

PRECOURSE WORKBOOK

ENT AND DIZZINESS



— BELMATT —
HEALTHCARE TRAINING





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I am a GP partner in a busy urban practice where 65% of our patient population is under the age of 35. This means any tech changes that can allow us to deliver a safe, caring, clinical environment to meet the needs of our patients are welcome. As part of Cohort 1 of the NHS Digital Academy I was exposed to the variety of challenges new technologies face when trying to break into the NHS from systems application to procurement.

Since completing the diploma I have been enthused about sustainability and digital health within the NHS -whilst learning the hard way about the difficulties in trying to employ any change within the current structure and organisation of our beloved healthcare system. This blog is a forum to not only discuss the changes the NHS faces but to also critically review whether these changes are in fact meeting the needs of our patients. The aim is to relay current digital news to clinicians, patients and industry experts in a short summary.



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ENT SESSION



AIMS

To develop consultation skills in assessing ENT conditions including dizziness and vertigo in primary care.

OBJECTIVES

- Know how to assess and manage common ENT problems in primary care
- Know about watchful waiting and use of delayed prescriptions
- Know how and when to refer to ENT secondary care for non-urgent referrals
- Know about ENT emergencies and how to refer
- Able to recognise the difference between vertigo and dizziness.
- Identify red flags and emergencies and refer appropriately.

SESSION CONTENT

- Common ear conditions including otitis media, otitis externa
- Assessment of hearing using Rinne and Weber and Romberg testing
- Identifying cholesteatomas, auricular haematoma, perforations, glue ear.
- Otitis media, otitis externa, assessment and treatment
- Treatment of ear perforations and other ear trauma
- Identifying common disorders including labyrinthitis, BPPV, Meniere's
- Foreign bodies and abnormalities in the nose
- Assessment of the throat and recognition of throat disorders
- Identification of tonsillitis, glandular fever and quinsy
- Vertigo and Dizziness

RECOMMENDED READING

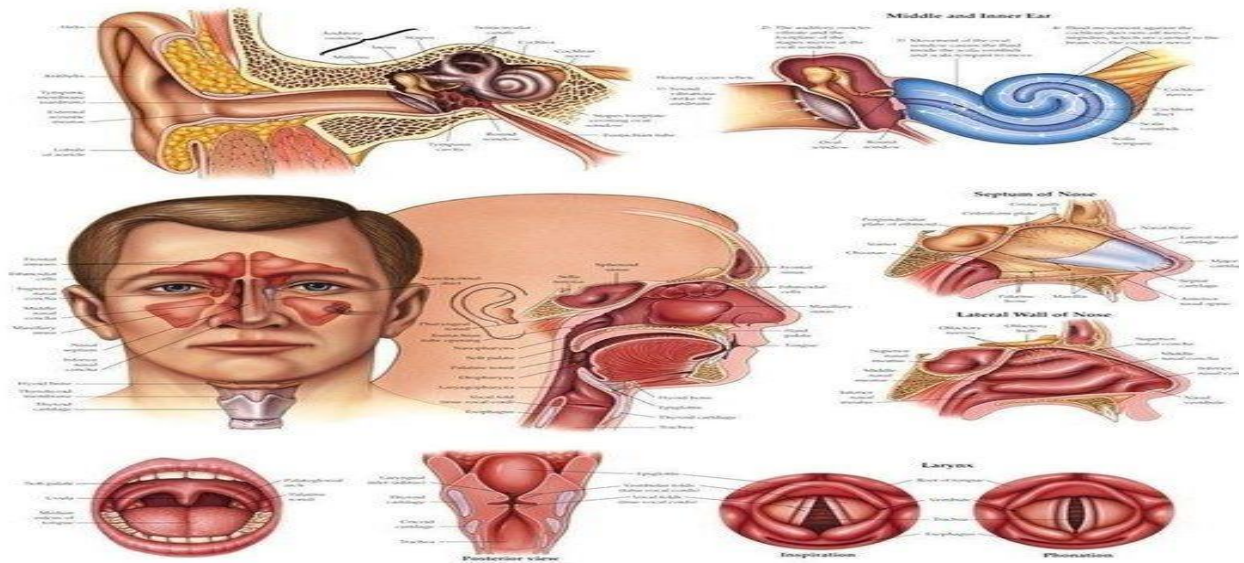
Cervoni, E and K. Leech (2017) ENT in Primary Care: A Concise Guide Paperback – Springer; 1st ed. 2017 edition (21 April 2017)

- **ISBN-10:** 3319519867
- **ISBN-13:** 978-3319519869

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EAR, NOSE & THROAT



RESOURCES

https://www.osmosis.org/learn/Anatomy_and_physiology_of_the_ear

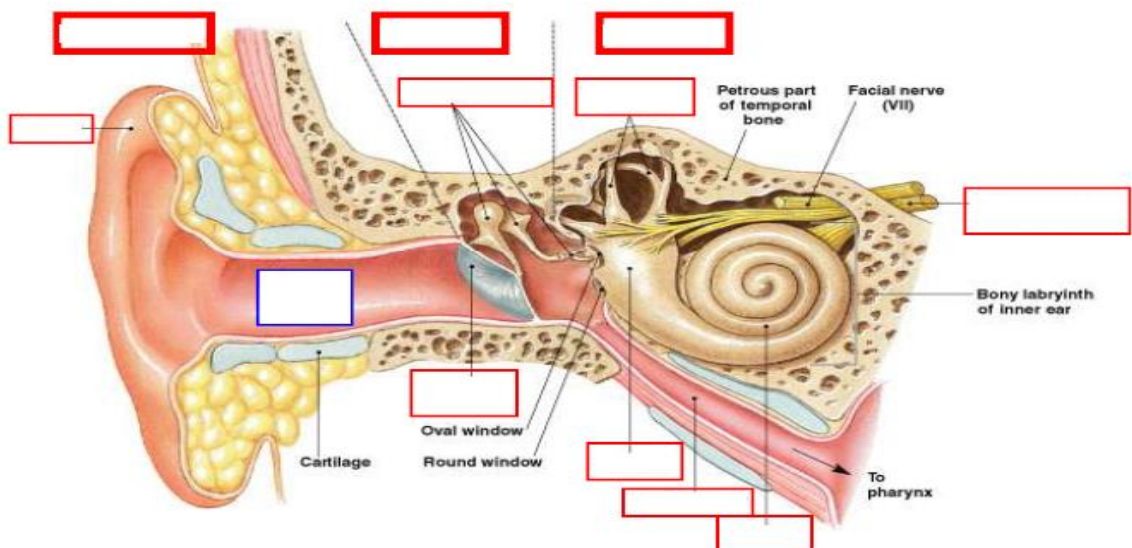
<https://www.youtube.com/watch?v=qYv9V2qna6l>

Otitis Media: <https://www.youtube.com/watch?v=TiSpifuQxXM>

Understanding ear pain https://www.youtube.com/watch?v=hW2_ZcofmNg

Eustachian Tube dysfunction <https://www.youtube.com/watch?v=H29571Ex-kY&vl=ru>

LABEL THE DIAGRAM



List the role of each structure

ENT CASE STUDY 1

A 24yr old presents with a blocked nose, is eating poorly and sleeping badly for the past 2 days. On examination he has a mild fever and looks run down. There are no signs of pneumonia or otitis media. A few of the other prisoners have coughs and colds at the moment.

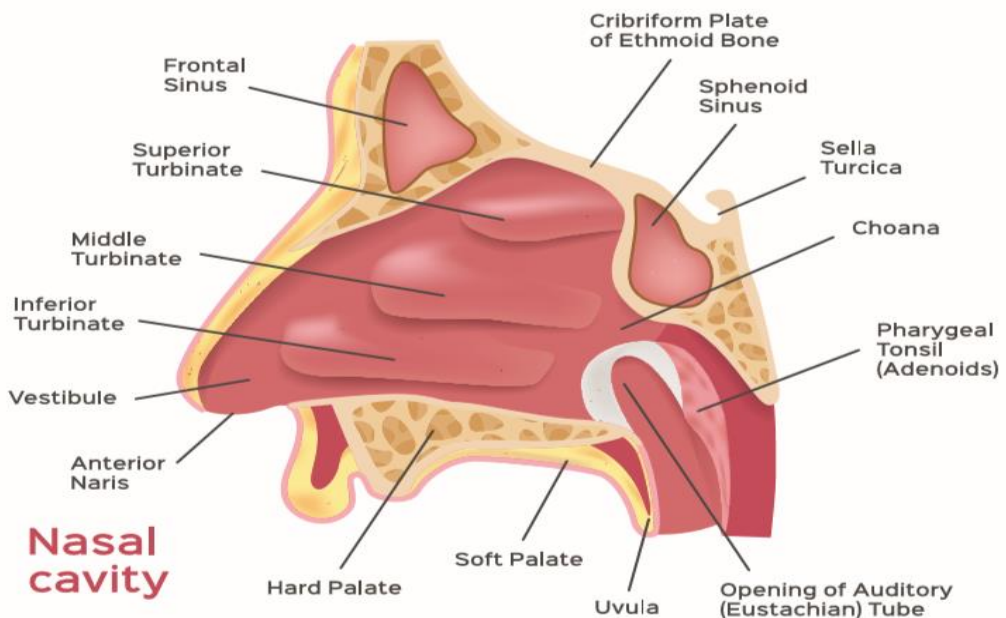
What is the likely diagnosis?

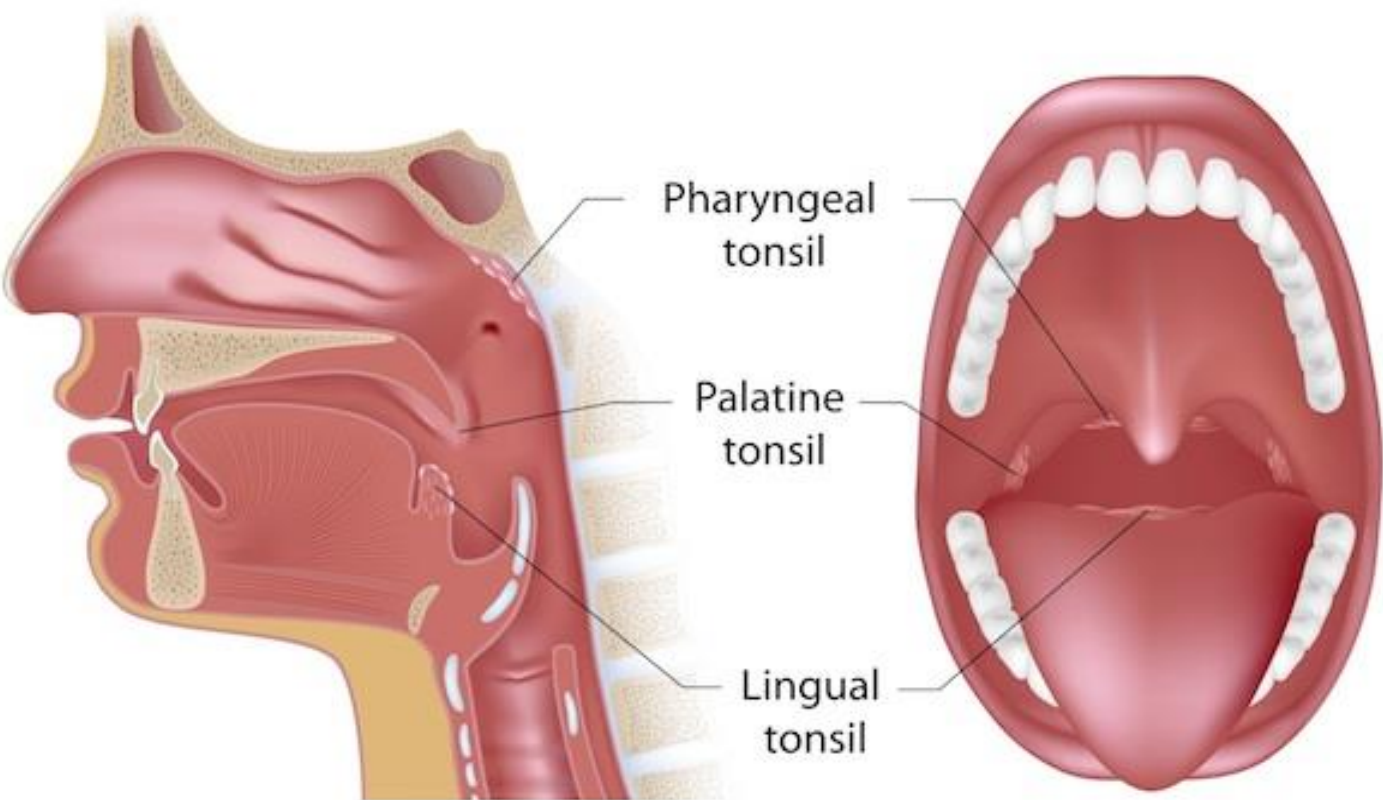
1. What is the probable cause?

2. What is the likely source of infection?

3. Should this patient be given antibiotics?

4. What management is needed?





ENT CASE STUDY 2



A 35yr old presents with fever and a very sore throat. On examination his tonsils are enlarged and swollen. The swelling is unilateral and there appears to be pus in the crypts. Uvula is not deviated. Throat is red. Patient able to eat and drink though complains that it is painful.

What is your diagnosis?

1. What is the cause?

2. Should the patient be given a course of antibiotics?

3. What are the serious complications if condition is bacterial?

4. What should you think if a patient with a sore throat and has difficulty swallowing and appears very ill.

Following a runny nose for 3 days, a patient develops a fever and severe pain in one ear. The next day he states he feels much better. Pus is seen in the external canal of that ear. Dipstick of pus shows protein. No history of injury or trauma. Denies foreign body insertion into ear. However, has mild conductive hearing loss now.

