

50-year-old asymptomatic female presenting after a motor vehicle accident

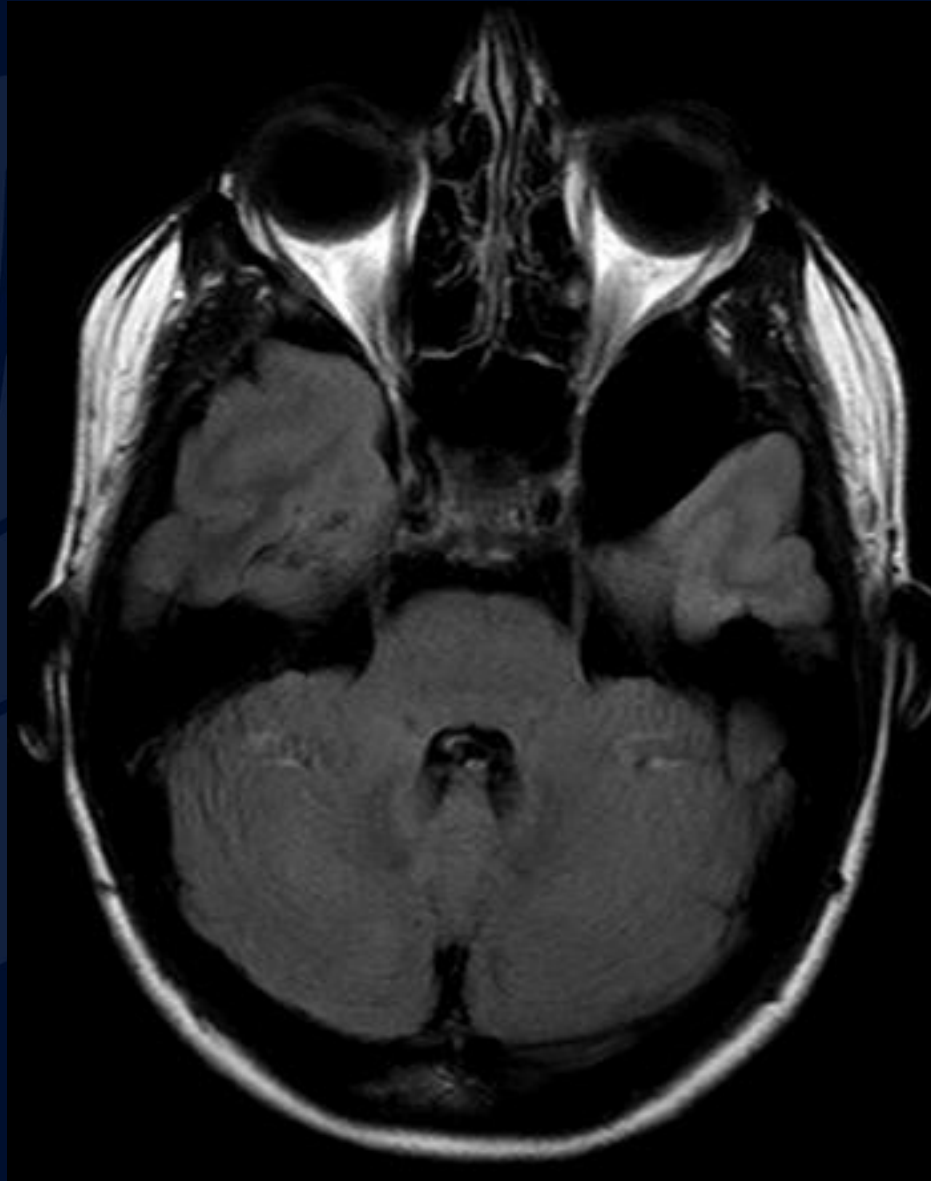
