30-year-old male with positional thunderclap headache

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Axial CT
Non-Contrast

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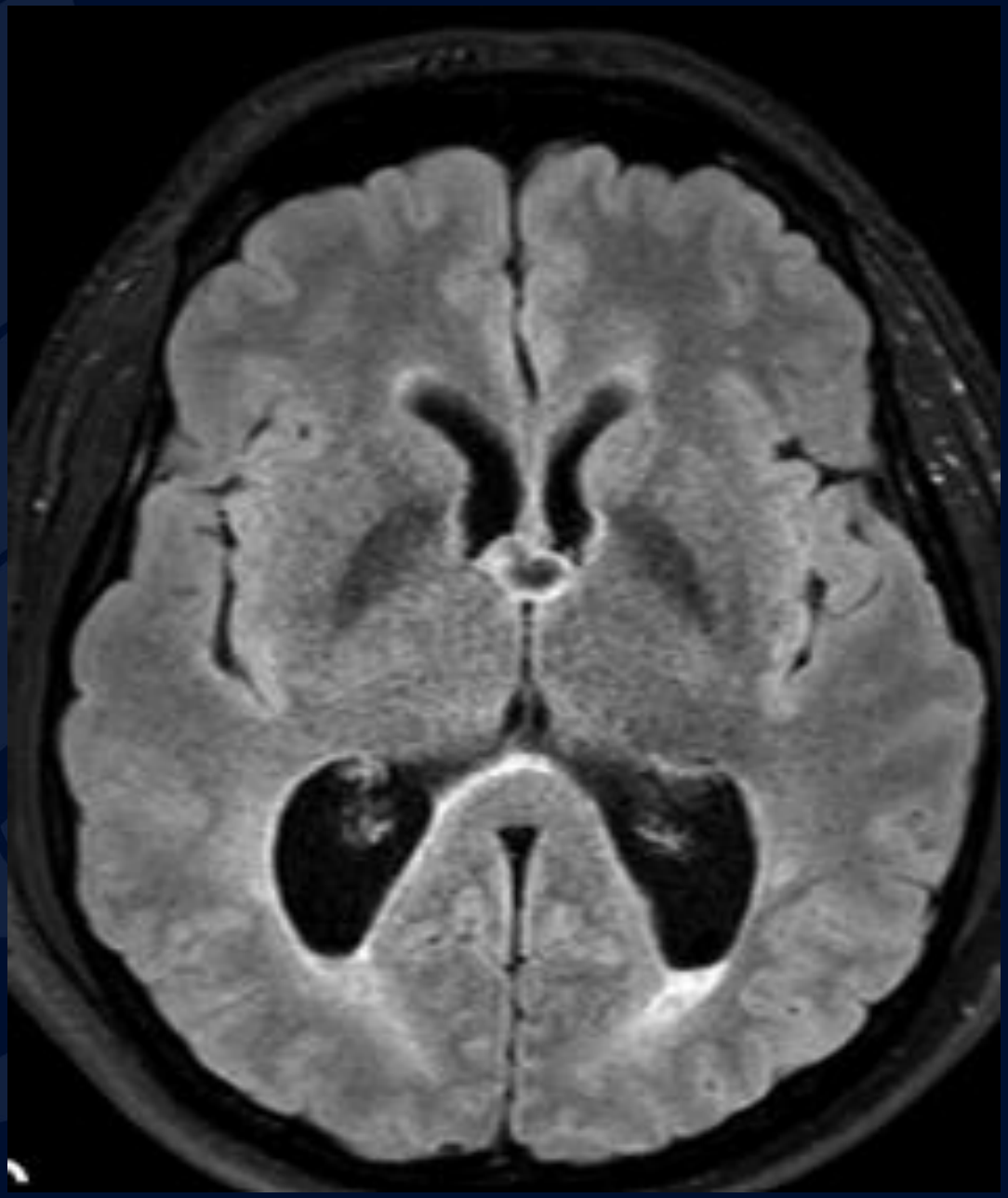