1. Why are the probable differentials for a severe ear ache.

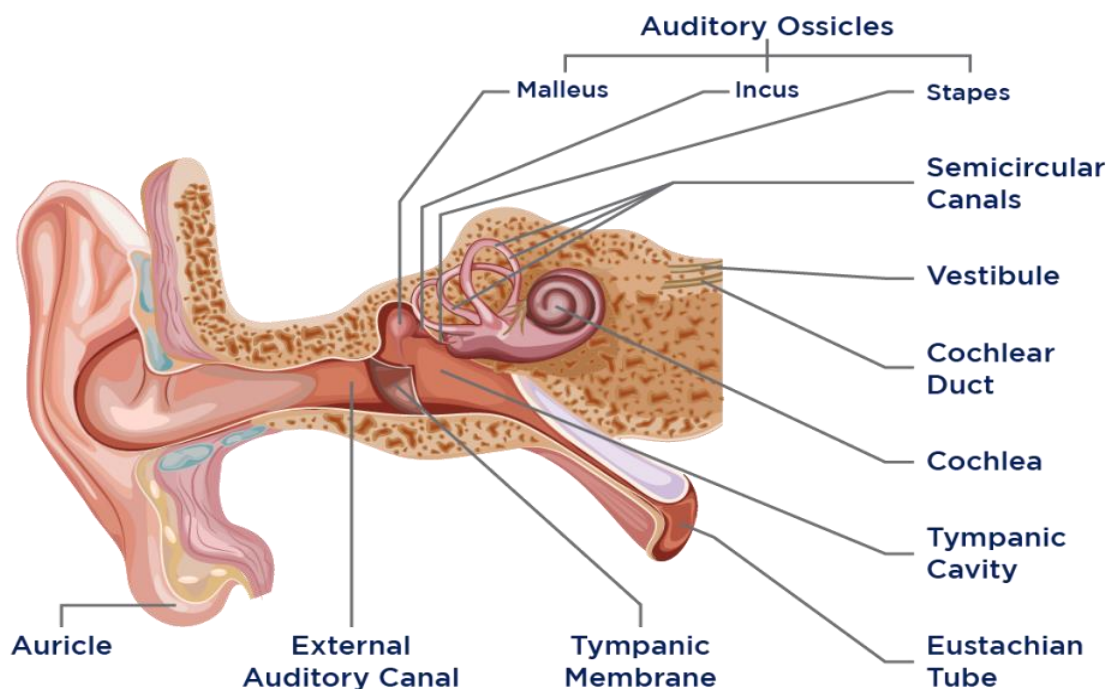
2. Why did the pain suddenly improve?

3. What treatment should he have been given?

4. What will happen to the hole in his ear drum?

5. What dangerous complication may follow suppurative otitis media?

6. What would a dipstick positive for glucose indicate?



MULTIPLE CHOICE QUESTIONS



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A previously healthy 5-year-old boy comes to the office because of fever for the past two days. His mother reports onset of vomiting and dysphagia earlier this morning but denies any diarrhea, rhinorrhea or upper respiratory symptoms. She notes that he just started kindergarten, and there have been a few other children out sick. His temperature is 38.8°C (101.9°F). His posterior oropharynx is erythematous with an inflamed uvula and enlarged symmetric masses. He also has enlarged, tender anterior cervical lymphadenopathy. He is quite resistant, constantly moving his head to avoid the examination.

Which of the following is the most appropriate treatment?

- a) Immediate surgical drainage by ENT
- b) Oral penicillin
- c) Rest and paracetamol
- d) Tonsillectomy
- e) IV antibiotics

A 5-year-old girl is brought to the surgery by her parents because of a sore throat and difficulty swallowing that began 3 days ago. Her temperature is 39.2 °C , pulse is 92/minute, respiration rate 22/minute, and blood pressure is 100/73 mm Hg. Her O₂ saturation of 98% on room air. Physical examination shows an erythematous oropharynx, bilateral tonsillar exudates, and cervical lymphadenopathy. During the examination, the patient resists moving her head and begins drooling.

Which of the following is the most likely diagnosis?

- a. Meningitis
- b. Croup
- c. Epiglottitis
- d. Peritonsillar abscess
- e. Retropharyngeal abscess

Your Answer _____

45-year-old man comes to the surgery because of the sudden onset of left facial paralysis. He has a history of high cholesterol and high blood pressure for past 8 years. He takes enalapril and hypertension. Physical examination shows drooping of the left side of the face, lack of wrinkling of the left forehead when asked to raise both eyebrows, and absence of left nasolabial fold.

Which of the following is the most likely diagnosis?

- a) Stroke
- b) Bell's Palsy
- c) Herpes Zoster Infection
- d) Haemorrhagic stroke
- e) Trigeminal neuralgia

Your Answer _____

22 Year old female presents with a history of vertigo, nausea and tinnitus for 2 days. Recent upper respiratory tract infection that was treated with anti virals. She has mild hearing loss and a positive Dix-Hallpike manoeuvre.

Based on the patient's history and symptoms, which of the following is the most likely diagnosis?

- a) BPPV
- b) Labyrinthitis
- c) Vestibular Neuritis
- d) Meniere's disease
- e) Tension type headache

Your Answer _____

35 year old female presents with a history of frequently biting her left cheek while chewing in the past 2 weeks. She also reports increasing asymmetry of her smile. She has no personal history of serious medical illness and takes no medications.

A tumour in which of the following glands best explains these findings?

- a) Pineal gland
- b) Lacrimal gland
- c) Parotid gland
- d) Sublingual gland
- e) Submandibular gland

Your Answer _____

A 53-year-old woman comes to the office because she thinks her hearing has worsened in her left ear. She has not noticed any discharge or felt any dizziness. Her temperature is 37.3 °C P: 72 RR:12 and BP : 132/78. She has conductive hearing loss in left ear. Physical examination shows no erythema or tenderness of the pinna or auricle. The ear examination shows a retracted tympanic membrane and squamous debris.

Which of the following is the most likely diagnosis?

- a) Mastoiditis
- b) Impacted wax
- c) Chronic Otitis Media
- d) Cholesteatoma
- e) Malignant Otitis Externa

Your Answer _____



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A 25yr old male comes to the out of hours clinic with an inability to open his mouth. He has pain and swelling in his neck which has worsened over the past day. He has bilateral swelling of the floor of the mouth involving his submandibular and sublingual glands. His molars on the right side are decayed and there is an abscess around the back molars. The skin of his upper neck is red but intact.

Which of the following is the most likely diagnosis?

- a) Periodontitis
- b) Sialolithiasis
- c) Kawasaki Disease
- d) Ludwig's Angina
- e) Steven Johnsons Syndrome

Your Answer _____



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A 65-year-old woman comes to the office because of problems with her hearing and 'ear fullness.' She reports that she has noticed a low pitch noise that others don't hear that sounds like being by the ocean, and a decrease in hearing in her left ear. She has also been having intermittent episodes of dizziness when she feels like the room is spinning.

Which of the following is the most likely diagnosis for this patient?

- a) Labyrinthitis
- b) Meniere's Disease
- c) BPPV
- d) Migraine with aura
- e) Multiple Sclerosis

Your Answer _____



NON-MEDICAL PRESCRIBER

GUIDELINES

NAME :

ENT Session

Aims

To develop skills in assessment and management of common ENT injuries and disorders presenting to primary care centers.

Objectives

- To assess and examine the ear
- Develop skills in identifying common ENT complaints
- Improve skills in assessment and examination using otoscope and tuning fork during assessment of ENT complaints. Identify red flags and emergencies and refer appropriately.

Session content

- Common ear conditions including otitis media, otitis externa
- Assessment of hearing using Rhine and Weber and Rhomberg testing
- Identifying cholesteatomas, auricular haematoma, perforations, glue ear.
- Otitis media, otitis externa, assessment and treatment
- Treatment of ear perforations and other ear trauma
- Identifying common disorders including labyrinthitis, BPPV, Menieres
- Management of Epistaxis
- Foreign bodies and abnormalities in the nose
- Assessment of the throat and recognition of throat disorders
- Identification of tonsillitis, glandular fever and quinsy

RECOMMENDED READING

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ENT History

Aims

To develop skills in assessment and management of common ENT injuries and disorders presenting to primary care centers.

Objectives

PC

Ear Discharge (Otorrhoea) Hearing impairment – Duration etc. Otagia (pain in the ear)

Itching Fever

HPC

Details about the complaints, enumerated in the CC.

i.e. All the above-mentioned symptoms in CC have to be analysed under the following heading.

e.g. Ear Discharge (Otorrhoea)

Onset –Sudden/Gradual

Duration – Continuous (Long duration or Short duration)/Intermittent

Type of Discharge – Waterydischarge/Serosanguinous/Mucoid/Purulent/Mucopurulent/Bloody

Odour – Odourless/Foul smelling (Fishy smell)

Quantity –Copious/Profuse/Scanty

e.g. Hearing Impairment (Deafness)

Onset –Sudden/Gradual Unilateral/Bilateral Progressive/Fluctuating etc.

e.g. Otagia (Pain in the Ear)

Onset –Sudden/Gradual

Duration – Short duration/Long duration Nature of the Pain – Dull/Sharp/Throbbing pain Relieving Factors & Aggravating Factors Radiating Pain & Referred Pain

(Otagia)

e.g. Tinnitus

Duration – Short/Long

Nature– Continuous/Intermittent and fluctuant/Pulsatile

Relieving factors/Aggravating factors



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PAST MEDICAL HISTORY

any previous surgery/operations e.g. time, place, what type of operation.

major illnesses or any current ongoing illness e.g. IHD, Heart attack, Asthma, HT, RHD, TB, Jaundice, diabetes. if diabetic, mention time of diagnosis, current medication, clinic check-up).

history of trauma or accidents.

MEDICATION

Always use generic name with dosage, timing & how long. i.e. now and past, prescribed and over-the-counter, allergies

ALLERGIES

Consider allergens

FAMILY HISTORY

Any familial disease running in families especially those relevant to the patient's chief complaint e.g. IHD, DM, HTN, Asthma.

SOCIAL HISTORY

Smoking: amount, duration & type Alcohol: amount, duration & type

Occupation, social & education background, ADL, social support, pets and hobbies.

SYSTEMIC ENQUIRY

General

Fever/rigors/night sweats, weight loss, fatigue, skin rashes/bruising

Neurological

General: fits/falls/LOC, headache, dizziness, vision/hearing, memory loss, neck stiffness/photophobia Motor: weakness/wasting, incontinence Sensory: pain, numbness, tingling



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- Ear: hearing loss, tinnitus, otalgia,
- Nose: rhinorrhoea, epistaxis,
- Throat: sore throat, odynophagia Cardiorespiratory: Chest pain, palpitations, SOB/wheeze, cough, sputum, leg swelling

Gastrointestinal: Weight: weight loss, appetite change. Work down body: dysphagia, nausea/vomiting, indigestion/heartburn, abdominal pain, bowel habit change, blood/mucus in stool

Urological: Storage: frequency, volume, urgency/nocturia, Infection: dysuria, haematuria, Prostatic/voiding (if male): hesitancy, poor flow/dribbling, feeling of incomplete emptying

Obstetric and Gynaecological: PV Bleeding: menorrhagia, inter-menstrual bleeding, post-coital, post-menopausal bleeding, PV Discharge, Pain: pelvic/dysmenorrhoea/dyspareunia, Pregnancy

Rheumatological: Joints: pain, stiffness, swelling, Work down body: skin (rashes, ulcers, Raynaud's), hair loss, eyes (redness, dryness), mouth (dryness), chest (breathlessness, SOB), GI (IBD symptoms), GU (discharge)

Orthopaedic: Joints/bone/soft tissue: pain, stiffness, swelling, movement restriction/ability to weight bear Mechanical symptoms: locking, giving way

Neurological symptoms: weakness, numbness, paraesthesia

Psychiatric: Schizophrenia, Depression screen: core (mood, anhedonia), biological (sleep, energy), future (hopelessness, suicidal thoughts) Other: memory loss, anxiety, insight RISK!!!: to self, to others



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EAR NOSE THROAT

General inspection Voice – weak/hoarse? Note any dyspnoea or stridor
Identify any scars on the neck – previous surgery (e.g. thyroidectomy) / radiotherapy
Observe for any obvious masses in the neck Inspect from the front and both sides

If a mid-line lump is present:

Ask the patient to take a sip of water, hold it in their mouth and swallow the water on command – thyroid masses and thyroglossal cysts will rise

Ask patient to protrude tongue – thyroglossal cyst will rise /and thyroid masses will **not**

Look for systemic signs that may relate to neck pathology:

Cachexia – malignancy

Exophthalmos / proptosis – Graves' disease

If there is a mid-line lump/scar or systemic signs suggestive of thyroid disease, ask the examiner if a full thyroid status examination should be performed.

Note: Sometimes asking the patient to slightly tilt their head forward can help to relax the neck muscles.

Lymph nodes can become enlarged for a number of reasons infection/malignancy

Lymph nodes are usually smooth, rubbery, with some mobility.

An enlarged, hard, irregular lymph node would be suggestive of malignancy.

Palpate the lymph nodes:

Supraclavicular – left sided enlarged lymph node – Virchow's node

Anterior cervical chain Posterior cervical chain Sub-mental

Sub-mandibular Occipital

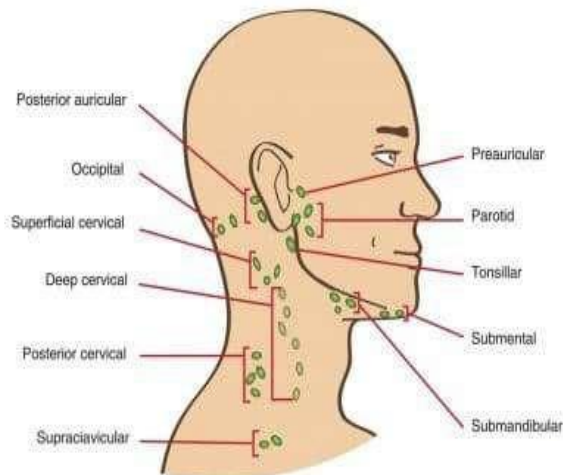
Pre-auricular Post-auricular Parotid

Note: You do not need to follow this specific routine but be clear in your own mind so that you cover all regions of the neck.



