Rakesh Chopra

MS DNB FRCS FRCGP

ENT Tutor–RCGP

Council member RSM

1

Ear

- Basic essential anatomy - DEMO
- Acute Otitis Media
- Perforations and the discharging ear
- Tinnitus
- Sudden deafness - DEMO TFT

Dizziness

- Approach
- Meniere's
- Acute Vestibulopathy
- BPPV
- Epley Maneuvere - DEMO

2

- Acute Central Vertigo

Nose

- Basic essential anatomy DEMO
- Epistaxis
- Sinusitis – Acute and Chronic
- Nasal Obstruction
- Anosmia – COVID and non-COVID
- Nasal fracture

Throat

- Tonsillitis- referral guidelines

3

- Asymmetric tonsils
- Glandular Fever
- Throat swabs
- Hoarseness
- Globus symptom
- HEAD AND NECK CANCER REFERRAL GUIDELINES

- Q&A – Open forum

4

- Look at overall picture
- Remember SIGN Guidelines

As per SIGN guidelines children diagnosed with AOM should not be prescribed antibiotics as initial treatment. Appropriate explanation, adequate analgesia and a wait and watch policy are advisable. If no improvement in 72 (96) hours prescribe antibiotics

5

REQUIRED: CKS NICE JAN 21

- **For most people presenting with suspected acute otitis media (AOM), advise a no antibiotic prescribing strategy or a delayed antibiotic prescribing strategy.**
- **For children younger than 3 months of age with AOM(>38), have a low threshold for admitting or prescribing antibiotics (3-6 months, temp>39).**
- **Offer an immediate antibiotic prescription** to:
- People who are systemically very unwell (but who do not require admission).
- People at high risk of serious complications because of significant heart, lung, renal, liver, or neuromuscular disease, immunosuppression, or cystic fibrosis, and young children who were born prematurely.
- People whose symptoms of AOM have already lasted for 3 days or more and are not improving.

6

Antibiotics seem to be most beneficial in children younger than two years of age with bilateral AOM (infection in both ears), and

in children with both AOM and otorrhoea (discharge from the ear, irrespective of age).

There was not enough information to know if antibiotics reduced rare complications such as mastoiditis (an infection of the bones around the ear).

7

CHRONIC SUPPURATIVE OTITIS MEDIA

- Emma Chompson
- 35 year old lady
- Known to have a ear perforation.
- ‘Dr my ear is discharging again?’

8

PERFORATION

Keep ear dry
- Cotton wool with Vaseline
- Ear plugs – local audiology dept
- Long term options

Avoid swimming

Long term - offer referral for tympanoplasty

9

EAR DROPS IN PERFORATED EAR DRUMS!?!

ENT UK guidance

-topical aminoglycoside only in the presence of obvious infection

-not more than 2 weeks

-justify

-if possible or practical perform a hearing test before treatment

Non UK – favour quinolone ear drops (CETRAXAL)

10

INTERNATIONAL OPINION

Australian Society of Otolaryngology Head &Neck Surgery recommendations

1. Non-ototoxic eardrops are preferable in the presence of tympanic membrane perforations.
2. If potentially ototoxic drops are used for discharging middle ears, they should be ceased immediately the infection resolves.
3. Patient's/parental informed decision making should be documented for use of potentially ototoxic eardrops.
4. If hearing loss, vertigo, or tinnitus develop while using potentially ototoxic ear drops the patient should be instructed to return to their doctor.
5. If the tympanic membrane is known to be intact a nd the middle ear and mastoid are closed, then the use of potentially ototoxic preparations presents no risk of ototoxic injury.

https://bnf.nice.org.uk/treatment-summary/ear.html

11

TAKE HOME MESSAGE

- If you prescribe any potentially ototoxic ear drops in a patient with a perforation let the patient make an informed decision, and warn regarding risk of ototoxicity
- Use for shortest possible period
- Follow other advise as per the international guideline.
- Long term – Tympanoplasty

https://bnf.nice.org.uk/treatment-summary/ear.html

12

OTITIS EXTERNA

- Localised
- Diffuse
- Necrotizing (Malignant)

