PAEDIATRICS ENT

EAR & NOSE ISSUE

	EAR WAX [*cerumen impaction*]	Glue Ear (Otitis media w/ effusion)	OTITIS MEDIA	OTITIS EXTERNA "swimmer's ear"	Hearing Loss
PP / comp.	• Impacted wax accumulation and stuck to eardrum • ear wax = normally protective to prevent infection in external ear	Middle ear becomes filled with fluid leading to hearing loss in affected ear ➢ 2nd to blocked Eustachian tube allowing accumulation of middle ear secretions	**Infection of middle ear** ➢ common site of infection in kids (due to horizontal Eustachian tube) ➢ bacterial infection preceded by viral URTi	➢ Infection of outer ear ➢ Swimmer's ear"	Divided into: ➢ Conductive hearing loss ➢ Sensorineural hearing loss
RF / causes	• Cotton bud usage	➢ Down's syndrome Recurrent ear infections	*URTI - Tonsillitis, rhino-sinusitis* • Viral URTI (mainly) • Bacterial URTI o **Streptococcus pneumoniae (main bacterial cause)** o HiB o Moraxella catarrhalis o S. aureus • Passive smoking • Previous ear infections	• Swimming • Humid environments • Ear polyps • FB in ear • Bacterial infection (**pseudomonas aeruginosa, S. aureus)** • Fungal infection (e.g. aspergillus, candida) → after ABx usage • eczema • seborrheic dermatitis • contact dermatitis	***Congenital*** ➢ TORCH infection (rubella, CMV) ➢ Genetic deafness (AR, AD) ➢ Down's syndrome ***Perinatal*** ➢ Prematurity ➢ Hypoxia during or after birth ***Post-natal*** ➢ Trauma ➢ OME / glue ear ➢ Meningitis ➢ Chemotherapy
Clinical Sx	• Conductive hearing loss • Aural fullness • Pain • Tinnitus	• Aural discharge • Otalgia • Hearing loss • Aural fullness	**NON-specific signs** (e.g. vomit, lethargy, poor feeding) • Otalgia • Reduced hearing of affected ear • Unwell + fever • URTi – cough, coryza and sore throat • +/- vertigo • +/- aural d/c (**if eardrum perforated)**	• Otalgia • Aural discharge • Itchiness • Conductive hearing loss (blocked ears)	• Speech delay • Frustrated or bad behaviours • Ignores commands and parental voice • Poor school performance
Comp.	**AOM**	• **Otitis media**	• **Mastoiditis/abscess → meningitis** • OME • Temporary hearing loss • Perforated TM • Recurrent infection • Labyrinthitis	**Malignant otitis externa → osteomyelitis in temporal bone** (*diabetes, immunsupp. HIV*) ➢ *Facial nerve damage* ➢ *CNIX, CNX, CNXI damage* ➢ *Meningitis* ➢ *Intracranial thrombosis*	**Speech delay**