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LYMPH NODES OF THE HEAD AND NECK



Thyroid gland

Place the three middle fingers of each hand along the midline of the neck below the chin
Locate the upper edge of the thyroid cartilage (“Adam’s apple”) Move inferiorly until you reach the cricoid cartilage/ring

The first two rings of the trachea are located below the cricoid cartilage and the thyroid isthmus overlies this area

Palpate the thyroid isthmus using the pads of your fingers

Palpate each lobe of the thyroid in turn by moving your fingers out laterally from the isthmus

Ask the patient to swallow some water, whilst you feel for symmetrical elevation of the thyroid lobes (asymmetrical elevation may suggest a unilateral thyroid mass) Ask the patient to protrude their tongue once more (if a mass is a thyroglossal cyst, it will rise during tongue protrusion)

If a thyroid mass is present, feel above and below it. Assess retrosternal extension by percussion on the sternum and assess vascularity by auscultation.

Note: A normal thyroid will be impalpable

Submandibular gland

The submandibular glands can be bilaterally palpated inferior and posterior to the body of the mandible.



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Move inwards from the inferior border of the mandible near its angle with the patient's head tilted forwards.

Submandibular gland swellings are usually singular (whereas lymph node swelling often involves multiple nodes). Salivary duct calculi are relatively common and may be felt as a firm mass within the gland.

Assessing a neck lump

Size – width / height / depth

Location – can help narrow the differential – anterior triangle / posterior triangle / mid-line

Shape – well defined?

Consistency – smooth / rubbery / hard / nodular / irregular

Fluctuance – if fluctuant, this suggests it is a fluid-filled lesion – cyst Trans-

Illumination – suggests mass is fluid-filled – e.g. cystic hygroma Pulsatility– suggests vascular origin – e.g. carotid body tumour/aneurysm

Temperature – increased warmth may suggest inflammatory / infective cause

Overlying skin changes – erythema / ulceration / punctum

Relation to underlying/overlying tissue – tethering/mobility (ask to turn head)

Auscultation – to assess for bruits – e.g. carotid artery aneurysm

Suggest further assessment and investigations

Thyroid status examination

Examination of the lymphoreticular system

Examination of oral cavity, oropharynx and nasal cavity to exclude mucosal lesion

Ultrasound scan of lesion

Fine needle aspiration – to allow histological diagnosis

Routine bloods – FBC/U+E/CRP – may be useful if considering infection / malignancy

Early referral to ENT– if there is suspicion of malignancy / presence of red flags

Differential diagnosis of a neck lump



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Red flags

CAN U ADD REDFLAGS. PUT THREE FLAGS



The following features are red flags that should raise your suspicion of malignancy in the context of a neck lump:

Hard, fixed mass

Patient is over 35 years old

Presence of mucosal lesion in the head or neck A history of persistent hoarseness or dysphagia Trismus

Ear pain (referred from tongue base)

Differential diagnosis

The location of the lump within the neck can sometimes be useful in narrowing the differential diagnosis. However, it should be noted that this is not an absolute rule, with further investigations required to confirm a particular diagnosis.

Examination of the neck

Lymph nodes – often multiple, may suggest infection or malignancy

Lipoma – painless/smooth mass

Dermoid cyst – cysts formed along the lines of embryological fusion, painless swellings that do not move with tongue protrusion (more common in children and young adults).

Sebaceous cyst

Thyroid gland – located below thyroid cartilage

Thyroid nodule – can be single or multiple – adenomas/cysts/malignancy

Thyroglossal cysts – painless/smooth /cystic – rises on tongue protrusion

Laryngocele – reducible tense mass – mass returns on sneezing or nose blowing

Anterior triangle – area of the neck anterior to sternocleidomastoid



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Lymph nodes

Lipoma – painless/smooth mass

THESE MARGINS ARE NOT
THE SAME AS BELOW. IT
SHOULD ALL BE ALIGNED

Sebaceous cyst

Salivary gland swelling – doesn't move on swallowing

Branchial cyst – present from birth – noticed in early adulthood when it manifests as an infected neck lump

Carotid artery aneurysm – pulsatile mass – bruit present on auscultation

Carotid body tumour – transmits pulsation – can be moved side to side but not up and down (due to carotid sheath)

Laryngocele – reducible tense mass – mass returns on sneezing or nose blowing

Posterior triangle – area of the neck posterior to sternocleidomastoid

Lymph nodes – often multiple – can be rubbery or hard depending on aetiology

Lipoma – painless/smooth mass

Sebaceous cyst

Subclavian artery aneurysm – pulsatile mass

Pharyngeal pouch – may present as a reducible mass

Cystic hygroma – most commonly on left side – fluctuant mass – trans illuminates

Branchial cyst

Tail of parotid mass – could be a pleomorphic adenoma or malignancy

Note: Lymph nodes in any of any of these regions can also be caused by lymphoma and tuberculosis, so a comprehensive history is key to provide a clinical context for your findings.

EAR EXAMINATION

Explain examination

“Today I'd like to examine your ears, this will involve me having a look inside your ears using a special piece of equipment known as an otoscope. In addition, I'll also be assessing your hearing using a number of different tests “

“Does everything I've said make sense? “Are you happy for me to go ahead? “

Gain consent



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External Ear Examination

Pre auricular region: Sinus, swelling, cyst, accessory tragus, lymph nodes

Pinna: Size, shape and position

Post auricular region: Swelling, scar, battle's sign, Reisinger's sign, 3-point tenderness test

External auditory canal: Upwards, backwards, outwards

Tympanic membrane

(Describe & identify normal anatomical landmarks) Colour – Pink/Rising sun/Red/Bluish(Blood accumulation)

Cone of light,

Four quadrants, umbo,

Handle & lateral process of malleus, Anterior & posterior malleolar folds,

Pars tensa – Retraction, Granulation, Blebs, Sclerotic patches, Perforation (type, margins, location, size, shape, edge, polyps etc.)

Pars flaccida, Bony annulus, Incudostapedial joint

Fistula test

Mastoid tenderness

Facial nerve

Tuning fork test (Rinne's, Weber's, Air bone conduction)

Gross hearing assessment

Ask the patient if they have noticed any change in their hearing recently.

Explain that you're going to say 3 words or 3 numbers and you'd like them to repeat them back to you (choose two-syllable words or bi-digit numbers).

1. Approximately 60cm from the ear, whisper a number or word.
2. Mask the ear not being tested by rubbing the tragus. Do not place your arm across the face of the patient when rubbing the tragus, it is far nicer to occlude the ear from behind the head. If possible, shield the patient's eyes to prevent any visual stimulus.
3. Ask the patient to repeat the number or word back to you. If they get 2/3 correct, then their hearing level is 12db or better. If there is no response use a conversational voice (48db or worse) or loud voice (76db or worse).
4. If there is no response you can move closer and repeat the test at 15cm. Here the thresholds are 34db for a whisper and 56db for a conversational voice.
5. Assess the other ear in the same way. Explain to the patient that you are going to test their hearing using a tuning fork.



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WEBER TEST

Tap a 512Hz tuning fork and place in the midline of the forehead. The tuning fork should be set in motion by striking it on your knee (not the patient's knee or a table). Ask the patient "Where do you hear the sound?"

RINNE TEST

spelt RHINNE

Normal – sound is heard equally in both ears

Sensorineural deafness – sound is heard louder on the side of the intact ear

Conductive deafness – sound is heard louder on the side of the affected ear

We use 512Hz as this gives the best balance between time of decay and tactile vibration. Ideally, you want a fork that has a long period of decay and cannot be detected by vibration sensation.

1. Place a vibrating 512 Hz tuning fork firmly on the mastoid process (apply pressure to the opposite side of the head to make sure the contact is firm). This tests bone conduction.
2. Next, move the tuning fork in front of the external auditory meatus (while still vibrating) to test air conduction. Ask the patient which they heard loudest and take note of the result.
3. Ask the patient if the sound is louder in front of the ear (external auditory meatus) or behind it (mastoid process)

Summary of Rinne's test results:

Normal – Air conduction > Bone conduction (Rinne's positive)

Sensorineural deafness – Air conduction > Bone conduction (both air and bone conduction reduced equally)

Conductive deafness – Bone conduction > Air conduction (Rinne's negative)

Ask the patient if they have any ear discomfort (if so examine the non-painful side first).

Ask the patient which is their "better" ear. Always examine the better ear first to act as a marker for comparison.



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External ear exam

OTOSCOPY

Test your otoscope to check that it is working and commence inspection.

Pinnae

Inspect the pinnae:

Compare symmetry with the other side Deformity Ear piercings

Signs of active infection

Scars

Inspect behind the pinnae (mastoid):

Skin changes, Erythema, Scars or previous surgery Ask about any pain in this region

Pre-auricular area (in front of the ear):

Pits, Sinuses, Fistulae

Conchal bowl – look for signs of active infection

External canal and tympanic membrane

remove all numbering

Ensure the light is working on the otoscope and apply a sterile speculum (the largest that will comfortably fit in the external auditory meatus).

Make sure to compare both ears.

Pull the pinna upwards and backwards with your other hand to straighten the external auditory meatus.

Position otoscope at the external auditory meatus: Otoscope should be held in your right hand for the patient's right ear and vice versa

Hold the otoscope like a pencil and rest your hand against the patient's cheek for stability. This will also stop damage to the ear if there is any sudden movement.

3. Advance the otoscope under direct vision. Be gentle with the otoscope and ensure movements are slow and considered otherwise you will cause the patient pain.

4. Look for any wax, swelling, erythema, discharge, foreign bodies or bony swellings.

5. Examine the tympanic membrane (think of it as having 4 quadrants which you should systematically examine to avoid missing pathology):

Look for any wax, swelling, erythema, discharge, foreign bodies or bony swellings.



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Tympanic membrane

7. Examine the tympanic membrane (think of it as having 4 quadrants which you should systematically examine to avoid missing pathology):

remove the number 7

Colour – pearly grey and translucent (normal) / erythematous (inflammation)

Erythema or bulging of the membrane – inspect for a fluid level e.g. otitis media

Perforation of the membrane – note the size of the perforation

Light reflex – absence/distortion may indicate ↑ inner ear pressure e.g. otitis media

Scarring of the membrane – tympanosclerosis – can result in significant hearing loss

Cholesteatoma – around the superior part of the eardrum

Withdraw the otoscope carefully

Discard the otoscope speculum into a clinical waste in the person that Meniere's disease is a long-term condition, but vertigo usually significantly improves with treatment.

Conditions

MENIERES DISEASE

Advise that an acute attack of vertigo will normally settle within 24 hours in most people. If there is no improvement after 5–7 days, or there is any deterioration in symptoms, ask the person to return to exclude an alternative diagnosis.

Advice

Advise people experiencing sudden attacks of vertigo to:

Keep medication readily accessible.

Consider the risks before undertaking activities such as operating dangerous machinery, using ladders or scaffolding, or going swimming.

Advise the person not to drive when they are dizzy, or if they might experience an episode of vertigo while driving.

The Driver and Vehicle Licensing Agency (DVLA) states that people with 'liability to sudden and unprovoked or unprecipitated episodes of disabling dizziness' should stop driving and inform the DVLA. For more information, see the DVLA publication Assessing fitness to drive: a guide for medical professionals.



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Symptomatic treatment for acute attack **THIS SHOULD BE A HEADING**

If symptoms are severe, hospital admission may be required for intravenous (IV) labyrinthine sedatives and fluids to maintain hydration, and nutrition.

To rapidly relieve (severe) nausea or vomiting associated with Meniere's disease, consider administration of buccal prochlorperazine, or a deep intramuscular injection of prochlorperazine or cyclizine.

To help alleviate nausea, vomiting, and vertigo in other people with Meniere's disease, consider prescribing a short course (7 days, 14 days if required previously) of prochlorperazine, or an antihistamine (for example cinnarizine, cyclizine, or promethazine teoclate).

The person has had previous attacks of Meniere's disease and responded well to one of these drugs, consider trying that drug as first-line treatment. Always consider the person's preferences when choosing the drug and delivery route. For more information, see Prescribing information. **REMOVE THIS LAST SENTENCE**

If the person's symptoms deteriorate or do not improve after 5-7 days, reassess to exclude an alternative diagnosis.

TREATMENT

CAN U PUT THIS IN DIFFERENT COLOURS SO THAT ITS EASIER TO VISUALISE

Prescribe promethazine teoclate 25 mg orally at night. The dose may be increased to 100 mg daily.

If symptoms are severe, hospital admission may be required for intravenous (IV) labyrinthine sedatives and fluids to maintain hydration, and nutrition.

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If the person's symptoms deteriorate or do not improve after 5-7 days, reassess to exclude an alternative diagnosis.



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HEALTHCARE TRAINING

EAR WAX

If earwax is totally occluding the ear canal and any of the following are present: Hearing loss, Earache, Tinnitus, Vertigo, Cough suspected to be due to earwax

If the tympanic membrane is obscured by wax but needs to be viewed to establish a diagnosis.

If the person wears a hearing aid, wax is present and an impression needs to be taken of the ear canal for a mould, or if wax is causing the hearing aid to whistle. If there is hearing loss and the tympanic membrane cannot be seen, then the wax should be removed as the majority of causes of conductive deafness are diagnosed by examining the tympanic membrane [Browning, 1994] Once the wax has been removed if hearing does not improve then alternative causes should be considered [Browning, 1994]. Visualisation of the tympanic membrane may identify causes of conductive deafness.