Otitis Externa

13

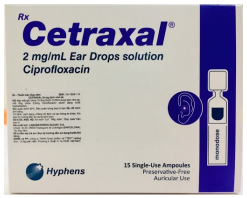
MANAGEMENT OF OE - KEY POINTS

NSAIDS/Flucloxacillin/Clarithromycin/Ciproflox

Diffuse

- Mild – Acetic acid (Ear Calm)
- Infected – Antibiotic + steroid ear drops
- Not infected- chronic- Betnesol+/- acetic acid/creams/ointment
- Do NOT swab initially.
- Refer – if not responding/debridement/swollen
- Diabetes/Water/Self -instrumentation

14

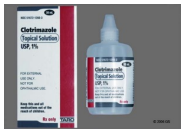


15

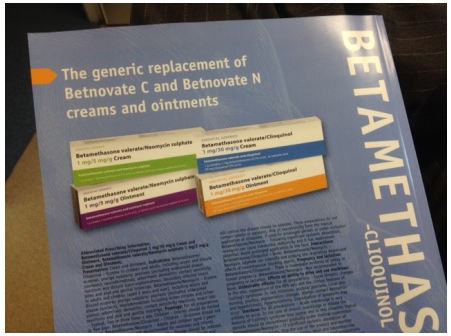
ANTI-FUNGAL

LOCORTEN VIOFORM
FLUMETASONE-CLIOQUINOL

CLOTRIMAZOLE



16



17

NECROTISING (MALIGNANT) OTITIS EXTERNA

- Refer urgently if malignant otitis is suspected. Suspect malignant otitis if:
- There is unremitting pain, otorrhoea, fever or malaise.
- There is granulation tissue at the bone-cartilage junction of the ear canal, or exposed bone in the ear canal.
- The facial nerve is paralysis, other cranial nerves.
- Raised temperature — over 39°C.
- Debilitated, immunocompromised, diabetic

"ENT EMERGENCY"

18

"I woke up this morning
and I can't hear anything
out of my right ear."

19

SUDDEN ONSET SENSORI-NEURAL HEARING LOSS

- Definition – 'Rule of 3'- less than 3 days, 3 frequencies, 30dB
- Etiology – idiopathic /vascular/viral/AI
- Investigation – bloods
- Management-
  - *-steroids oral/trans-tympanic dexamethasone*
  - *-Immediate ENT Referral*
  - *-Audiometry*
  - *-hyperbaric oxygen*
  - *-dextran,vasodilators,acyclovir - X*
- Needs an MRI scan

20

SUDDEN OR RAPID HEARING LOSS NICE JUNE 2018 (SEPT 2019)

- If the hearing loss developed suddenly (over a period of 3 days or less) within the past 30 days, refer immediately (to be seen within 24 hours) to an ear, nose and throat service or an emergency department.
- If the hearing loss developed suddenly more than 30 days ago, refer urgently (to be seen within 2 weeks) to an ear, nose and throat or audiovestibular medicine service.
- If the hearing loss worsened rapidly (over a period of 4 to 90 days), refer urgently (to be seen within 2 weeks) to an ear, nose and throat or audiovestibular medicine service.
- Focal neurology/stroke/head and neck trauma/necrotising otitis externa

21

KEY POINTS FOR SSNHL-AAOHNS

- Distinguish SN from Conductive (check the TM)
- Rule of '3' holds true
- Offer Steroids within 2 weeks of onset or Hyperbaric O2
- Salvage within 4 weeks of onset
- Intra-tympanic Steroids for salvage 2-6 weeks (any Rx after 2 weeks is salvage)
- Up to 32-65% may recover
- No Lab investigations, NO CT scan
- MRI
- Prednisolone 1mgm/kg/D 7-14 and taper off over same duration.

22

TUNING FORK TESTS

CONDUCTIVE OR SENSORI-NEURAL?

