  
<https://commons.wikimedia.org/wiki/File:Epistaxis1.jpg>.
- Slide 9: Therapeutic Intranasal Drug Delivery Needleless treatment options for medical problems.  
<http://www.intranasal.net/Epistaxis/default.htm>
- Slide 9: Arzol silver nitrate. BBODO / CC BY-SA (<https://creativecommons.org/licenses/by-sa/3.0/>).  
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- Slide 10: [www.entsho.com](http://www.entsho.com)
- Slide 11 and 13: <https://www.shutterstock.com/image-vector/anatomy-nose-throat-human-organ-structure-123867553>
- Slide 12: Exposing & Bonding of Brackets to Teeth Explanation & Warnings.  
[http://www.exodontia.info/Expose\\_and\\_Bonding\\_of\\_Teeth.html](http://www.exodontia.info/Expose_and_Bonding_of_Teeth.html)
- Slide 12: Sarindam7 / CC BY-SA (<https://creativecommons.org/licenses/by-sa/4.0/>).  
[https://commons.wikimedia.org/wiki/File:Tilly%27s\\_Nasal\\_Dressing\\_Forceps\\_ENT\\_Instrument\\_Medical1.jpg](https://commons.wikimedia.org/wiki/File:Tilly%27s_Nasal_Dressing_Forceps_ENT_Instrument_Medical1.jpg)
- Slide 14 and 15: [www.entsho.com](http://www.entsho.com)
- Slide 16: [https://vula.uct.ac.za/access/content/group/ba5fb1bd-be95-48e5-81be-586fbaeba29d/Sphenopalatine%20artery%20SPA\\_%20ligation.pdf](https://vula.uct.ac.za/access/content/group/ba5fb1bd-be95-48e5-81be-586fbaeba29d/Sphenopalatine%20artery%20SPA_%20ligation.pdf)



## References: Part 2

- Slide 17 and 18: <https://www.shutterstock.com/image-photo/image-mucus-nose-young-boy-235618357>
- Slide 19: Part of Mr Manjaly's collection
- Slide 20: LITFL - <https://litfl.com/nasal-foreign-body/> - non-commercial use (non-profit)
- Slide 20: Sarindam7 / CC BY-SA (<https://creativecommons.org/licenses/by-sa/4.0>).  
[https://commons.wikimedia.org/wiki/File:ENT\\_Instruments\\_Foreign\\_Body\\_Hook.jpg](https://commons.wikimedia.org/wiki/File:ENT_Instruments_Foreign_Body_Hook.jpg)
- Slide 21 and 22: [www.ENTSho.com](http://www.ENTSho.com)
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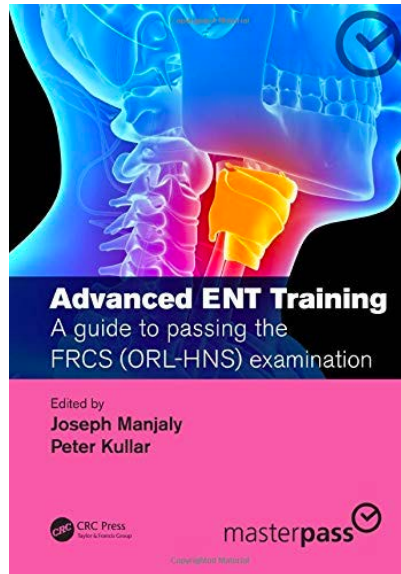
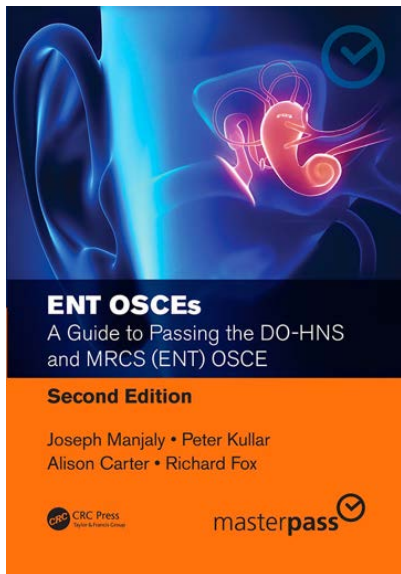
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