Wax may need to be removed in order to take an impression of the ear canal, for people who wear hearing aids. Excess wax may cause the hearing aid to whistle.

Explain that removal of earwax may not necessarily relieve the symptoms (for example hearing loss may be a sensorineural loss and not due to impacted wax).

How to remove earwax

THIS LOOKS VERY BORING TO READ.

Prescribe ear drops for 3–5 days initially, to soften wax and aid removal.

Olive oil, or almond oil drops can be used 3-4 times daily for 3-5 days (do not prescribe almond oil ear drops to anyone who is allergic to almonds).

Sodium bicarbonate 5%, sodium chloride 0.9%,

Sodium chloride 0.9% is not available as a proprietary ear drop product. However, sodium chloride 0.9% nasal drops can be prescribed for use in the ear (off-label use).

Do not prescribe drops if you suspect the person has a perforated tympanic membrane.

Warn the person that instilling ear drops may cause transient hearing loss, discomfort, dizziness and irritation of the skin. If symptoms persist, consider ear irrigation, providing that there are no contraindications. If irrigation is unsuccessful, there are three options:

Advise the person to use ear drops for a further 3–5 days and then return for further irrigation.

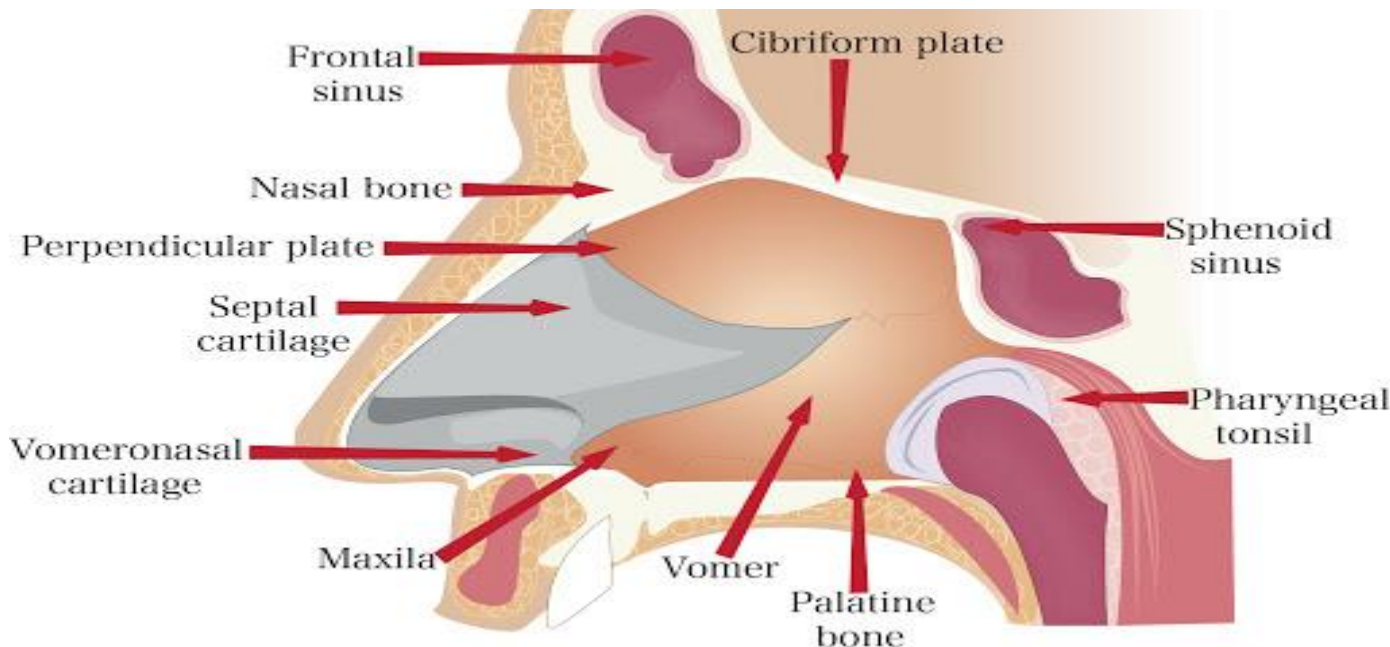
Instil water into the ear. After 15 minutes irrigate the ear again.

Refer to an Ear Nose and Throat specialist for removal of wax.

Advise anyone who has had earwax removed to return if they develop otalgia, or significant itching of the ear, discharge from the ear (otorrhoea), or swelling of the external auditory meatus, as this may indicate infection.



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HEALTHCARE TRAINING



NOSE INSPECTION (EXTERNAL)

Look at the external surface of the nose noting:

Skin changes – e.g. skin lesions / erythema / rash around the face / scars

Deformity – inspect the nose from the front, side and standing behind the patient

Note any deviation in the nasal bones or cartilage (this is best done by standing behind the patient with their head tilted slightly back)

Examination

**THESE NOSE SLIDES SHOULD COME
JUST BEFORE THE FLOW CHARTS**

1. Sit facing the patient with your knees together and to one side of the patient's knees. It is not pleasant for the patient to be "straddled."

Ask the patient to look forward, keeping their head in the neutral position.

3. Carefully elevate the tip of the nose with your thumb, so that the nasal cavity becomes visible. Use pen torch or otoscope as a light source to externally illuminate the cavity (elevating the tip of the nose will also assess for columellar dislocation).

Inspect the nasal mucosa for any abnormalities (including the septum).

Inspect and compare the nasal cavities alignment (note any septal deviation).



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Further assessment

Further inspection can be done using an otoscope with a large speculum attached (inserting only the very tip into the nose) or using Thulium's speculum which essentially just widens the nasal cavity to allow you to peer in using a Lightsource.

using a thudicum speculum

The correct method for using the Thudicum's speculum is slightly counter-intuitive, however, it does allow the best visualisation of the nasal mucosa. Insert your index finger into the bend of the speculum and support it above with the thumb. The middle and ring fingers are used to manipulate the prongs of the speculum. You will be aiming to look at the gap between these two fingers.

what to look for

Whichever method you use, you should inspect the various elements visible:

Nasal vestibule – skin changes (e.g. ulceration) / swelling / asymmetry

Nasal septum – polyps / deviation / perforation / areas of cautery

Inferior turbinate's – asymmetry / inflammation / polyps

The turbinates are projections of bone, covered in nasal mucosa, that control airflow through the nose, exposing it to a large surface area of mucosa which both warms and cleans the air prior to it arriving at the lungs.

Nasal Palpation

Nasal bones and cartilage

Palpate the nasal bones assessing:

Alignment

Tenderness or irregularity (if suspicious of fracture in trauma)

Palpate the nasal cartilage assessing:

Alignment Tenderness

Palpate the infraorbital ridges and assess eye movement if there is a history of trauma to screen for an orbital blowout fracture. The classical signs are of infraorbital tenderness, epistaxis and restricted eye movement (usually on vertical gaze).



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HEALTHCARE TRAINING

DEFINITIONS

A cholesteatoma is an abnormal sac of keratinizing squamous epithelium and accumulation of keratin within the middle ear or mastoid air cell spaces that can become infected and also erode neighbouring structures.

EARLY SYMPTOMS

Cholesteatoma may be asymptomatic in its early stages. Cholesteatoma most commonly presents with a persistent or recurrent discharge from the ear that is often foul smelling. Additionally, a conductive hearing loss may occur (although it is commonly not noticed) as well as ear discomfort (although this is usually mild and not a prominent feature of the condition).

Rarely with progression of the disease vertigo, sensorineural hearing loss, facial nerve palsy, meningitis or intracranial abscess may develop.

DIAGNOSIS

The diagnosis requires clear visualisation of the tympanic membrane to identify the characteristic appearance of a cholesteatoma. If the tympanic membrane can be seen, a cholesteatoma should be suspected if there is:

A deep retraction pocket in the tympanic membrane, with or without granulation tissue and skin debris.

A crust-like lesion, often yellow or brown in colour, usually in the upper part of the tympanic membrane, often surrounded by pus, and sometimes associated with a perforation of the adjacent tympanic membrane.

If the tympanic membrane cannot be clearly seen because the external auditory canal is occluded by pus, the person should be treated for presumed infection and brought back for re-examination after treatment has been completed. The person should either receive treatment for:

Otitis externa, particularly if there are symptoms and signs of inflammation of the external auditory canal, or

Acute otitis media if there has been an acute onset of pain associated with the purulent discharge. If the tympanic membrane cannot be clearly seen after treatment, the person should be referred to an Ear, Nose, and Throat specialist. Referral should not be delayed for repeated courses of treatment if the discharge persists.

WHEN TO ADMIT

Emergency admission should be arranged for people with a suspected cholesteatoma associated with a serious complication of the condition including:

A facial nerve palsy or vertigo.

Other neurological symptoms (including pain) or signs that could be associated with the development of an intracranial abscess or meningitis.

Routine referral to an Ear, Nose, and Throat specialist should be arranged for people with a suspected cholesteatoma who do not have a serious complication.



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Nasal Airflow Assessment

There are two common methods via which to formally assess nasal airflow shown below.

Method one

Place your thumb over the nostril not being assessed to occlude airflow.

Ask the patient to breathe in through their nose and note the degree of airflow.

Repeat assessment on the other nostril, noting any difference in apparent airflow.

Reduced airflow through a particular nostril may indicate the presence of something blocking that air passage, such as a polyp, deviated nasal septum or foreign body.

The absence of misting or a disparity in the amount of misting between the nostrils may suggest unequal or absent airflow through a particular nostril.

ALLERGIC RHINITIS

CAN U PUT THIS IN BULLET POINTS

Treatment for occasional symptoms, prescribe an antihistamine first line.

For people with allergic conjunctivitis, children aged 2–5 years of age, and people who prefer oral treatment, prescribe an oral antihistamine (such as cetirizine or loratadine).

For all other people, prescribe intranasal azelastine first line. Explain the importance of a good technique.

For people who want preventive treatment to control more frequent or persistent symptoms:

Advise the person to avoid the causative allergen, if possible.

If allergen avoidance is inadequate or not possible, prescribe drug treatment. If nasal drops or a spray is prescribed, explain the importance of a good technique.

If the predominant symptom is nasal blockage, or nasal polyps are present, prescribe an intranasal corticosteroid.



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SYMPTOM : SNEEZING OR DISCHARGE

If the predominant symptom is sneezing or nasal discharge, prescribe an oral antihistamine (if oral treatment is preferred or allergic conjunctivitis is present) or an intranasal corticosteroid(if a more effective treatment is required).

PREGNANT OR BREASTFEEDING

For pregnant or breastfeeding women, prescribe an intranasal corticosteroid. If this is not tolerated or additional treatment is required, prescribe an oral antihistamine (loratadine).

Intranasal sodium cromoglicate and nasal douching (with normal saline) can be used as alternative or add-on treatments.

For people who require rapid relief of symptoms while awaiting preventive treatment to take effect: **NASAL CONGESTION**

If nasal congestion is a problem, prescribe an intranasal corticosteroid for up to 7days. If the person is already using an intranasal corticosteroid, add an oral antihistamine. If symptoms are severe and/or impairing quality of life, prescribe a 5–10- day course of prednisolone: 20–40 mg a day in adults, 10 mg a day in children. Advise people to reconsult after 2–4 weeks if symptoms remain inadequately controlled.

Advantages and disadvantages of first-line drug treatments for allergic rhinitis

THE BITS IN RED SHOULD BE HEADINGS

Table 1 shows some of the advantages and disadvantages of the different first-line drug treatments for allergic rhinitis.

	Relative efficiency	Relative efficiency	Onset of action
antihistamine	allergic rhinitis	Allergic conjunctives	++ ++ Within 1hour Once-daily options available

Table 1



Not suitable for children < 5 years of age. † Maximum efficacy takes days or weeks to develop [ARIA, 2010]

Advise allergen avoidance for people with: Suspected pollen allergy.

House dust mite allergy — when symptoms are inadequately controlled with maximal preventive drug treatment and the responsible allergen has been confirmed by allergy testing.

Suspected animal allergy — after confirming the responsible allergen by allergen testing.

Occupational Allergies

CHOLESTEATOMA **remove this word as not related. heading should say ADVICE**

For people with grass pollen allergy, advise: Against walking in grassy, open spaces, particularly during the early morning, evening, and night, when pollen counts are at their highest.

Keeping windows shut in cars and buildings.

Changing car pollen filters with each service, if these are fitted.

For people with confirmed house dust mite allergy inadequately controlled by drug treatment, advise:

Fitting mattresses and pillows with house dust mite impermeable covers.

Using synthetic pillows and acrylic duvets, and keeping furry toys off the bed.

Washing all bedding and furry toys at least once a week at high temperatures.

Choosing wooden or hard floor surfaces instead of carpets, if possible.

Fitting blinds that can be wiped clean instead of curtains. Surfaces should be wiped regularly with clean, damp cloth.

For people with confirmed animal allergy, advise that ideally the animal should not be allowed in the house. When this is not acceptable, advise restricting their presence to the kitchen.

For people with occupational allergy, advise eliminating or reducing exposure to allergens, for example by using latex free gloves, using a dust mask, and ensuring that their environment is adequately ventilated.



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REFERRAL

HIGHLIGHT THE HEADINGS

Refer as an otologic emergency people with: THIS ONE

Sudden onset pulsatile tinnitus.

Tinnitus in association with significant neurological symptoms and/or signs (for example facial weakness).

Tinnitus associated with severe vertigo.

Tinnitus secondary to head trauma.

Tinnitus associated with unexplained sudden hearing loss.