Ix	**Otoscope - CERUMEN IMPACTION**	• ***Otoscope** – dull eardrum with air bubbles and visible fluid level* ➢ ***Audiometry –** check extent of hearing loss*	➢ *Otoscope – inflamed bulging red tympanic membrane* ➢ *+/- perforation*	• ***Otoscope** – inflamed red swollen outer ear with narrowed external canal* • ***Ear swab** - M/C/S and PCR (identify causative organism)*	***Audiometry (audiogram)*** **< 6mths** = Auditory Brainstem Response Testing **6mths – 3 years** → Visual Reinforcement Orientation Audiometry (VROA/ puppet show test) **Children (3-7 years)** → Pure Tone Play Audiometry
Mx	1) Avoid cotton bud usage 2) Ear drops (olive oil or 5% Bicarb) 3) Saline irrigation (CI = if perforated eardrum or infection) 4) Microsuction **When to refer or follow-up?** • **F/U** = 8 weeks esp. if recurrent OME, AOM or hearing difficulties • **ENT referral** = uncontrolled pain, failure to resolve w/ AB or ≥6 x episodes in past 12 months	***ENT referral*** ➢ *Grommet insertion - drain fluid from middle ear* ➢ *Advise parents that grommets fall out within year* ➢ *1 in 3 require further grommets for persistent glue ear* *Grommets = tympanostomy tubes*	***Conservative*** • ***Reassure** - ear toilet and dry ear + avoid swimming* • ***Simple analgesia** (2x Panadol PO tds for 7 days)* ***Medical – ABx*** • ***30mg/kg Amoxicillin PO bd for 5 days*** • *Clarithromycin (penicillin allergy)* • *Erythromycin (penicillin allergy in pregnant)* **consider delayed ABx prescription (valid only after 3 days if symptoms persist)* ***Indications for ABx*** ➢ *6/12 old* ➢ *ATSI* ➢ *Immunocompromised* ➢ *Hearing aids (cochlear)* ➢ *Only hearing ear*	***Mild Otitis externa*** • *Ear toilet and dry ear (avoid headphone and swimming for 10 days)* • *OTC acetic acid 2% (antifungal and antibacterial effect) → used therapeutically or prophylactically* ***Moderate Otitis externa [use ear wick]*** **No perf** – **Sofradex** (dex, framycetin + gramicidin) ear drops (3x drops daily for 7 days) **Perf** – **Ciloxan** (cipro 0.3% ear drops) → 5x drops bd for 7 days **Comp.** – **Ciproxin HC** (cipro + hydrocortisone) → 3x drops bd 2 days **Fungal** – **Triamcinolone** (*neomcycin + nystatin, gramicidin*) **3x drops tds for 7days** **If severe –Admit to hospital and give IV ABx* ***Medical – malignant otitis externa*** ➢ *Admit under ENT* ➢ *IV ABx* ➢ *CT or MRI (identify extent of infection)*	***MDT management*** ➢ *Speech pathologist* ➢ *ENT* ➢ *Educational psychologists* ***Interventions*** ➢ *Hearing aids* ➢ *Sign language*