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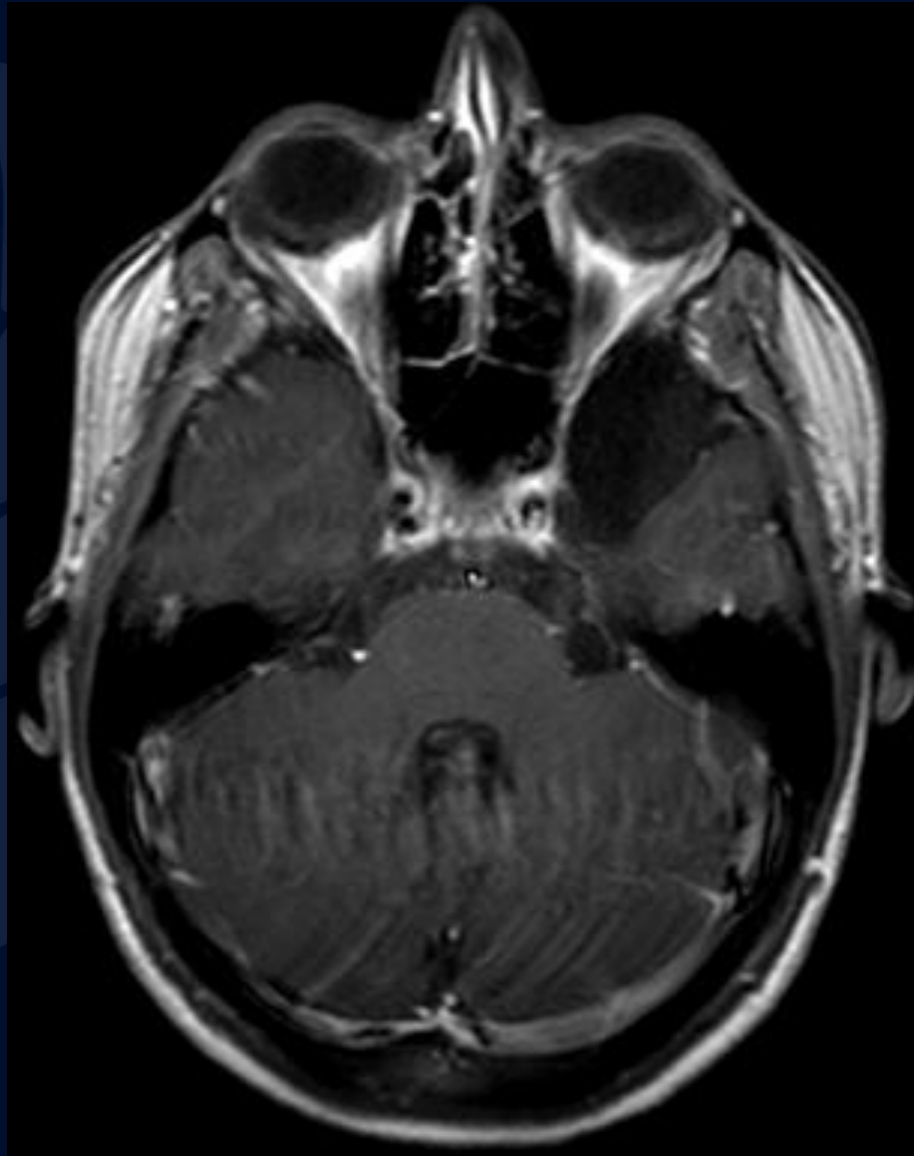
MR T2