Refer less urgently to an ear, nose, and throat specialist THIS ONE
(using clinical judgement):

Tinnitus of uncertain cause. This includes people with tinnitus that is not associated with hearing loss, ear pain, drainage or malodour, vestibular symptoms or facial weakness and people with hearing loss that cannot clearly be distinguished as either sensorineural or conductive.

Tinnitus that is causing distress despite primary care management. Refer all people with tinnitus for an audiological assessment, particularly if it is persistent (lasting 6 months or more).

Refer urgently to an ear, nose, and throat specialist THIS ONE
people with: Objective or pulsatile tinnitus.

Unilateral tinnitus.

Tinnitus associated with unilateral or asymmetric hearing loss.

Tinnitus associated with persistent otalgia or otorrhoea that doesn't resolve with routine treatment.

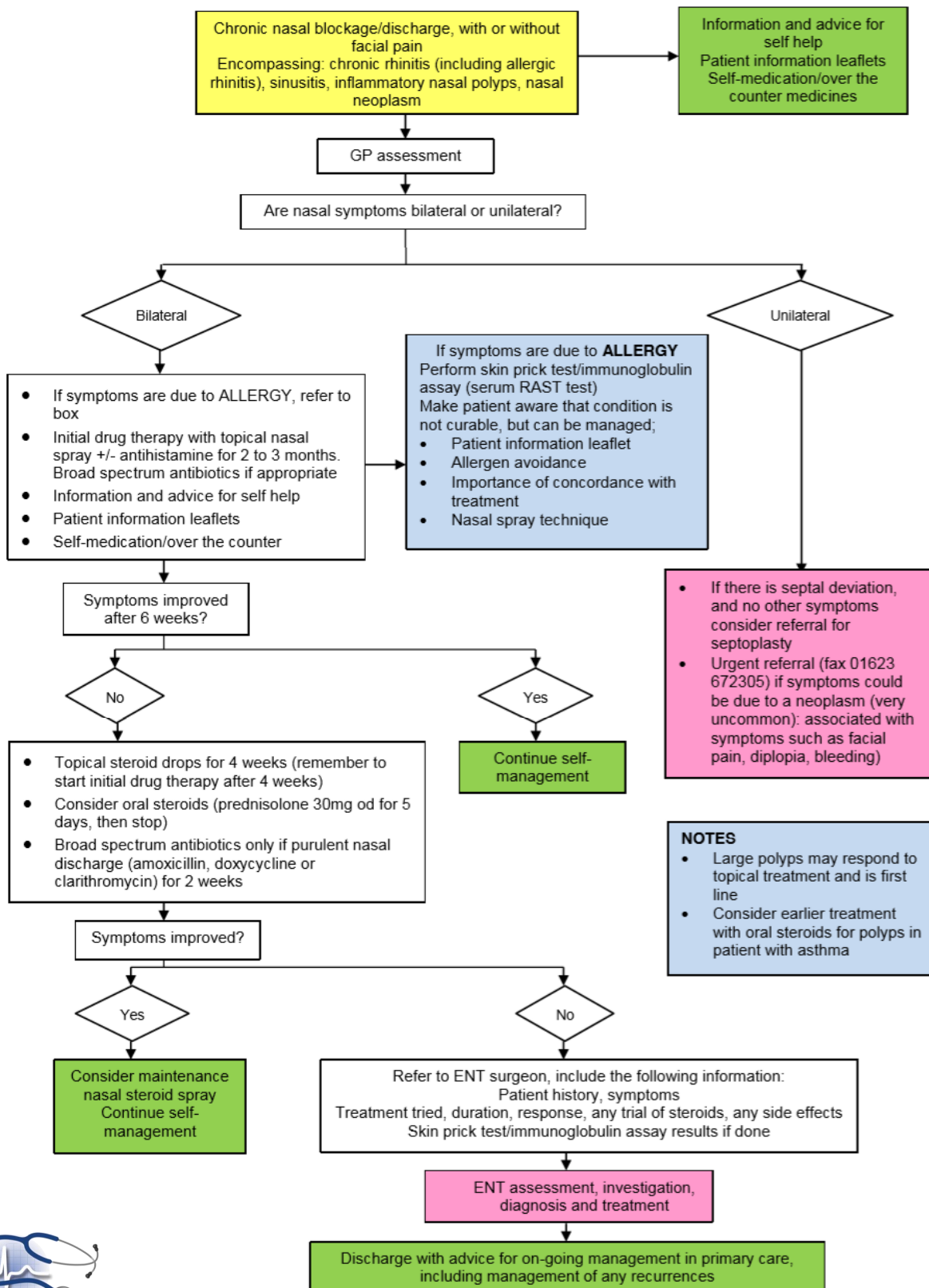
Tinnitus with vestibular symptoms (for example dizziness, vertigo).

THE TREATMENT OPTIONS AND REFERENCE PAGES ARE
MISSING.
REFERNECES SHOULD GO AT THE END.

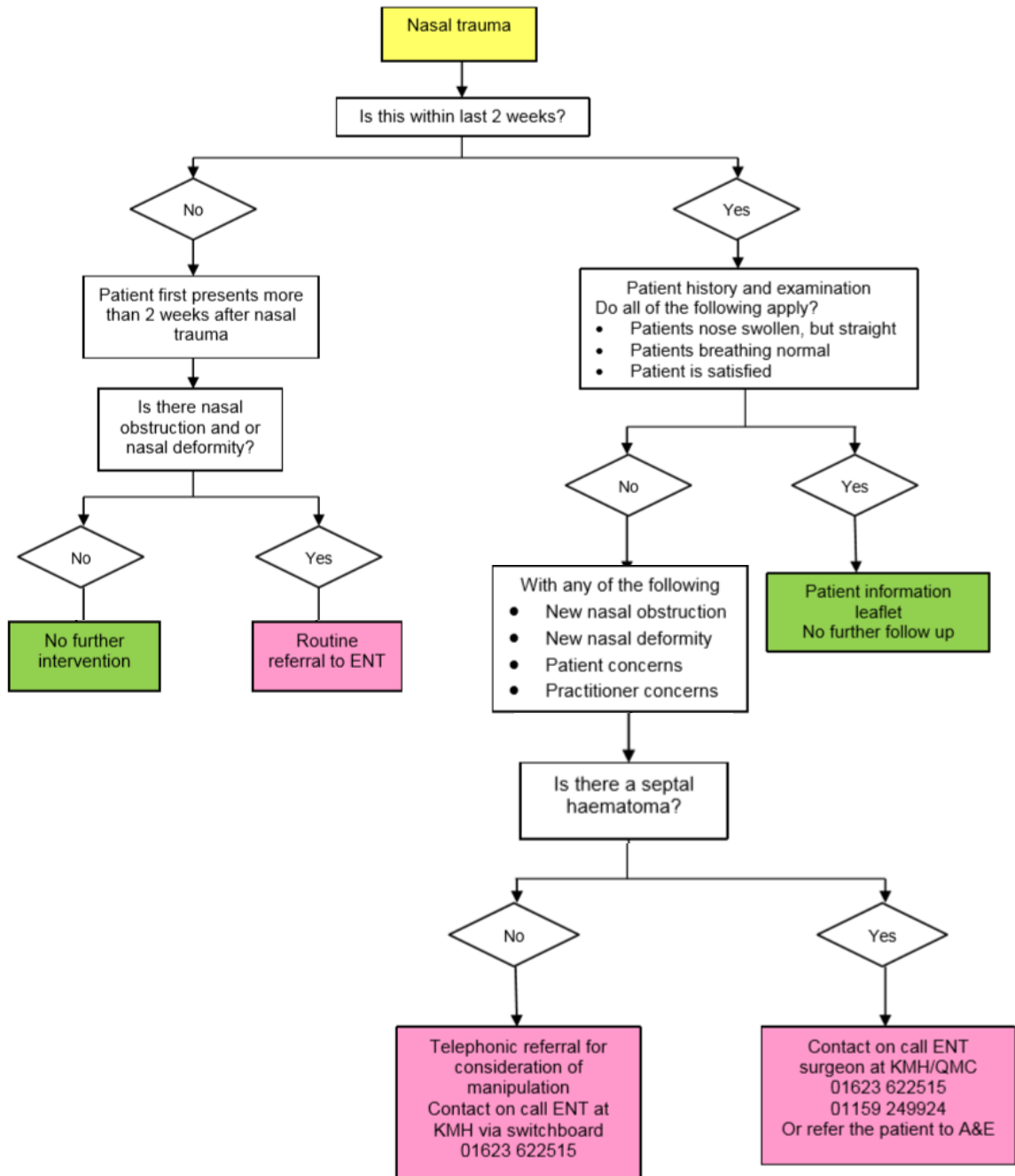


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Nasal Blockage / Discharge +/- Facial Pain in Adults

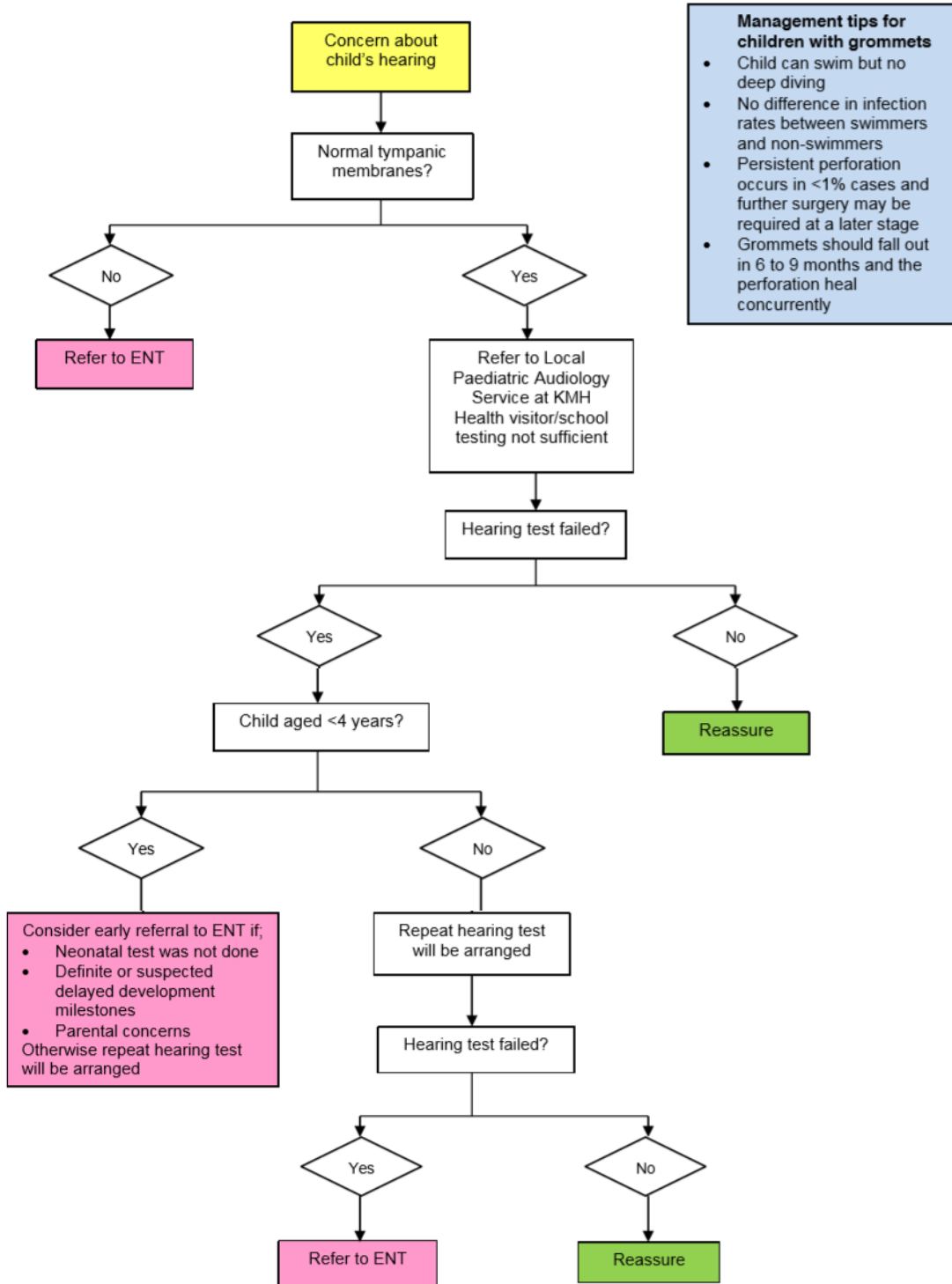


Nasal Trauma (Adults)

