

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

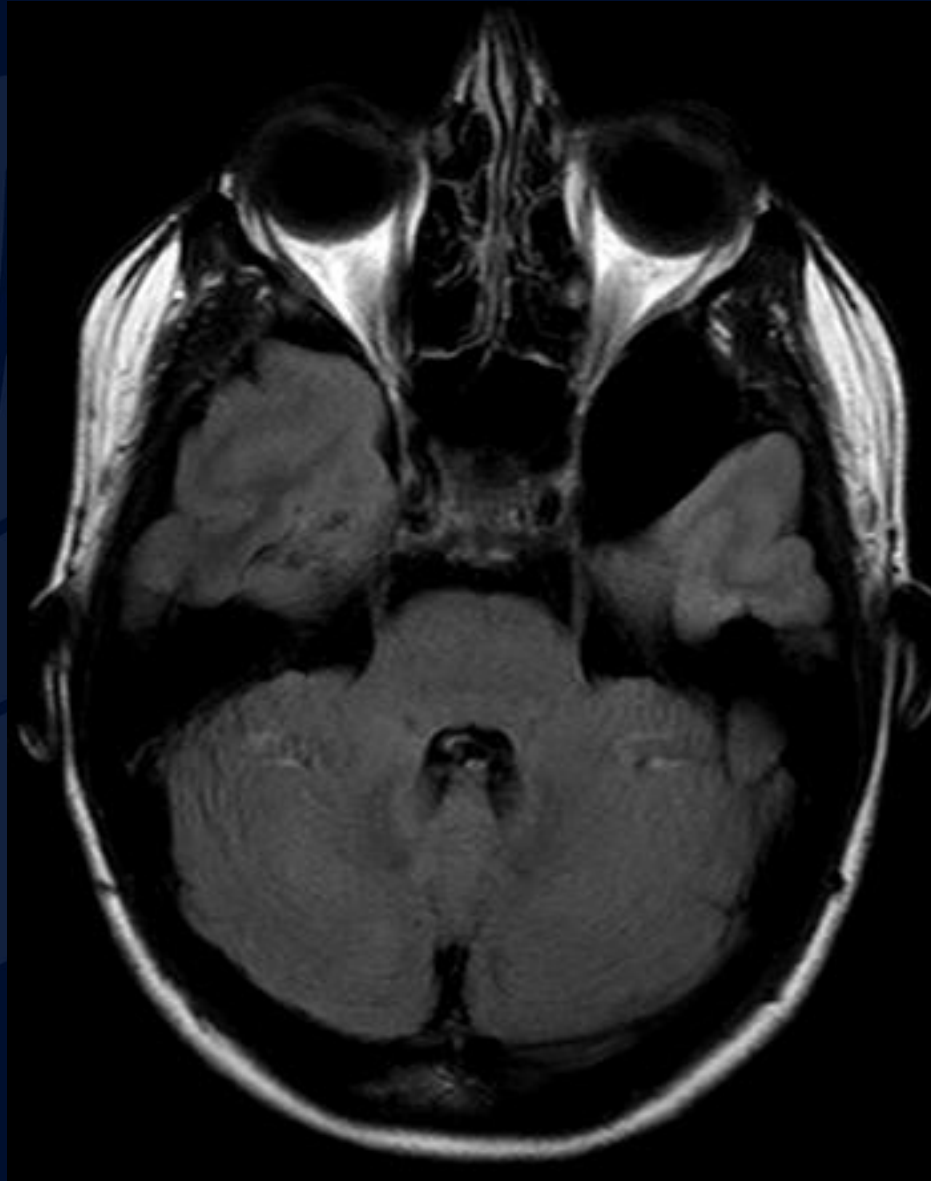