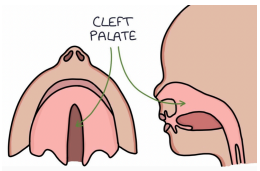
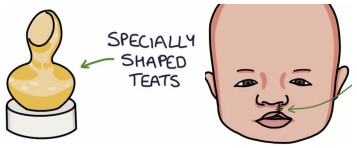
NOSE ISSUE & NECK LUMPS

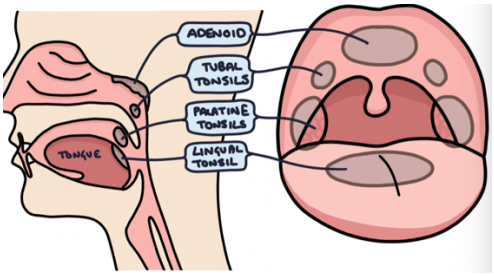
	EPISTAXIS	CYSTIC HYGROMA	THYROGLOSSAL CYST	BRANCHIAL CYST
PP / comp.	Bleeding typically in anterior septum of nose in little's area (Kiesselbach's plexus)	➢ Malformation of lymphatic system causing lymph filled cyst ➢ **Posterior triangle of neck**	Persistent thyroglossal duct that does NOT obliterate after thyroid gland descends into neck from base of tongue ➢ Duct becomes fluid filled cyst ➢ Located below larynx and anterior to trachea	Failure of **2nd branchial cleft** to properly form during fetal development ➢ Creates space surrounded by epithelial tissue that is fluid filled Nb: 1st and 3rd, 4th branchial clefts possible but rarer
RF / causes	DDx: • Trauma (nose picking) • Colds • Vigorous nose blowing • Change in weather • Coagulopathy	• Common congenital abnormality	• Congenital	• Congenital • **Present after age of 10** (most commonly seen in teenagers and young adults)
Clinical Sx	• Usu. unilateral bleed o If bilateral = suggests posterior bleed • Heamatemesis (if swallow blood) ***Severe epistaxis definition*** • *does not stop within 15 mins* • *bilateral epistaxis* • *haem unstable*	• **Large** • **Soft** • **Non-tender** • **Trans-illuminable** (key difference compared to branchial cyst)	• **Mobile** • **Non-tender** • **Soft** • **Fluctuant** • **Moves up/down upon tongue** movement (remnant connection between base of tongue and cyst)	• Round • Soft • Cystic swelling • **Anterior triangle (**Between angle of jaw and SCM)
Comp.	• Airway obstruction • **Anaemia – light-headed, SOB, pre-syncopal**	➢ **Infected cyst – hot, tender painful lump → sepsis** ➢ *Haemorrhagic cyst* ➢ *Airway compromise – SOB* ➢ *Dysphagia – feeding and swallowing issues*	**Infected cyst – hot, tender painful lump → sepsis**	**Infected cyst / sinus / fistula– hot, tender painful lump → sepsis** ➢ **Branchial cleft sinus** – branchial cyst connected to outer skin (noticeable discharge from sinus) ➢ **Branchial pouch sinus** – branchial cyst connected to oropharynx ➢ **Branchial fistula** - connects cyst to outer skin via oropharynx
Ix	➢ ***Clinical Dx*** ➢ ***Nasoendoscopy*** *– locate source of bleed* ➢ ***Bloods*** *– FBC, Coags (PT/APTT) and thrombocytopenia screen (heamolytic screen + blood film)*	• *Ante-natal scans* • *Clinical diagnosis* •	• ***Clinical diagnosis*** • *USS or CT scan*	•
Mx	***Conservative*** • *Pressure on cartilaginous part of nose with head tilted forward) for **10-15 minutes*** • *Spit out blood in mouth (DO NOT swallow)* ***Severe epistaxis Mx*** ➢ ***Admit to hospital*** ➢ *Nasal packing – use nasal tampons or inflatable packs* ➢ *Nasal cautery → use AgNO3 stick* ***Post nasal bleed Mx:*** ➢ *Prescribe **naseptin (chlorhexidine and neomycin) qid for 10 days** to reduce crusting, infection and inflamamtion* ➢ *CI = peanut or soya allergy*	***Depends on size, location and complications*** ***Benign / asymptomatic*** ➢ *watch and wait* ***Symptomatic consider:*** ➢ *Aspiration* ➢ *Surgical removal* ➢ *Sclerotherapy*	***Refer to ENT surgeon*** ***Surgical removal*** ➢ *Send for histology and pathology* ➢ *Advise cyst can recur unless full thyroglossal duct removed* ***Complications of surgery*** ➢ ***Infection, bleeding*** ➢ ***Neurovasc. Damage (e**.g. RLN palsy,*	***Depends on size, location & comp.*** ***Benign / asymptomatic*** ➢ *watch and wait* ***Symptomatic consider:*** ➢ *Surgical removal*

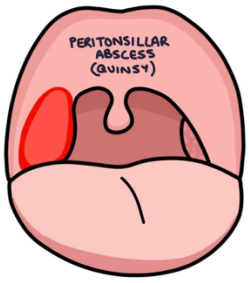
DDx neck lump

- **Anywhere on neck –** lymphoma, lipoma, sebaceous cyst, recent viral infection, malignancy (SCC)
- **Anterior / Midline –**thyroid nodule
- **Anterior / lateral -** carotid body tumours, branchial cysts
- **Posterior –** cystic hygroma (usu. L sided)