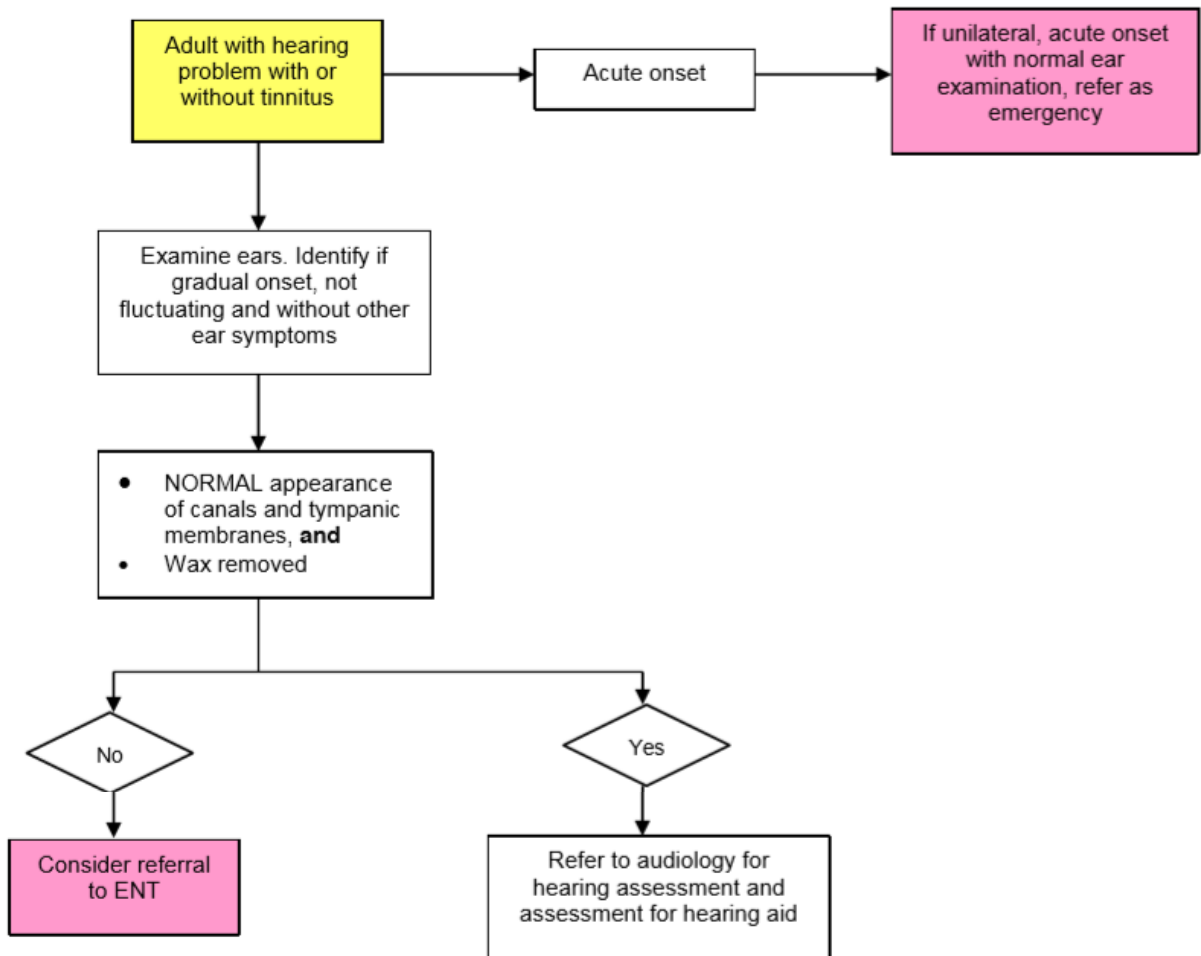


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Hearing Problems in Children



Hearing Problems in Adults



Criteria for direct referral to audiology

- Patients with non-fluctuating hearing loss of gradual onset
- Reassessment of hearing aid
- Patient known to the service
- Any ear wax has been removed
- NORMAL appearance of canals and tympanic membranes, **and**
- Any pre-existing ear condition has been investigated by ENT surgeon or audiology physician



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Infectious Sore Throat in Adults

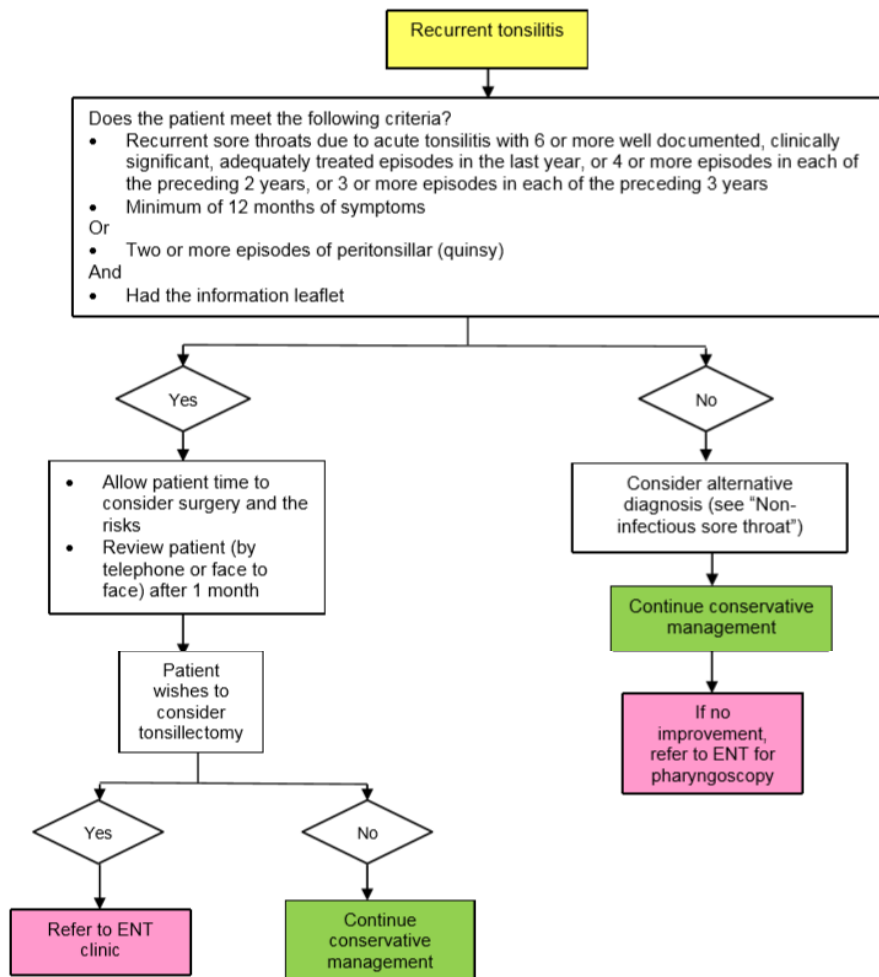
Acute pharyngitis
and simple tonsillitis

Routine
management

Notes

If antibiotics are indicated:
Phenoxymethylpenicillin 500mg
qds first line if not penicillin
allergic, not amoxycillin

Infectious Sore Throat in Adults

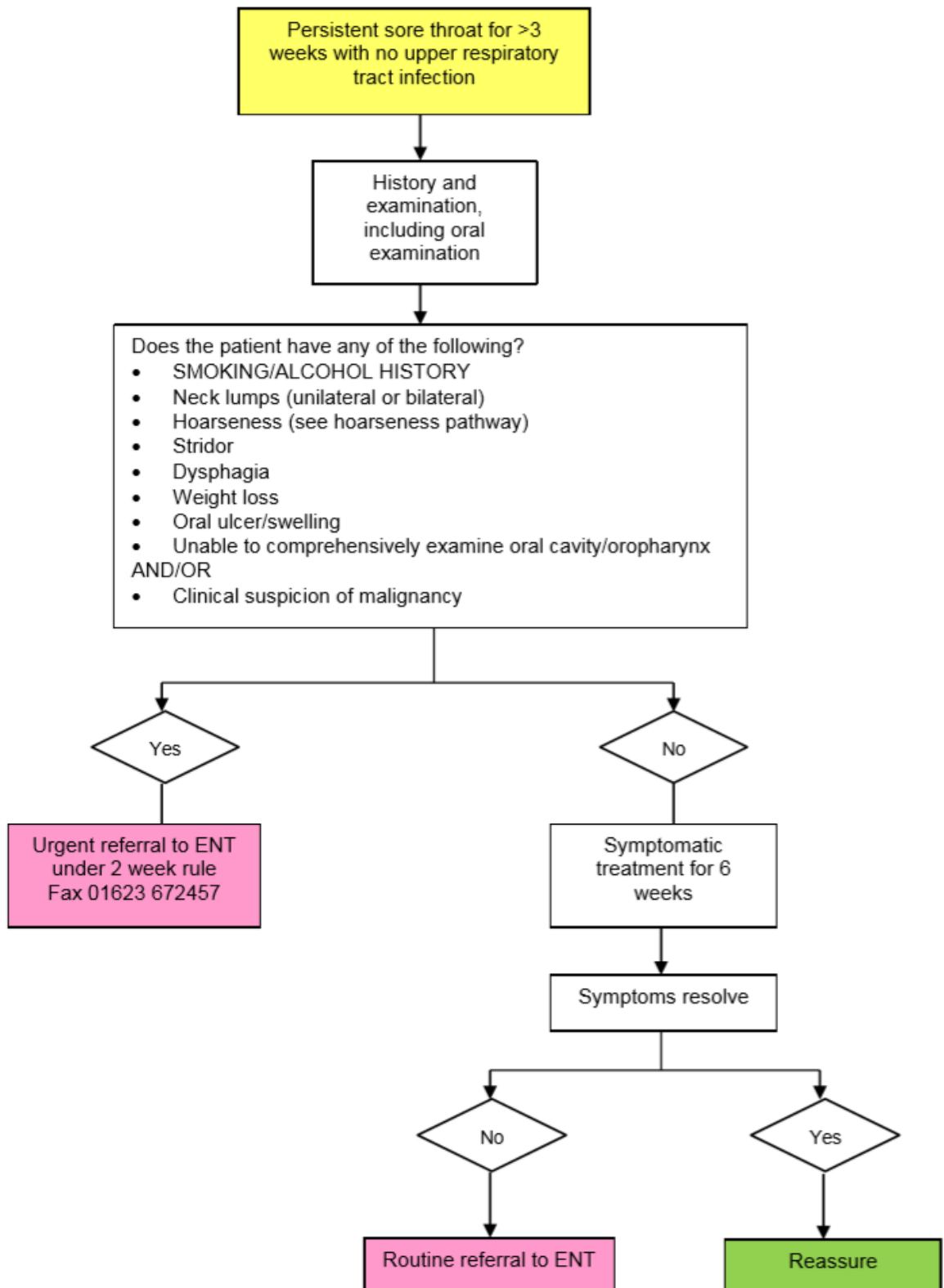


Peritonsillar abscess
(quinsy) +/- airway
obstruction
Neck abscess
Stridor

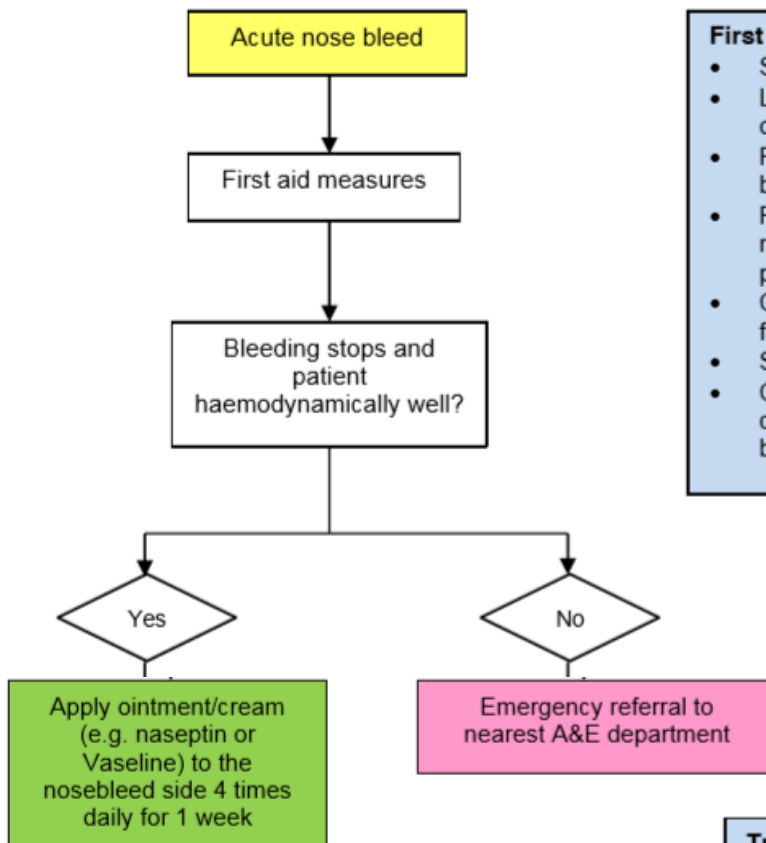
Patient likely
to require
emergency
admission

Refer to A&E or
contact on call ENT
surgeon at
KMG/QMC

Non-Infectious Sore Throat in Adults



Acute Nose Bleed



First aid measures for acute nose bleeds

- Sit patient down
- Lean patient forward (ideally over sink or table)
- Pinch the lower part of the nose between thumb and forefinger
- Pinch nose for 5 minutes. DO NOT release the pressure <5 minutes. If persists repeat x2.
- Consider inserting nasal tampon if familiar with its use
- Spit out any blood
- Check if the patient is taking aspirin, clopidogrel, prasugrel or warfarin. If so, bleeding is less likely to stop easily

Treatment options for persistent nose bleeds

Nasal cautery if bleeding site can be identified
Nasal packing e.g. nasal tampons
Admit to hospital