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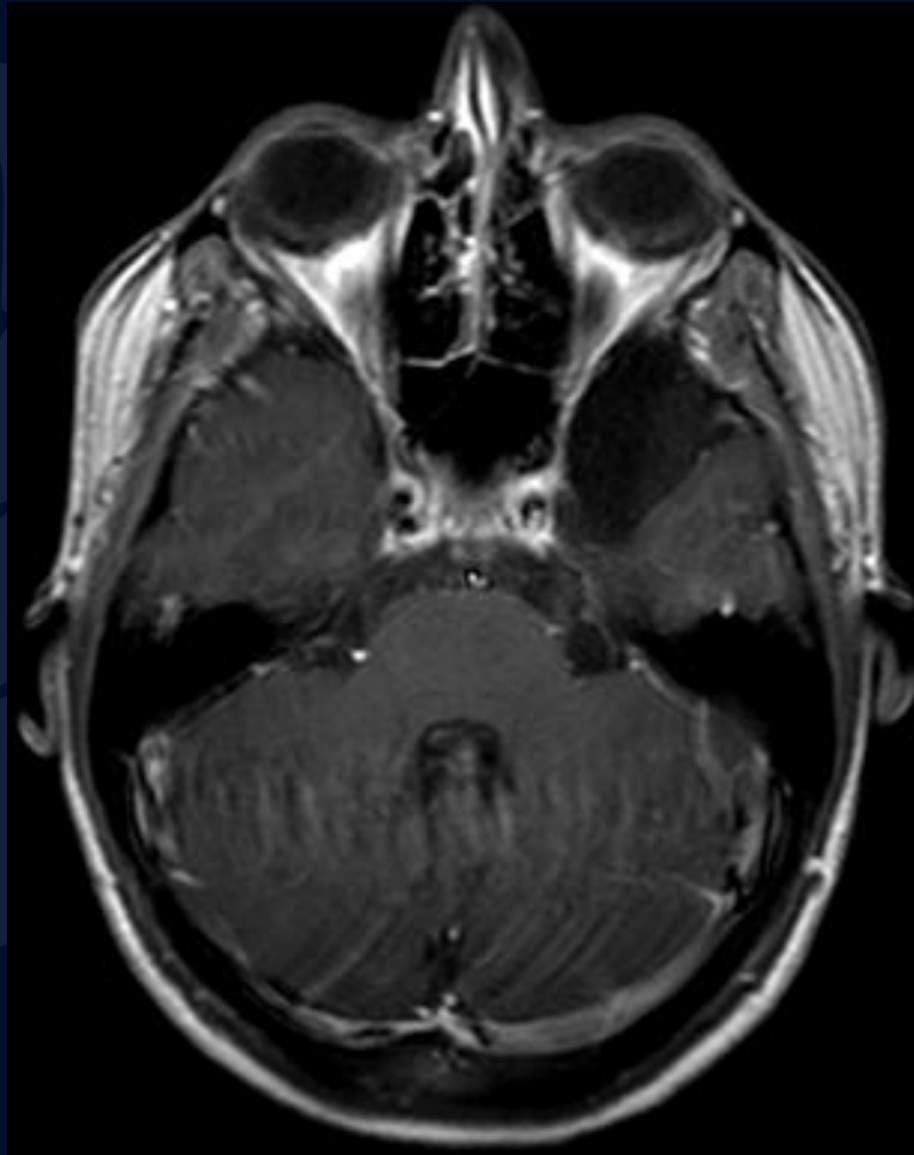
MR T2