MR FLAIR



MR T1 C+



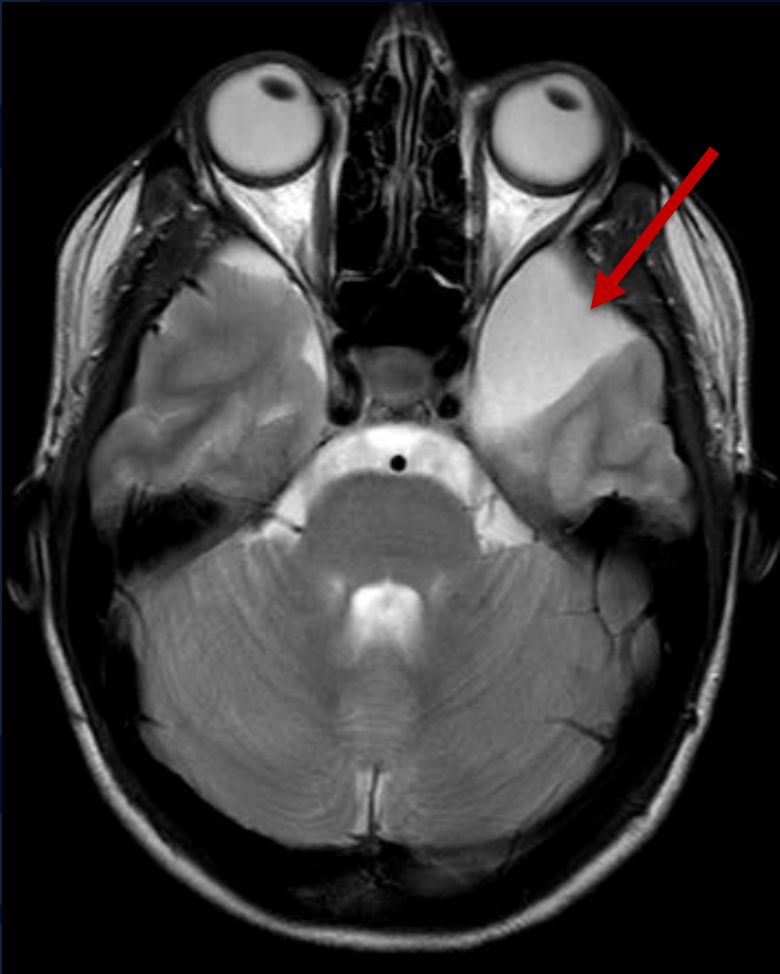


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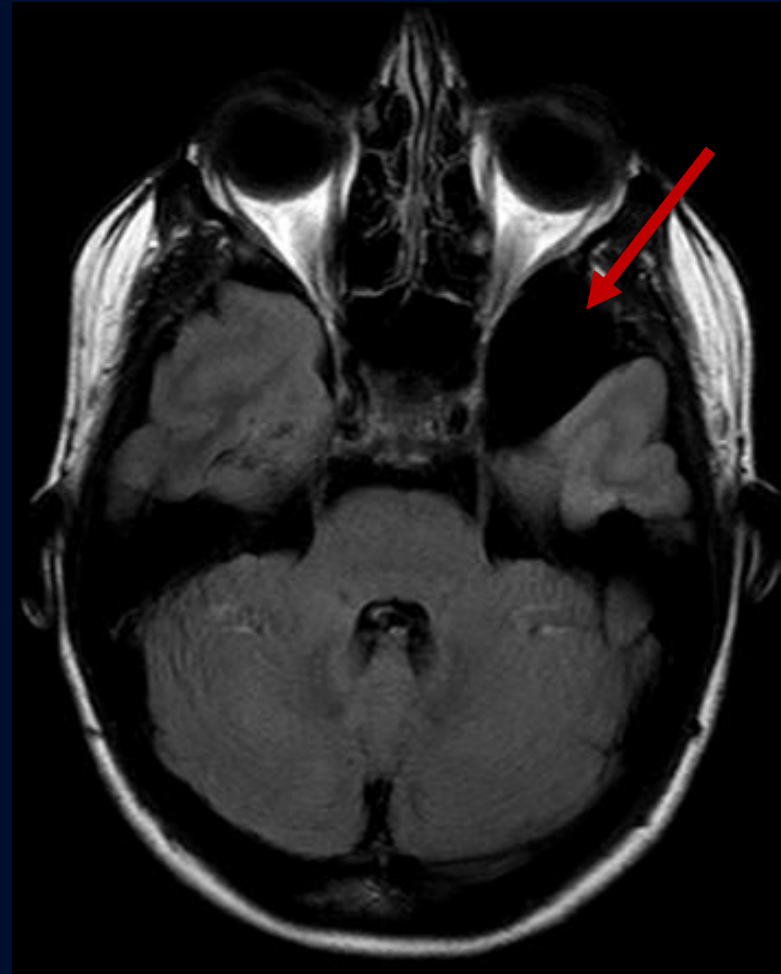
A large, stylized oak leaf graphic in a dark blue color, positioned on the left side of the slide. The leaf has a prominent central vein and several smaller veins branching off it. The leaf's edge is serrated.