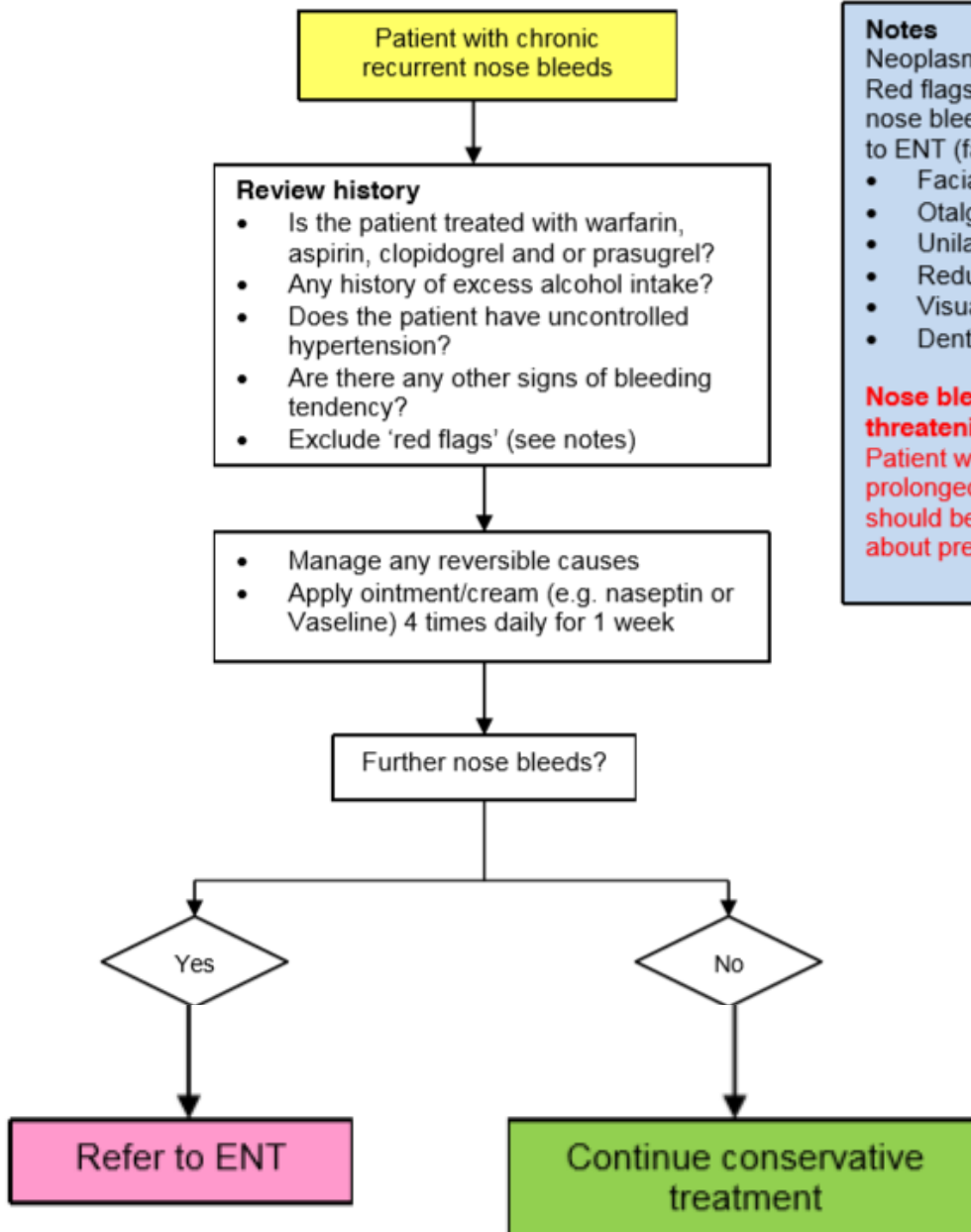
Nose bleeds can be serious and life threatening.

Patients who have had serious, prolonged recurrent nose bleeds should be given the information leaflet about prevention of nose bleeds



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Chronic Recurrent Nose Bleeds



Notes

Neoplasm is very rare.

Red flags in patients with recurrent nose bleeds, requiring urgent referral to ENT (fax 01623 672457):

- Facial pain/swelling
- Otagia
- Unilateral nasal obstruction
- Reduced sense of smell
- Visual symptoms
- Dental symptoms

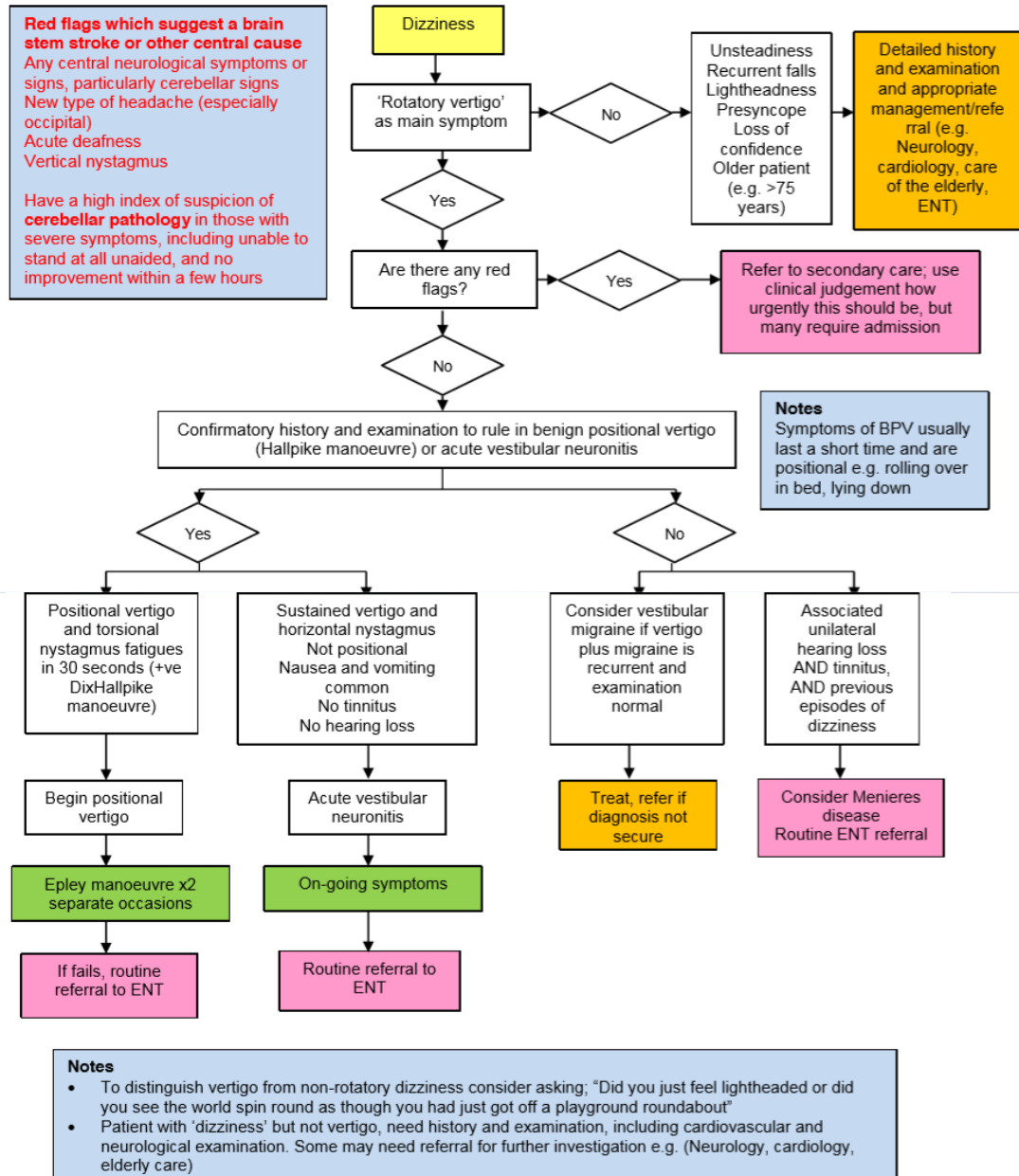
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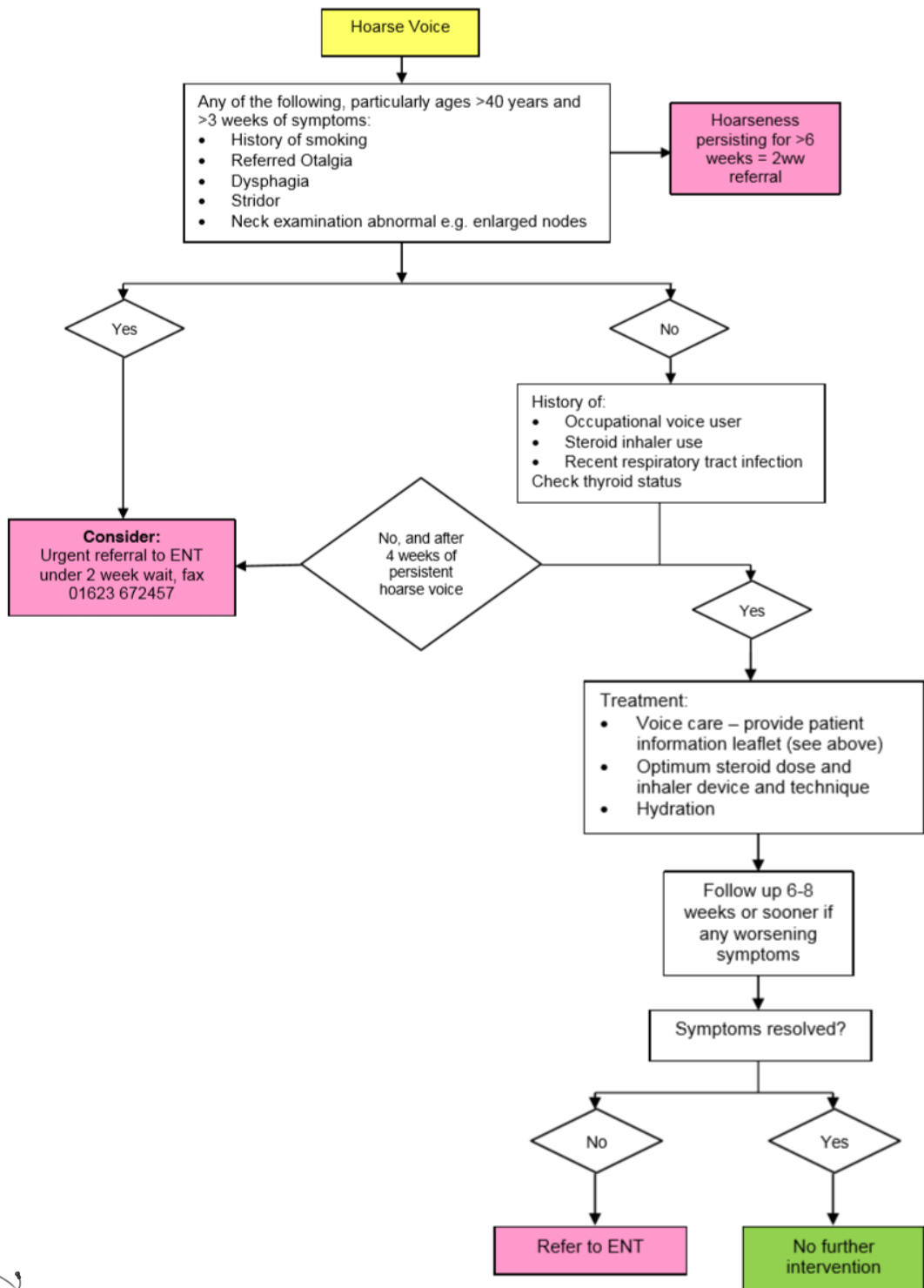
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Vertigo



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Hoarse Voice in Adults

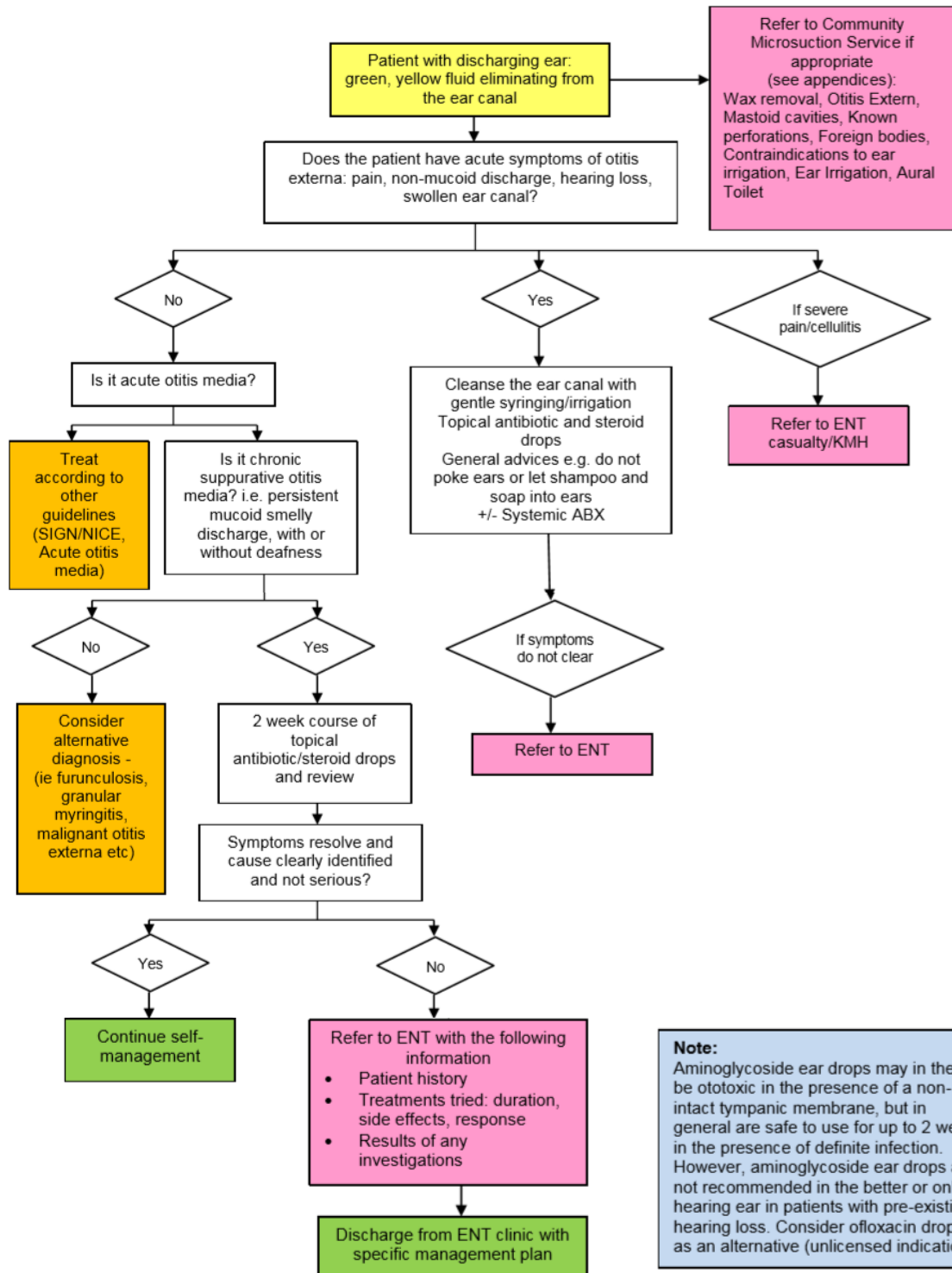


Feeling of Something Stuck in the Throat



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Management of Discharging Ear