- Rinne

  Positive – Normal

  Diminished positive – sensori-neural

  Negative - conductive

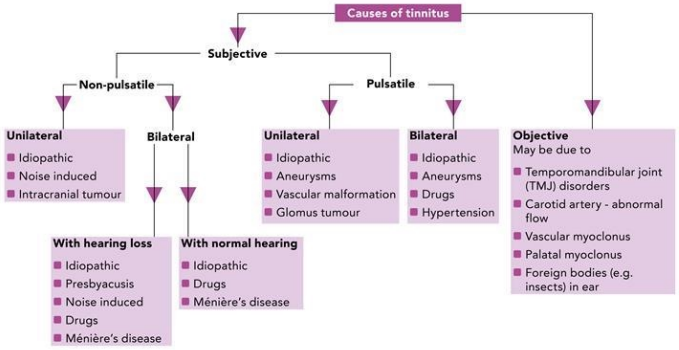
- Weber - lateralized to side of conductive deafness

23

TELEPHONE CONSULTATION

"Hi Doc, Tinnitus here, I Bond – I have developed this buzzing noise in my ear. Is it anything I should be concerned about?"

24



25

KEY QUESTIONS? TINNITUS

- Is there a serious underlying cause?
- Is it Intrusive?
- What can be done to help the patient?

26

UNDERSTANDING TINNITUS - GOLENHOFFEN

- Auditory Cortex perception disorder
- Somatosensory disorder
- Cochlear disorder

27

MANAGEMENT OF TINNITUS

Current treatments of tinnitus are not cures, they are a means to reduce tinnitus perception or awareness.

- Demystification, reassurance
- Sound therapy-fans/TV/white noise/MP3/Pillows with speakers
- Low dose SSRI/Amitriptiline
- Habituation therapy
- Tinnitus maskers
- Hearing Aids
- Psychological associations and therapy – CBT/TRT

28

WHEN SHOULD I REFER SOMEONE WITH TINNITUS TO SECONDARY CARE? (NICE -MARCH '20)

- Refer people with tinnitus immediately :
- A high risk of suicide — refer to a crisis mental health management team.
- Sudden onset of significant neurological symptoms or signs (for example, facial weakness) — refer for neurological assessment.
- Acute uncontrolled vestibular symptoms (for example, vertigo) — refer for neurological assessment.
- Suspected stroke – follow a local stroke referral pathway?????
- Sudden onset pulsatile tinnitus.
- Tinnitus secondary to head trauma.

Refer people very urgently (to be seen within 24 hours) if they have tinnitus and hearing loss that has developed suddenly (over a period of 3 days or less) in the past 30 days – refer to ear, nose, and throat or an emergency department.

29

- Refer people urgently(to be seen within 2 weeks) if they have tinnitus associated with:
- Distress affecting mental wellbeing (for example, distress that prevents them from carrying out their usual daily activities) even after receiving tinnitus support at first point of contact with a healthcare professional.
- Hearing loss that developed suddenly more than 30 days ago, or rapidly worsening hearing loss (over a period of 4–90 days).
- Persistent otalgia or otorrhoea that does not resolve with routine treatment.
- Refer all people with tinnitus for an audiological assessment, particularly if it is persistent (lasting 6 months or more).

30

- Refer people in line with local pathways if they have:
- Tinnitus that bothers them despite having received tinnitus support at first point of contact with a healthcare professional.
- Persistent objective tinnitus.
- Tinnitus associated with unilateral or asymmetric hearing loss.
- Consider referring people for tinnitus assessment and management in line with local pathways if they have: (In line with NICE guideline on hearing loss in adults)

Persistent pulsatile tinnitus

-Offer imaging to all people with pulsatile tinnitus.

- Persistent unilateral tinnitus.

31

CONSIDER A STEPPED APPROACH TO PSYCHOLOGICAL THERAPIES FOR PEOPLE WITH TINNITUS-RELATED DISTRESS

- If the person does not benefit from the first psychological intervention or declines an intervention, offer the next step in the following order:
- Digital tinnitus-related cognitive behavioural therapy (CBT) provided by psychologists.
- Group-based tinnitus-related psychological interventions, including mindfulness-based cognitive therapy (delivered by appropriately trained and supervised practitioners), acceptance and commitment therapy or CBT (delivered by psychologists).
- Individual tinnitus-related CBT (delivered by psychologists).

32

What will we cover today?

