66 y/o female with unilateral hearing loss

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Axial T1W
Coronal T1-Gd
Vestibular Schwannoma
Vestibular Schwannoma

Epidemiology

• Also known as acoustic neuroma, acoustic tumor
• 7-8% of all intracranial tumors
• 75-90% of cerebellopontine angle masses
• 95% sporadic
• Bilateral or multiple vestibular schwannomas are diagnostic of neurofibromatosis type 2
• Rare in children unless associated with NF2
• Peak at 40-60 years of age
Vestibular Schwannoma

Pathology

• Benign WHO grade 1 tumors
• Arise from the intracanalicular segment of the vestibular portion of the vestibulocochlear nerve – cranial nerve VIII
  – At the glial-Schwann cell junction
  – Usually arise from the inferior division of the vestibular nerve
Vestibular Schwannoma

Clinical Presentation

• Slowly progressive unilateral sensorineural hearing loss or tinnitus
• Dysequilibrium
• Symptoms can go unnoticed
  – Delayed presentation
  – Present with symptoms related to mass effect
Vestibular Schwannoma

Radiologic Features

- T1W post contrast MR is gold standard
- Volumetric T2 (can detect ~ 98% of vestibular schwannoma)
- T1W Post contrast
  - Focal, enhancing mass at the CP angle
  - All enhance strongly
- FLAIR
  - Increased cochlear signal from increased perilymph protein
Mildly hypointense to brain parenchyma. Absence of CSF in the IAC.
Avidly enhancing CP angle mass (arrow).
Coronal T1-Gd

Avidly enhancing, well circumscribed mass at the left CP angle
References