

Did you know?

The latest from the field of otolaryngology

Hearing and Balance

There are many different causes of hearing and balance disorders. When examining a patient, consider who may be at high risk for hearing loss and balance disorders.

Hearing Loss Common Causes

- **Presbycusis:** Hearing loss from aging
- **Otitis Media:** Infection of the middle ear
- **Noise Exposure**
- **Ototoxicity:** Drug or chemical induced hearing loss
- **Metabolic Disorders:** Diabetes
- **Autoimmune Disorders:** Lupus, Cogan's syndrome, autoimmune inner ear disease
- **Syndromes:** Waardenburgs, Ushers, Downs, BOR, Meinere's, fetal alcohol syndrome
- **Trauma or Barotrauma**
- **Infection:** Meningitis, syphilis, CMV, neonatal infections, toxoplasmosis

Audiologic Testing

- **Tympanometry:** Test of middle ear and tympanic membrane function.
- **Hearing Evaluation:** Includes puretone audiometry, speech discrimination threshold, and word recognition testing. Determine if patient has sensorineural or conductive hearing loss.
- **Eustachian Tube Dysfunction Test**
- **Otoacoustic Emissions:** Shows functional integrity of outer hair cells in the cochlea.
- **Auditory Brainstem Response (ABR):** Can be used neurodiagnostically as a screening tool for auditory nerve tumors. ABR can also be used to estimate auditory thresholds in infants and others who are not able to provide a behavioral response.

Balance Disorders

- **Meniere's Disease:** Symptoms include vertigo, tinnitus, fullness in ears, fluctuating hearing loss.
- **Benign Paroxysmal Positional Vertigo (BPPV):** Patient experiences vertigo when lying down or sitting up to one side. May occur after head injury or whiplash, often occurs spontaneously in the elderly. Often treated successfully with the Epley maneuver.
- **Perilymph Fistula:** Often occurs after head injury or barotrauma. Symptoms include dizziness that often increases with loud sounds, or when patient performs the valsalva maneuver.

Balance Testing

- **Electronystagmography/Videonystagmography (ENG/VNG):** Includes oculomotor testing, positional testing, and calorics. Used to localize where balance issues are originating from either CNS or peripheral pathology and often helps to determine which side is problematic.
- **Dix Hallpike:** Often part of the ENG/ VNG test battery, but can be performed separately to determine presence or absence of BPPV. Also localizes which side BPPV is occurring on.

A carefully obtained medical history is the most important part of the evaluation to determine if a patient needs further evaluation of their hearing or balance disorder. Start with questions such as:

- Do you have difficulty understanding others?
- Do you feel like you have difficulty hearing?
- Do you have any tinnitus or dizziness?
- When was the first time you felt dizzy? How severe was it?
- Do you notice your dizziness occurs in any certain positions?

If your patient is having any hearing or balance issues, or is at high risk for either, the patient should be referred for further evaluation by a qualified hearing specialist.

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