Causes – Case scenarios

- Epley Manoeuvre
- Approaching a dizzy patient?
- Key tips

33

DEFINITION

perception of a range of sensations such as feeling faint, woozy, unsteadiness or spinning.

- Vertigo - It refers to a false sensation of you or your surroundings are spinning.
- Presyncope - a sensation of being about to lose consciousness, usually caused by a decrease in global cerebral blood flow.
- Disequilibrium/unsteadiness/imbalance - a feeling of being unstable while sitting, standing, or walking.
- Light-headedness — not clearly defined.

34

Case Scenario 1

Hi Dr C, this is Mrs Marple your favourite patient! Its my birthday today, I am 65 now! Oh! Doc I'm ever so dizzy these days as soon as soon as I lie down and turn in bed the whole world just spins, but only for a few seconds. I also feel the same on bending down and getting up. But my ears feel fine. I can still hear my husband releasing wind in the next room. Otherwise I feel great doctor!

I think it's the neighbours cat… Diagnosis?

35

- BENIGN – No serious underlying pathology
- PRAXOYSMAL – sudden onset, multiple, brief.
- POSITIONAL – It must be triggered by change in position!
- VERTIGO – spinning/rotation.

36

Bridgewater Community Healthcare NHS
NHS Trust

GPSI ENT CLINIC

POST EPLEY INSTRUCTIONS

An assessment has identified that you have Benign Paroxysmal Positional Vertigo which is causing your dizziness.

This can be treated successfully by the Epley Manoeuvre.

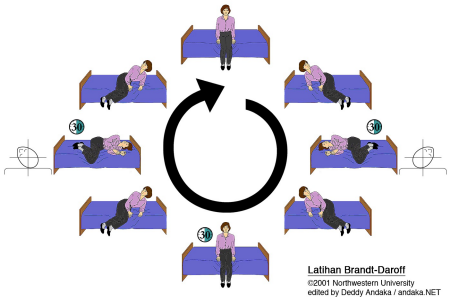
Your clinician has advised that the Epley Manoeuvre will treat the symptoms of dizziness you are experiencing. The manoeuvre involves the clinician placing your head in an extended position for a short period of time. This will help to reposition the calcium crystals within the semi-circular canals in the ear and will improve your symptoms considerably over the next few days.

It is advisable not to drive to this appointment

Instructions to be followed for the next 2 – 3 days for Post Epley Manoeuvre

1. Avoid any large or fast head movements.
2. Use a collar or towel to limit head movement.
3. Avoid activities such as visiting the dentist, hairdressers, gym or swimming.
4. Take care when shaving, using eye drops or washing hair.
5. Sleep on your good side (side that does not cause your dizziness), with a pillow for support. Avoid sleeping on your bad side.

37



38

Cautions for Epley

–Cervical spine
-disc/surgery/severe osteoporosis/severe arthritis

–Carotid stenosis (be cautious unstable cardiac disease, suspected vertebro-basilar disease, or morbid obesity).

39

Case scenario 2

- 33 year old, male
- Recurrent bouts of vertigo
- Spinning
- Lasting a few hours
- Tinnitus
- Fullness/pressure in the ear
- Hearing loss - fluctuating

Diagnosis?

40

Meniere's Disease - Key Facts

- Prosper Meniere 1861
- Triad – rotatory dizziness/tinnitus /hearing loss
- Vertigo - 30 minutes to 24 hours
- Feeling of pressure in the ear
- Fluctuating hearing loss

- ACUTE ATTACK – Dramatic – Tumarkin's crises
(Drop attacks- 5-10%)
- Positive Romberg's

41

Criteria for diagnosing Meniere's syndrome (American Academy of Otolaryngology–Head and Neck Surgery)

- Recurrent, discrete episodes of spinning or rotation
- Duration ranging from 20 minutes to 24 hours
- Nystagmus associated with attacks
- Nausea and vomiting may accompany attacks
- Absence of other neurologic symptoms

Deafness
- Fluctuating hearing deficits, unilateral
- Sensori-neural hearing loss
- Progressive unilateral hearing loss

Tinnitus
- Often low-pitched, and louder with attacks
- Unilateral, on affected side

42

Meniere's Disease : Definite Criteria (Barany Society)

- Definite Menière's disease is based on clinical criteria and requires the observation of an:

- Episodic vertigo syndrome associated with low- to medium-frequency sensorineural hearing loss and fluctuating aural symptoms (hearing, tinnitus and/or fullness) in the affected ear.

