Dizziness

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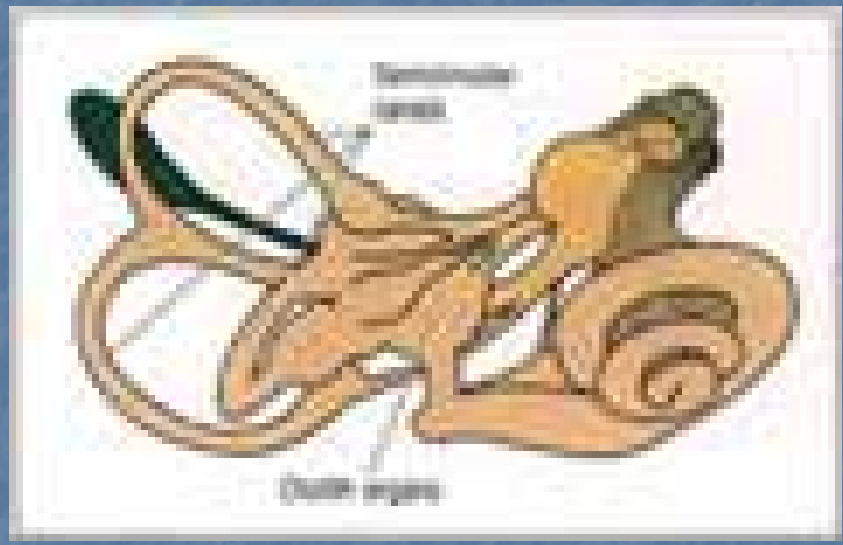
Vestibular organs

- Semicircular canals
- Otolith organs



Types of dizziness

- Vertigo – BPPV, Meniere's, vertebrobasilar insufficiency
- Pre-syncopal light headedness–orthostatic hypotension, vasovagal episode, cardiac arrhythmia, hyperventilation
- Psychophysiological dizziness- anxiety, panic attacks, phobias

Continue

- Disequilibrium-peripheral neuropathy, stroke, cerebellar atrophy
- Ocular dizziness-impaired vision
- Multisensory dizziness-DM, aging
- Physiologic dizziness-motion sickness, height vertigo

Benign paroxysmal positional vertigo(BPPV)

- Sudden attacks of vertigo precipitated by sitting up, lying down or turning in bed
- Short duration of sensation of vertigo(sec)
- Abnormal sensitivity of post SCC stimulated by free-floating canaliths
- Etiology:Degenerative changes, otitis media,labyrinthine concussion,previous ear surgery +occlusion ant. Vestibular a.

Dix-Hallpike test

- Used to provoke nystagmus +vertigo commonly associated with BPPV
- Head turned 45 degrees to stimulate post SCC, head supported + rapidly placed into head hanging position
- Frenzel glasses eliminate visual fixation

Dix-Hallpike test

Positive Dix-Hallpike test

- Up-beating nystagmus
- Nystagmus to the stimulated side
- Rotary component to the affected ear (Lt side clockwise + Rt anti-clockwise)
- Lasts 15-45 seconds
- Latency of 2-15 seconds
- Fatigues easily

Treatment

- Canalith repositioning procedure- Epley maneuver 135° facing downwards until no nystagmus seen
- Sitting upwards for 48H + vestibular suppressants
- 80-85% resolution (1st Rx)
- <1% - Surgery

Meniere's Disease

- Fluctuating SNHL, tinnitus + fullness in affected ear
- Episodic vertigo lasting 30min- 2H
- 85% Unilateral; 60% remission
- Rx:Vestibular suppressants, vasodilators, duiretics + surgery

Acoustic neuroma(Vestibular schwannoma)

- Benign, slow-growing tumor in vestibular division of eighth cranial nerve
- Unsteadiness rather than episodic vertigo
- 80% of CPA
- MRI with gadolinium is reliable +cost-effective
- Rx: Gamma-knife (RoRx)/ Surgery

Vestibular neuronitis

- Known as viral labyrinthitis
- Nonspecific viral illness followed by 6/52 by a sudden onset of vertigo, nausea + vomiting
- Rx: Vestibular suppressants + Antivirals

Otitis media

- Suppurative or serous otitis media- fluid in middle ear restricting round window

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Vestibular symptoms

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Treatment: Medically /Surgically

- No Rx- Labyrinthitis, dead ear or FN palsy

Syphillis

- Congenital or acquired
- Episodic vertigo 50%
- Uni/Bilateral sudden/fluctuating SNHL
- + Hennebert's + Tullio's sign- fibrous bands between footplate + oval window
- Rx: IV Pen G for 10/7 + steroids

Signs

- Hennebert's sign- +Fistula test

  -Normal TM + EAC

  -Nystagmus with negative pressure application

- Tullio phenomenon-Loud noise precipitates vertigo

Rhomberg Test

Rhomberg Test

- Patient asked to stand with feet together + eyes closed
- Fall or step is positive test
- Equal sway with eyes open + closed suggests proprioseptive/cerebellar site
- More sway with eyes closed suggests vestibular weakness

Ototoxic drugs

- Streptomycin
- Gentamycin
- Kanamycin
- Erythromycin
- Chemotherapeutic drugs

Other causes

- Temporal bone fractures +concussion
- Vascular insufficiency
- Vertigo due to whiplash injury
- Migraine
- Otosclerosis
- Multiple sclerosis
- Cogan syndrome

Examination

- Head + neck exam; BP sitting+ standing
- Spontaneous nystagmus → vertical/ directional changing→ MRI + neurology referral
- Pneumatic otoscopy→ +Hennebert's→CT scan
- Dix-Hallpike→ + then Eply manuever→ still dizzy → ENG
- Rhomberg test → equal sway open + closed →neurology referral
- Audiogram

The End