Axial Flair

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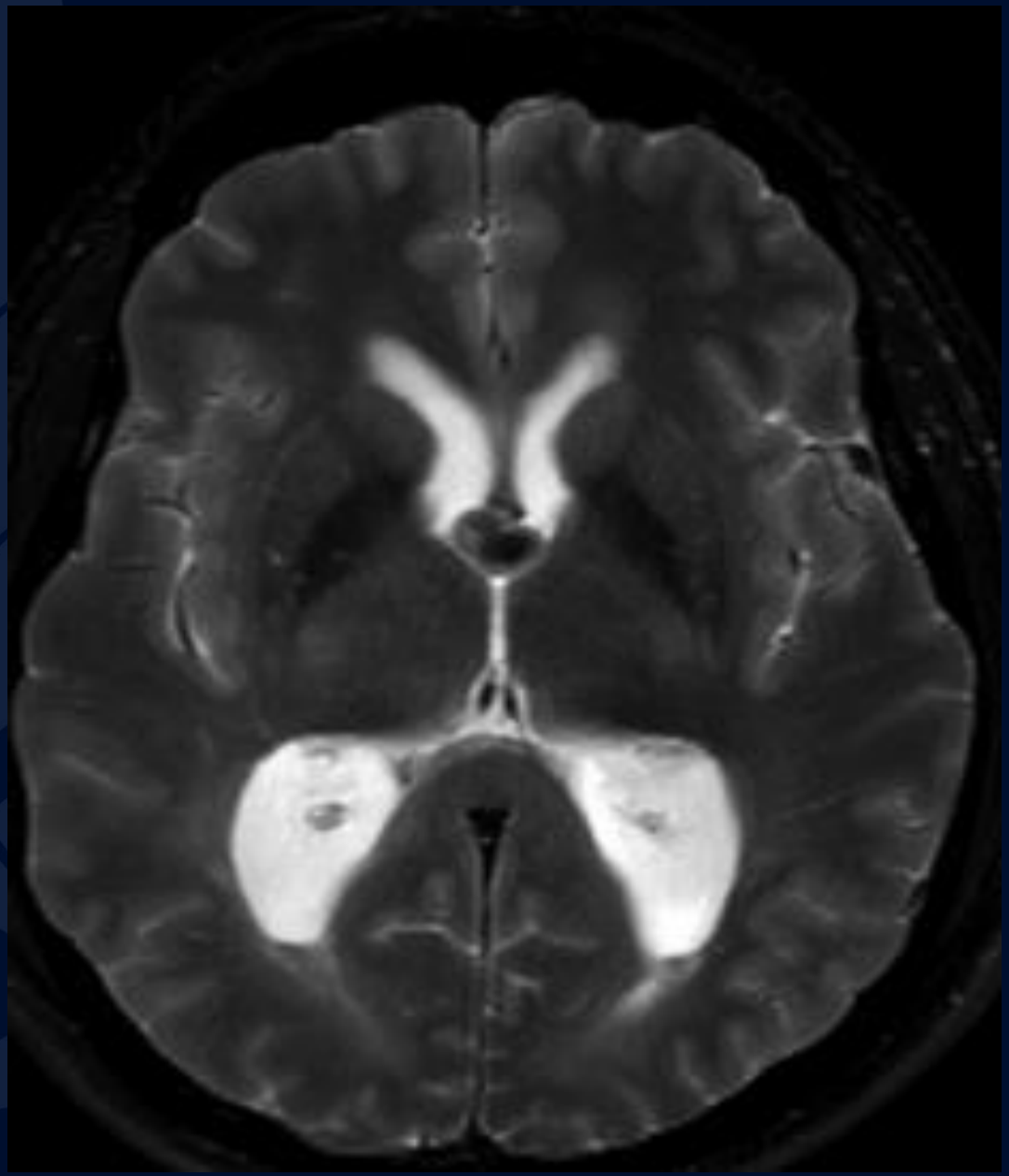