Arachnoid Cyst

T2

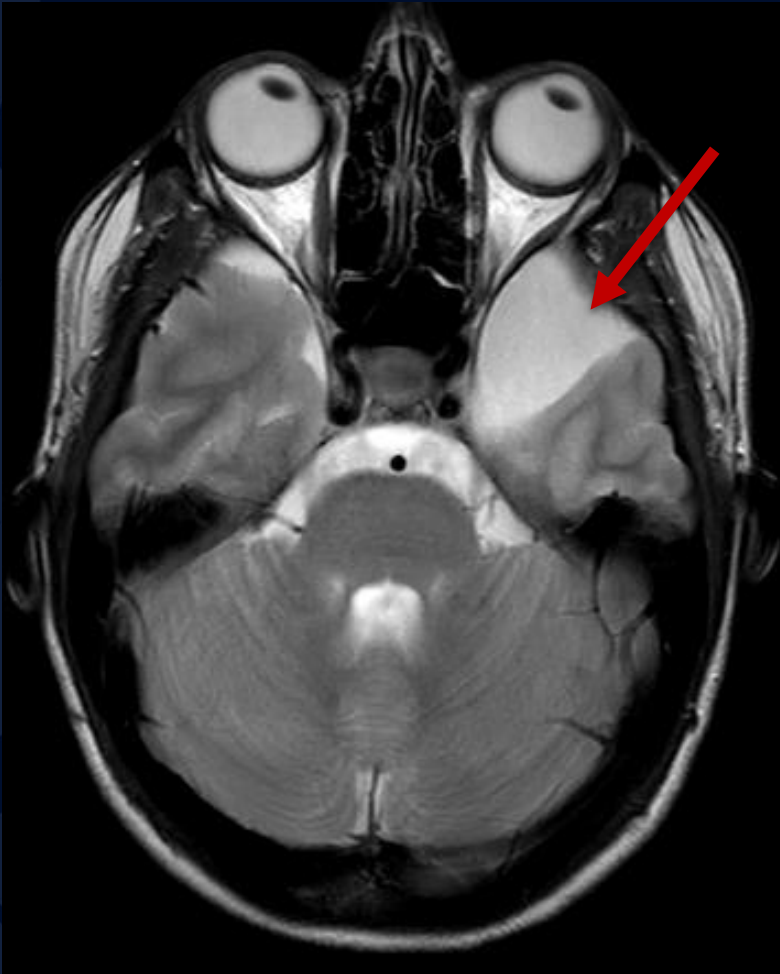


FLAIR

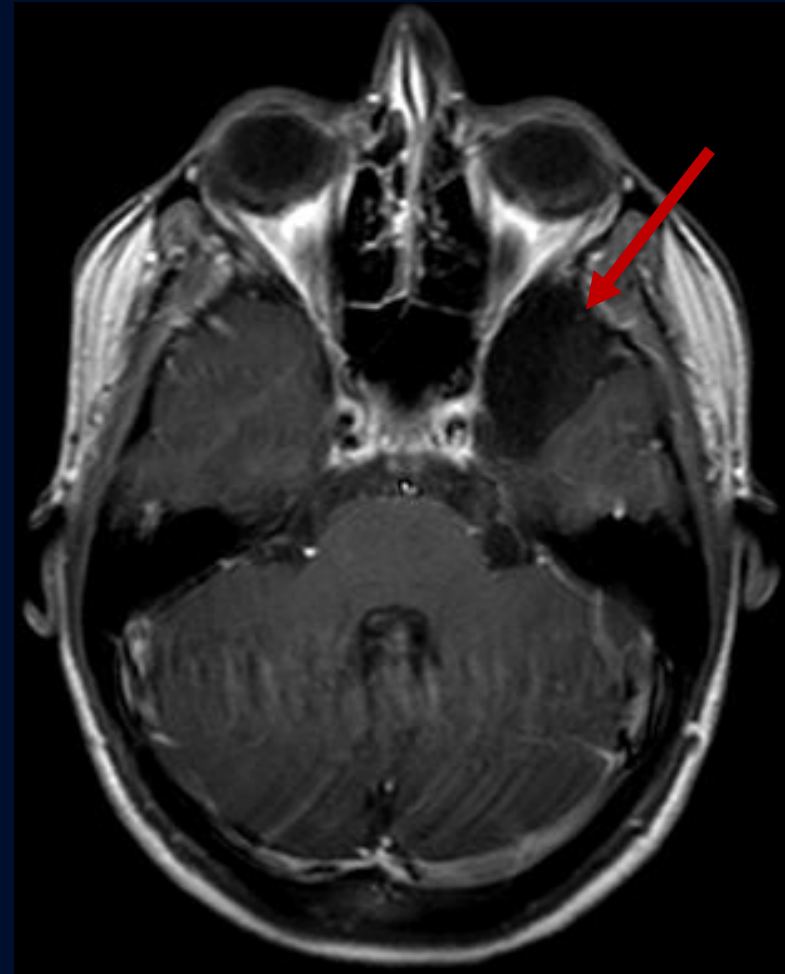


Sharply marginated T2 hyperintense fluid collection which suppresses on FLAIR

T2



T1 C+



T2 hyperintense cystic lesion in the middle cranial fossa without solid component.

Does not enhance on post-contrast imaging.

Arachnoid Cyst

Arachnoid cyst is a relatively common, benign and typically asymptotic intra-arachnoid CSF containing sac.

Pathophysiology

- Arise from congenital splitting of the arachnoid layer with accumulation of CSF within this space. Cyst wall is composed of flattened arachnoid cells forming a thin, translucent membrane

Clinical Presentation

- Most often asymptomatic
- Approximately 5% are symptomatic due to mass effect resulting in headaches, seizures, dizziness, etc.

Imaging Findings

CT

- Non-enhancing, sharply marginated lesion with the same density as CSF and an imperceptible wall
- May expand, thin or remodel adjacent bone
- May exert mass effect, resulting in displacement of intracranial vessels

MRI

- Sharply marginated extra-axial fluid collection with same signal characteristics as CSF on all sequences
 - Suppresses on FLAIR just as CSF does
- No blooming artifact on GRE/SWI, unless hemorrhage is present which is extremely rare
- No restriction
- No enhancement
- +/- displacement of vessels on MRA/MRV due to mass effect

References

Gaillard F, Gajera J, Mishra H, et al. Arachnoid cyst. Reference article, Radiopaedia.org (Accessed on 03 Oct 2023) <https://doi.org/10.53347/rID-929>

Al-Holou WN, Terman S, Kilburg C, Garton HJ, Muraszko KM, Maher CO. Prevalence and natural history of arachnoid cysts in adults. J Neurosurg. 2013 Feb;118(2):222-31. doi: 10.3171/2012.10.JNS12548. Epub 2012 Nov 9. PMID: 23140149.