- Duration of vertigo episodes is limited to a period between 20 minutes and 12 hours.

43

Meniere's Disease Management

- Betahistine (16 mg tds, 8 mg tds- 24 mgm tds - ACUTE)
- Intervention/Surgery
  - Intra-tympanic steroids
  - Trans-tympanic gentamycin
  - Positive pressure therapy – Meniett device

Surgery -
- Endolymphatic sac decompression
- Vestibular neurectomy
- Labyrinthectomy

Intra-tympanic steroids? Cochrane 2011- single trial.
Lancet Meth-pred vs gentamycin – comparable

- Dexamethasone- multiple vs single/hearing+/-

44

Case scenario 3

- 77 year old
- Unsteadiness, feels drunk when walking
- Diabetic
- Peripheral neuropathy
- Cataracts
- Hypertensive
- IHD

Diagnosis?

45

ELDERLY

- Multiple-Sensory-Deficit dizziness
- Benign disequilibrium of aging

Impaired sensation from feet/poor vision/over reliance on an ageing vestibular apparatus,

Harrison's Principles of Internal Medicine 17th Edition

46

Case scenario 4

- 39 year female
- Wakes up with severe acute dizziness
- Vomiting
- Calls GP out
- Takes about 3 days to settle down
- No hearing loss, no tinnitus, no neurology

Diagnosis?

47

Acute vestibular syndrome neuritis/neuronitis/ (Acute labyrinthitis x

- Severe acute vertigo - days
- Sudden onset
- Vomiting
- Bed ridden
- May lie on one side
- Usually no hearing disturbance/tinnitus
- Slowly settles, periods of decompensation, weeks, rec less severe episodes 18/12

48

VESTIBULAR NEURONITIS - CKS NICE

- Vestibular neuronitis due to inflammation of the vestibular nerve and often occurs after a viral infection.
- Labyrinthitis is a different diagnosis that involves inflammation of the labyrinth *and* the vestibular nerve, and is often attributed to a viral infection. Hearing loss is a feature of labyrinthitis, but hearing is *not* affected in vestibular neuronitis. '(RESTRICT CASUAL USE)'
- Vestibular neuronitis often affects previously well, young or middle-aged adults, but can affect anyone.
- People with vestibular neuronitis will typically get better even if they have permanent unilateral loss of vestibular function. This may take several weeks, or even longer.
- Symptoms of vestibular neuronitis spontaneous onset of vertigo, which usually settles over a few days, nausea and vomiting. Hearing loss and tinnitus are *not* present, and there are no focal neurological symptoms.

49

Management of Acute Vestibulopathy

- Rest
- Labyrinthine sedatives (short-term) during acute phase
- Vestibular rehabilitation exercises

Cawthorne-Cooksey exercises

50

Cawthorne-Cooksey Exercises

Level 1 - Eye movements (head kept still)

- a. Look up then down, slowly at first, then rapidly 20 times.
- b. As above but side to side.
- c. Focus on fingers at arms length.
- Maintain focus while moving fingers towards nose and away again 20 times.

Level 2 - Head and eye movements (sitting)

- a. Bend head forwards and backwards (eyes open). Do this slowly then quickly.
- b. As above. Rotating to the left and then to the right.
- c. Repeat both of the above but with eyes closed.

51

- Level 3 - Arms and body movements (sitting)
- a. Shrug shoulders 20 times
- b. Circle shoulders 20 times
- c. Rotate to the right and then to the left, at waist (i.e: upper part of the body moves together) 20
- d. Turn head side to side through full range of rotation, slowly.
- e. Repeat above doing two slow turns followed by one rapid turn.
- f. Repeat above followed after a couple of seconds pause, by three rapid turns.
- g. Repeat above turning with eyes
- Level 4 - Arm and trunk movements

52

Case Scenario 5

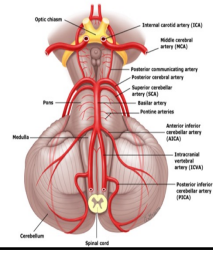
- 72 year male
- Visual disturbance
- Bouts of dysarthria
- Weakness of the legs/incoordination
- Dizziness
- Facial numbness
- h/o carotid stenosis
- Hyperlipidaemia

Diagnosis?

