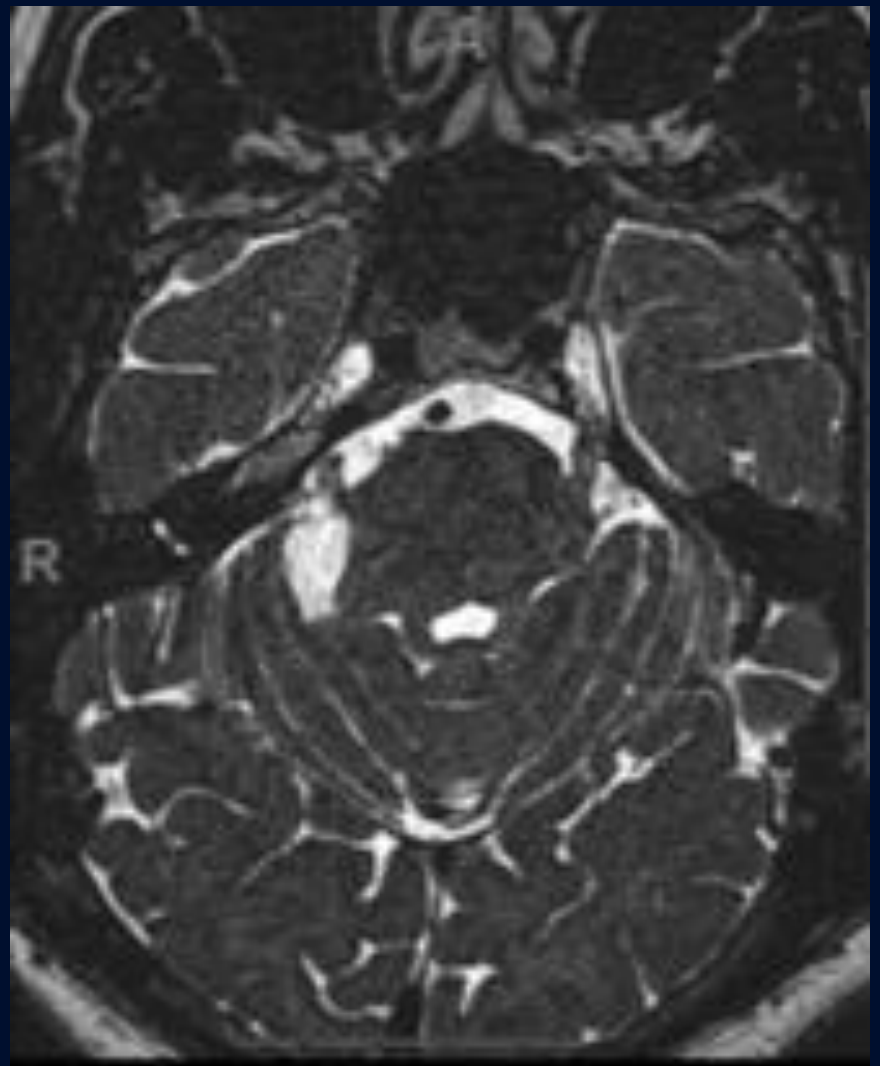
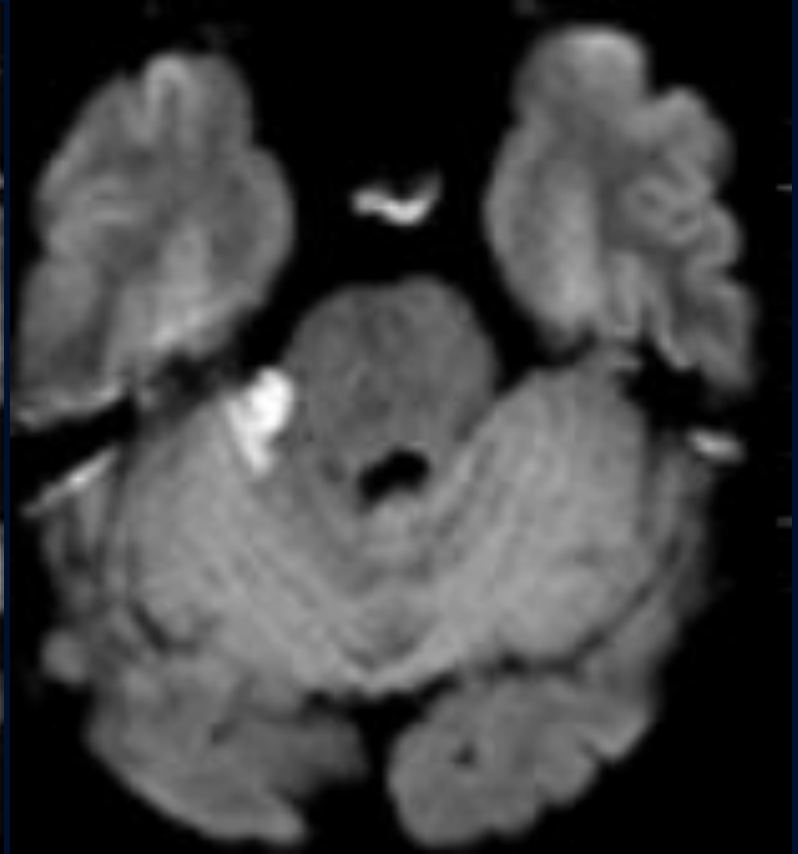