THROAT ISSUES

	TONSILLIITIS / PHARYNGITIS	Quinsy	Cleft Lip and Palate
PP	INFLAMMATION of tonsils due to: ➢ **Viral infections** (most) ➢ **Bacterial infections** (GAS – pyogenes, Strep pneumoniae) ***Other = HiB, Moraxella Catarrhalis, MSSA/MRSA***	Peritonsillar abscess ➢ Unilateral tonsillar swelling with discharge ➢ Same causes as Tonsillitis	Cleft lip = congenital defect where upper lip splits and may extend up to node Cleft palate = congenital defect in hard/soft palate (roof of mouth) creating cavity between mouth and nasal cavity
Sx	• SORE throat- odynophagia • Low grade fever • Lymph nodes **CENTOR criteria (for Abx) → ≥ 3 = 40-60% chance bacterial** ➢ Low grade fever > 38 ➢ No cough ➢ Tonsillar exudates (red inflamed enlarged tonsils) ➢ Tender anterior cervical LN ➢ Young < 15yo	*Tonsillitis symptoms PLUS* - ***Referred ear and neck pain*** - ***Trismus*** *– unable to open mouth* - *Altered voice- "hot potato voice"* - *Swelling and redness in area behind tonsil*	*FHx* *3 in 10 associated with underlying syndrome* 
Comp.	- Quinsy (peritonsillar abscess) - Meningitis - Epiglottitis - GAS (Scarlet fever) → acute rheumatic fever → IE - Splenic rupture (EBV?) – **AVOID contact sports**	- Airway obstruction - Meningitis - Septic shock - spread to retropharyngeal space	• Feeding and swallowing issues → FTT, FTG • Speech developmental delay • Psychosocial issue – reduced maternal bond • Recurrent OME and AOM
Ix	Otoscope + tongue depressor ➢ Throat swab → M/C/S ➢ EBV monospot test ➢ ASOT ➢ FBC + blood film	Otoscope + tongue depressor	**Clinical Dx**
Mx	**1) Reassure and safety net if viral** **2) PO penicillin V for 10 days if: (Nb: tastes bad!!)** ➢ Bacterial tonsillitis suspected (Centor ≥ 3) ➢ Immunocompromised ➢ Hx of Rheumatic fever *Clarithromycin = true penicillin allergy **Consider STAT 8mg dex for odynophagia **3) When to admit?** ➢ Immunocompromised ➢ Systemically unwell ➢ Dehydrated ➢ RDS (e.g. stridor at rest) ➢ Signs of peritonsillar abscess or cellulitis	**Urgent referral to ENT** ➢ Admit to hospital ➢ Incision and drainage under GA ➢ ABx before and after surgery (**co-amoxiclav)** ➢ +/- dexamethasone to reduce inflammation and aid recovery ➢ F/U GP in 1 week	**MDT approach:** ➢ Specialist paediatricians and neonatologists ➢ ENT and maxillofacial plastic surgeons ➢ Speech and language therapist ➢ Psychologists (for parents) ➢ GP **Main priority – improve feeding** ➢ Offer specially shaped teat bottles ➢ Surgical correction planned o Cleft lip surgery at 3/12 o Cleft palate surgery at 6/12 





*Waldeyer's ring = tonsil area (non-Hodgkin's lymphoma)

DDx for sore throat

- Pharyngitis/ Tonsillitis
- EBV (mono)
- Quinsy
- GORD
- Trauma (FB, caustic substance)
- Malignancy (lymphoma, secondary mets – SCC, melanoma)
- Pertussis (vomit after cough)
- Cellulitis (Ludwig's angina)

TONSILLECTOMY

INDICATION	Contraindications	Procedure	Post-tonsillectomy bleed
Recurrent acute sore throats ➢ ≥7 in 1 year ➢ ≥ 5 in 2 years ➢ ≥3 in 3 years **Recurrent tonsillar abscesses (**2x episodes) Enlarged tonsils → causing dysphagia, apnoea, stridor	➢ Sore throat (lasts 2 weeks) ➢ Teeth damage ➢ Infection ➢ Post-tonsillectomy bleed (5%) (can occur 2 weeks after operation)	1) ***General anaesthetics*** 2) ENT surgical excision of tonsils 3) 2 weeks recovery at least 4) Clear bland meals	Call ENT registrar + inform anaesthetists ➢ Reassurance + adequate analgesia ➢ Sit upright to spit out blood ➢ IV access → FBC, Coags, group and save ➢ IVF (resus+ maintenance) ➢ Keep NBM *If manageable bleed consider:* ➢ Adrenaline-soaked swab applied topically ➢ Hydrogen peroxide gargle