MR FLAIR



MR T1 C+



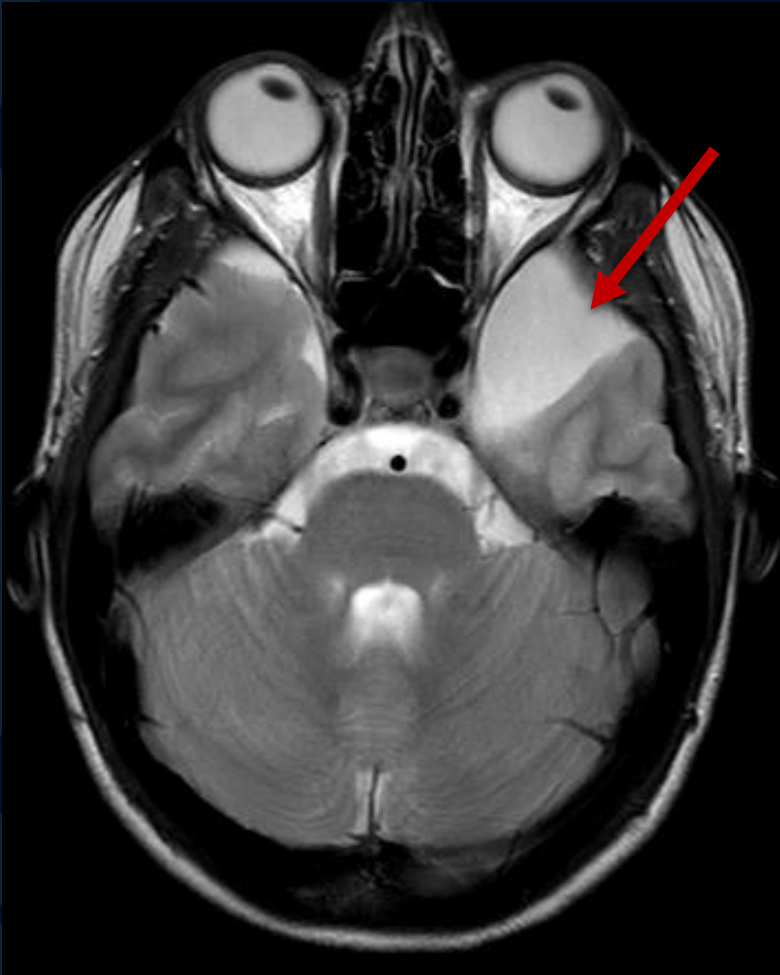


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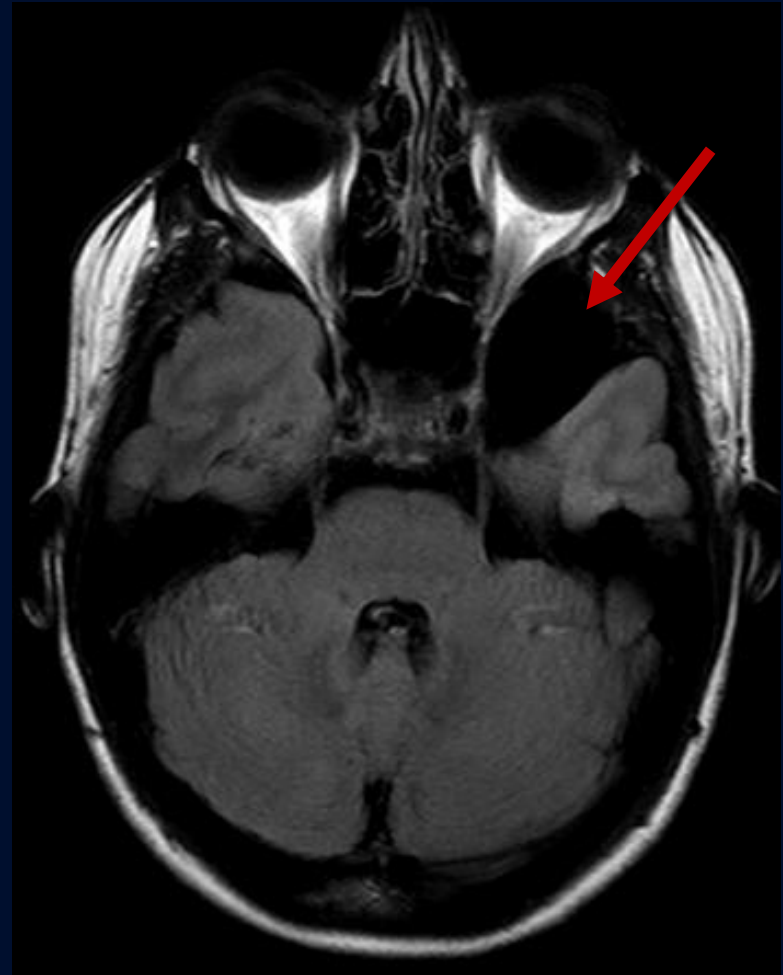
A large, stylized oak leaf graphic in a dark blue color, positioned on the left side of the slide. The leaf has a prominent central vein and several smaller veins branching off, with a wavy, lobed edge.