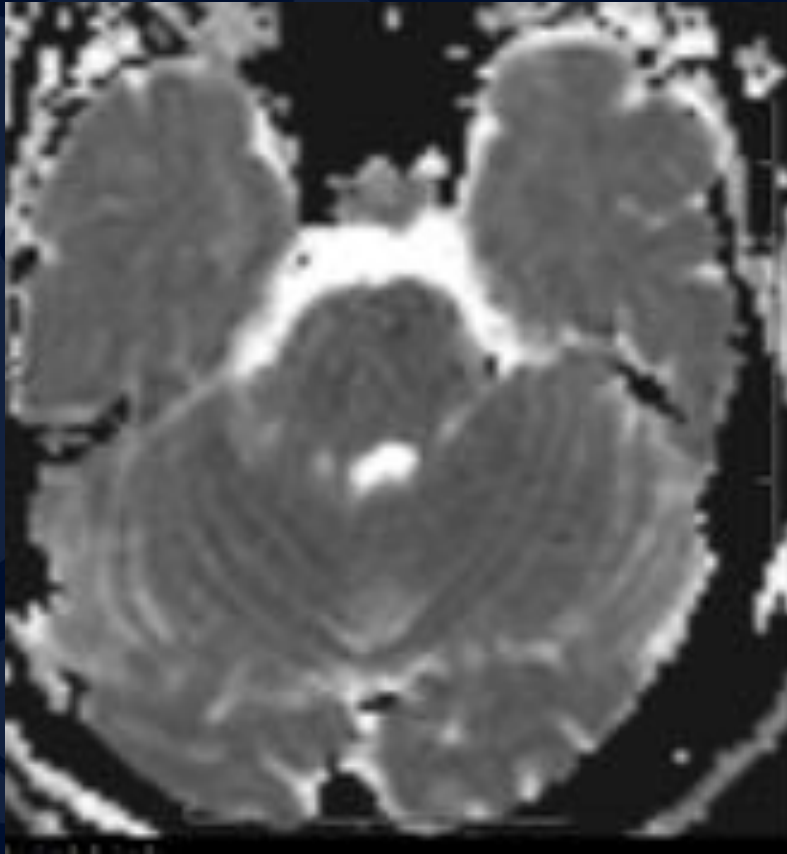