53

Vertebro-basilar Insufficiency

Vertebral basilar ischaemia, refers to a temporary set of symptoms due to decreased blood flow in the posterior circulation of the brain. The posterior circulation supplies blood to the medulla, cerebellum, pons, midbrain, thalamus, and occipital cortex (responsible for vision).



54

VBI (cont'd)

- The symptoms due to VBI vary according to which portions of the brain experience significantly decreased blood flow
- In the United States, 25% of strokes and transient ischemic attacks occur in the vertebrobasilar distribution
- These must be separated from strokes arising from the anterior circulation, which involves the carotid arteries.

55

Post circulation stroke: still a Cinderella disease'. (*BMJ*. 2013 Jun 14;346)

- 30,000 per annum UK
- Does not follow classic FAST (face, arms, speech, time)
- Delayed referral
- Different imaging protocol MRI
- Higher recurrent rates
(Not included in UK's interventional stroke trial)

BMJ 24 May 2014/Volume 348

56

Case scenario 7

- 55 year old male
- Lightheadedness, especially on getting up
- Hypertensive
- Known BPH
- On B-Blockers
- On Tamsulosin

Diagnosis?

57

"Do you feel lightheaded, faintness/blackout
Not enough blood output! Think CVS!

- The person feels about to black out when upright. The blood pressure drops on standing (orthostatic hypotension). *Orthostatic Intolerance*
- Blocked outflow from the heart (aortic valve stenosis)
- Abnormal heart rhythms - brady/tachyarrhythmias
- Overmedicated (especially with drugs used for blood pressure control)
- An autonomic nervous system disorder (diabetic autonomic neuropathy, multi-system atrophy)
- Dehydration/severe blood loss

58

Pre-syncope, or a *syncoptic episode*, is lightheadedness, muscular weakness and feeling faint as opposed to a syncope, which is actually fainting. Pre-syncope does not result from primary central nervous system pathology, nor does it originate in the inner ear but is most often cardiovascular in aetiology.

59

Do you feel loss of balance/unsteady? Disequilibrium – Think neurology!

- The person feels unsteady and about to fall even though muscle strength is normal
- Cerebellar disorders (ataxia due to stroke, chronic alcoholism)
- Basal ganglia disorders (Parkinson's disease, Lewy body dementia, progressive supranuclear palsy)
- Loss of position sense in the legs (neuropathy or spinal cord disease)
- Visual disturbances (caused by new glasses, double vision, cataract surgery)
- Overmedicated with sedatives, anticonvulsants, or other drugs, intoxicated with alcohol
- Inner ear disorders (vertigo)

60

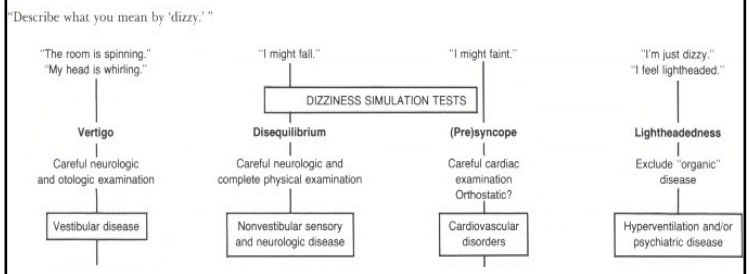
Do you feel spinning? –Vertigo – Think vestibular!

The person or the person's surroundings seem to be moving or spinning

- Benign paroxysmal positional vertigo (BPPV)
  Vestibular neuritis/labyrinthitis
- Meniere's disease
- Middle ear infections
- Migraine associated vertigo - Central
- Motion sickness
- Reduced blood supply to the brain stem and cerebellum (vertebrobasilar insufficiency), as occurs during a stroke or transient ischemic attack (TIA)- Central

61

Clinical Methods – Walker et al



62