Arachnoid Cyst

T2

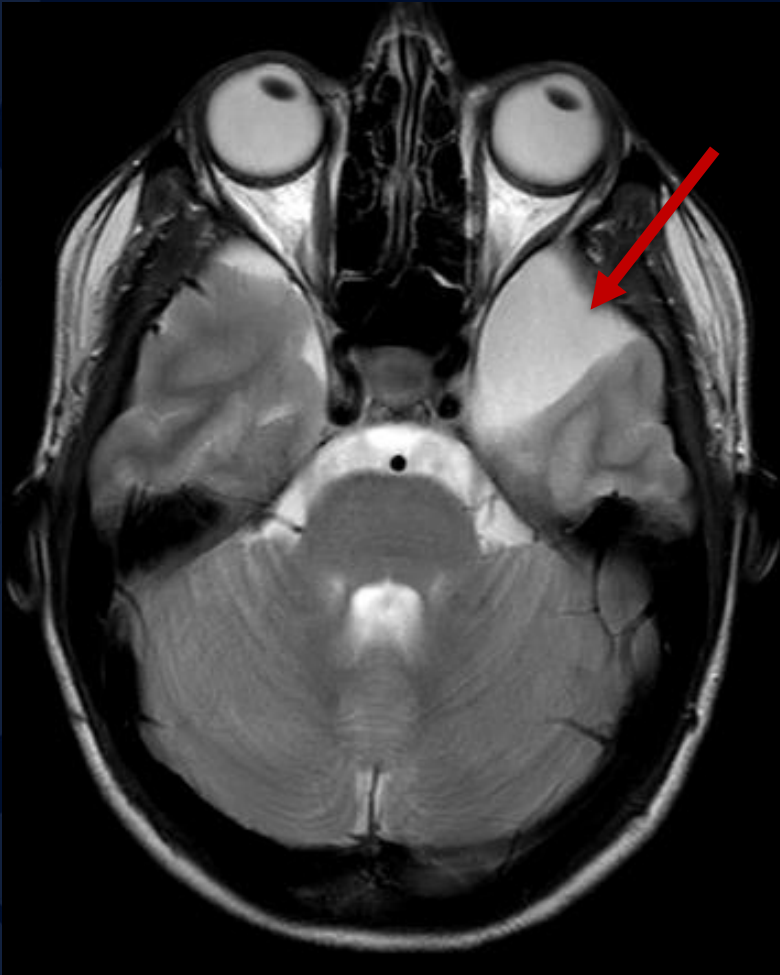


FLAIR

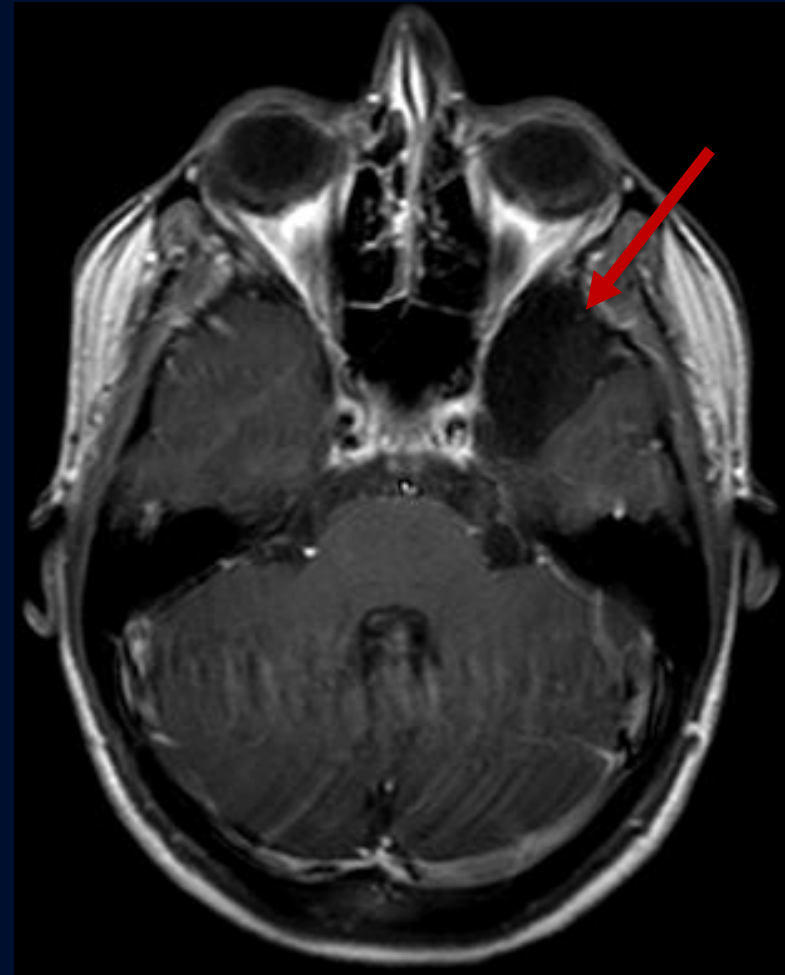


Sharply marginated T2 hyperintense fluid collection which suppresses on FLAIR

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.