Young female with tinnitus and headache.

John A Cieslak III, MD, PhD
Leo Wolansky, MD





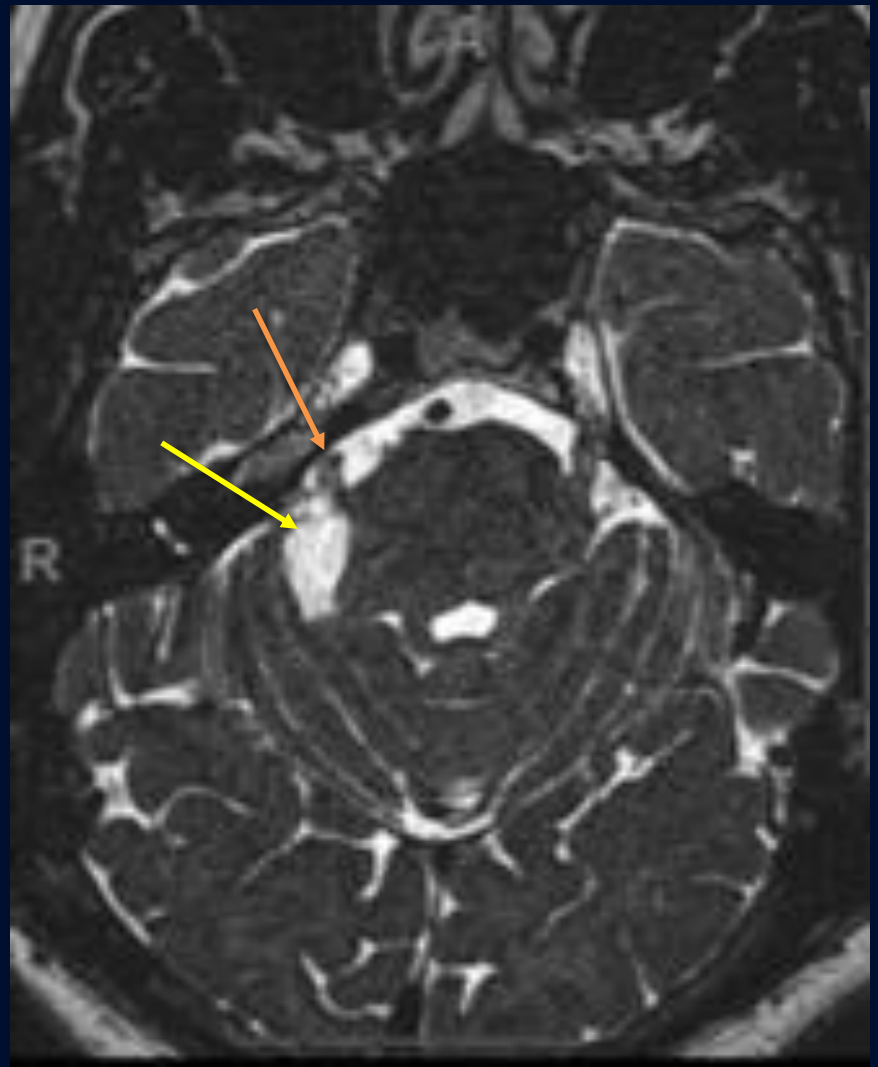
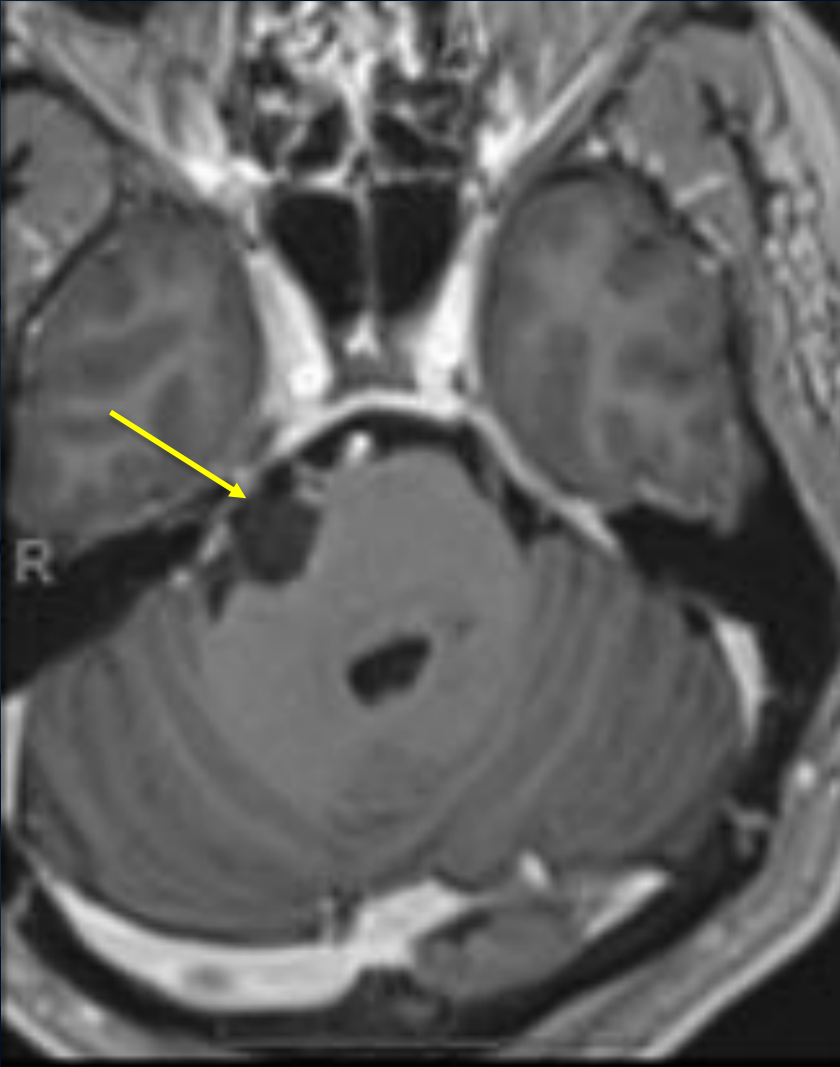
A large, stylized oak leaf graphic in a dark blue color, positioned on the left side of the slide. The leaf has a prominent central vein and several smaller veins branching off, with a scalloped edge.