Primary Care Management of Snoring in Adults/ Sleep Apnoea

History, include:

- Loudness of snoring
- Excessive/intrusive daytime sleepiness
- Witnessed apnoea's
- Impaired alertness
- Nocturnal choking episodes
- Waking unrefreshed
- Co-morbidity e.g. hypothyroidism, ischaemic heart disease, cerebrovascular disease, diabetes, hypertension
- Smoking history
- Alcohol consumption
- Medication history
- Consider psycho-social impact

Examination, include:

- BMI
- Collar size
- Tonsil grade (refer to diagram)
- Pharynx (refer to diagram)
- Bite? Recessed mandible, under-projected maxilla (refer to diagram)

Epworth Sleepiness Scale

Use the following scale to choose the most appropriate number for each situation:

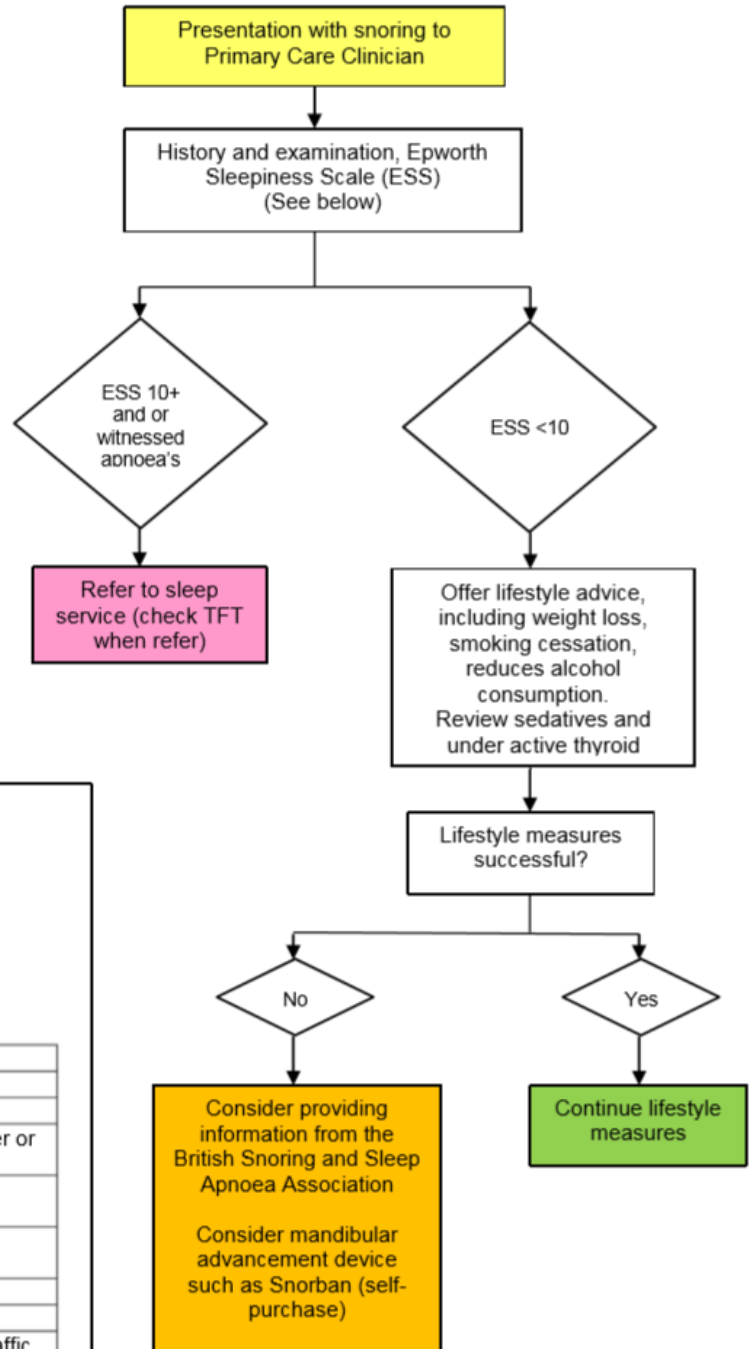
- 0 = No chance of dozing
 1 = Slight chance of dozing
 2 = Moderate chance of dozing
 3 = High chance of dozing

SITUATION

Sitting and reading
Watching TV
Sitting, inactive in a public place (e.g. a theater or a meeting)
As a passenger in a car for an hour without a break
Lying down to rest in the afternoon when circumstances permit
Sitting and talking to someone
Sitting quietly after lunch without alcohol
In a car, while stopped for a few minutes in traffic

To check your sleepiness score, total the points:

- 1-6 = Congratulations, you are getting enough sleep
 7-8 = Your score is average
 9+ = Seek the advice of a sleep specialist without delay



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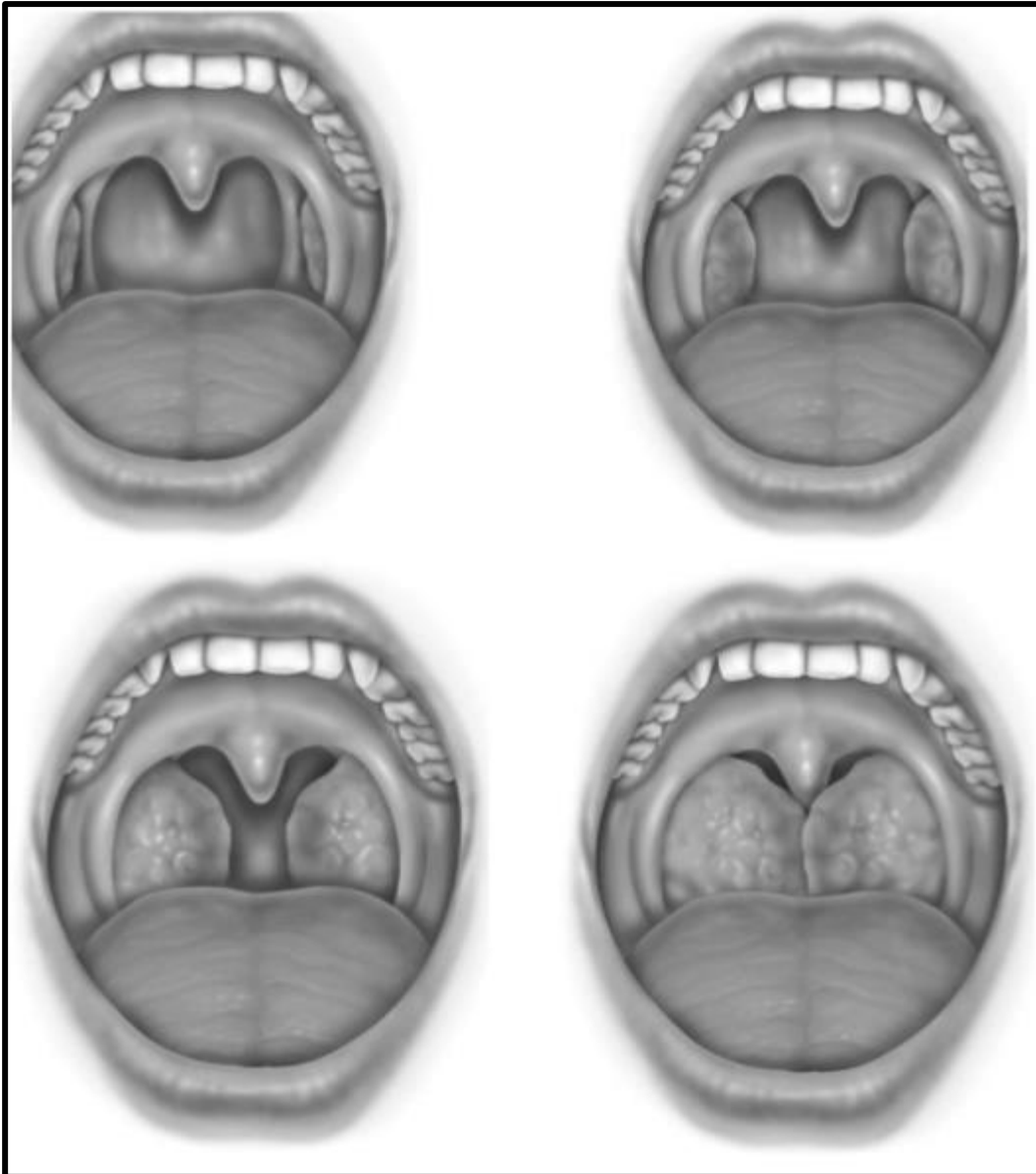
Tonsil Size: Graded 1 to 4

Grade 1

Tonsils hidden within pillars

Grade 2

Tonsils extend to edge of pillars



Grade 3

Tonsils beyond pillars but
not to midline

Grade 4

Tonsils meet in midline

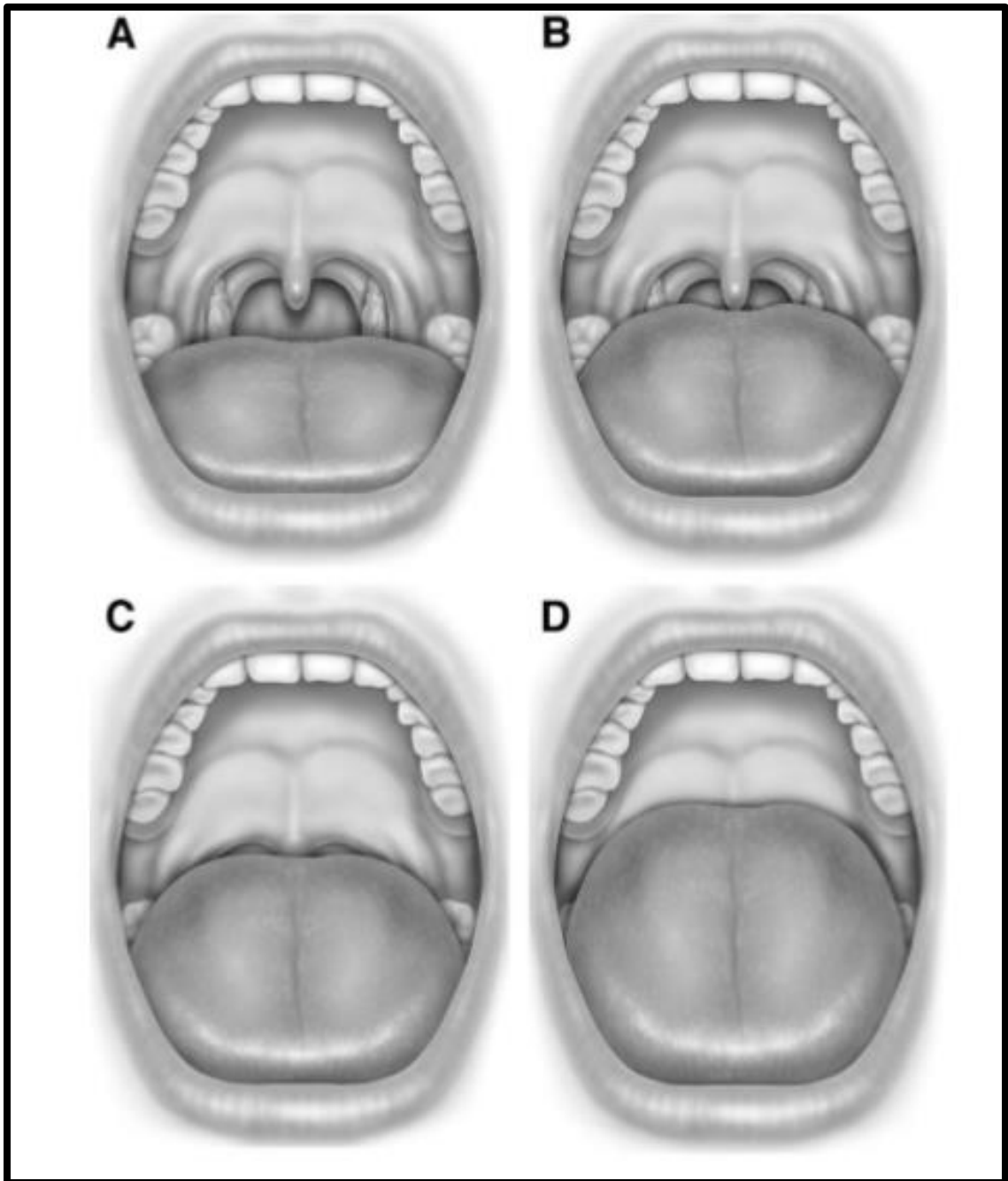
Snoring in Primary Care: Examination of the Pharynx (Malampatti)

A = Grade I: full view of oropharynx

B = Grade II: pillars still visible

C = Grade III: only base of uvula seen

D = Grade IV: tongue obscures whole oropharynx





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