?

Cerebellopontine angle epidermoid

T1-Gd, axial

T2-weighted, axial

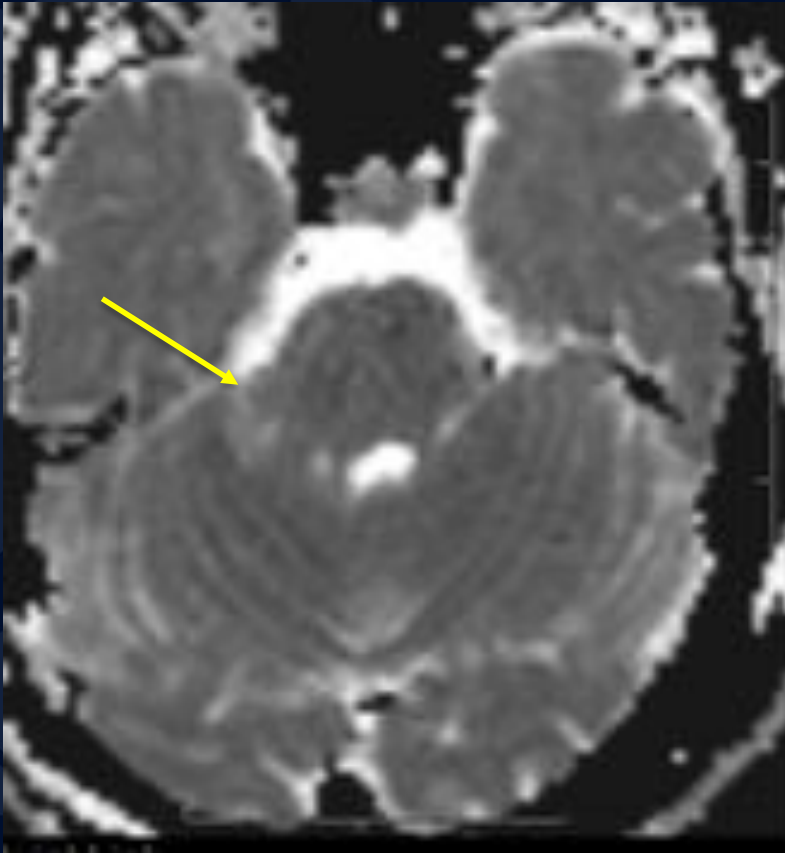


Epidermoid cysts fluid is isointense to CSF on T1 & T2 (yellow arrow). Mass displaces the trigeminal nerve (orange arrow)

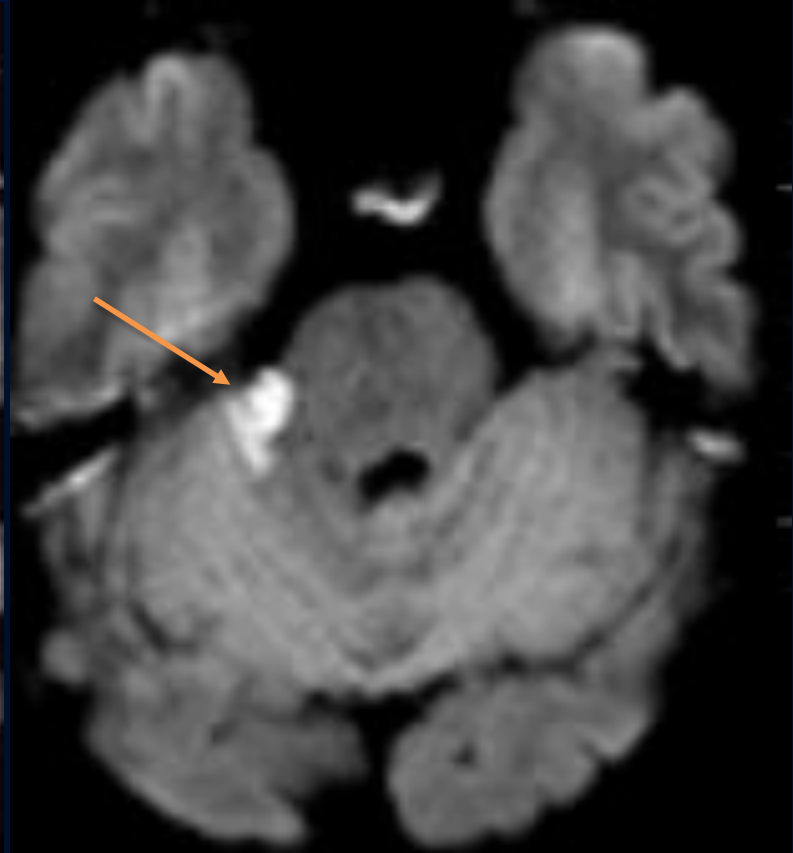
UCONN
HEALTH

RADIOLOGY

Epidermoid cyst fluid is not isointense to CSF on ADC (yellow arrow).
Marked restriction of diffusion is seen on DWI (orange arrow)



Apparent diffusion
coefficient, (ADC) axial



Diffusion weighted,
(DWI) axial

Epidermoid cysts

- An inclusion cyst:
 - Benign congenital lesions of ectodermal origin.
 - 1% of all intracranial lesions
 - Increase in size as the patient ages, usually asymptomatic until age 20-40.
 - Most common locations:
 - Cerebellopontine angle (40-50%), supracellar cistern (10-15%), fourth ventricle (~17%).

Epidermoid cysts

- Presentation:
 - Headaches (most common).
 - Cranial nerve deficits (tinnitus, vertigo, etc)
 - Cerebellar symptoms
 - Seizures
 - Recurrent aseptic meningitis (from cyst rupture)

Epidermoid cysts

- CT Findings:
 - Attenuation similar to CSF.
 - Calcifications seen in 10-25%.
 - No contrast enhancement.
- MRI Findings:
 - Typically have intensity similar to CSF on T1 and T2 (can be dirty CSF).
 - No contrast enhancement.
 - Heterogeneously hyperintense to CSF on FLAIR
 - Similar to brain parenchyma on ADC (significant restriction)
 - Hyperintense on DWI (B1000)

Epidermoid cysts

- Differential diagnosis and distinguishing characteristics of CPA cystic lesions:
 - CSF collections (arachnoid cyst or mega cisterna magna).
 - Follow CSF on ALL sequences, including FLAIR and DWI.
 - Dermoid Cyst
 - Often fat density due to sebum, and often located along the midline.
 - Neurocysticercosis
 - Depends on stage of cysticercus. Live cysticercus follows CSF except for scolex. Later cysticercus is nonspecific ring lesion.
 - Cystic tumors (acoustic schwannoma)
 - Almost always a solid, enhancing component

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4. Tampieri D, Melanson D, Ethier R. MR imaging of epidermoid cysts. *American Journal of Neuroradiology*. 1989; 10(2): 351-356.