Axial T2

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Colloid Cyst

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Axial CT
Non-Contrast

Hyperdense Lesion at Foramen of Monro

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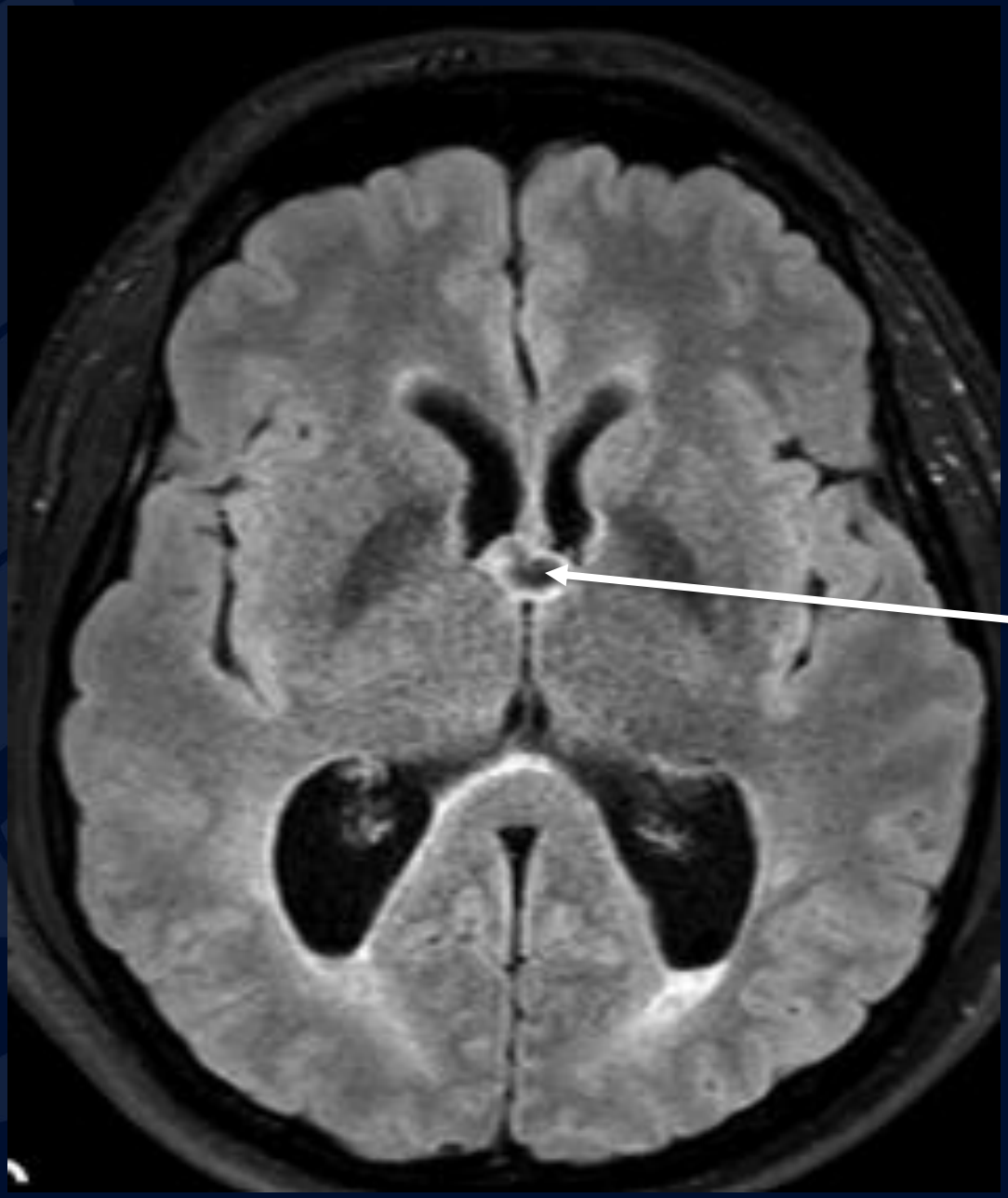

Axial Flair

Decreased signal intensity lesion

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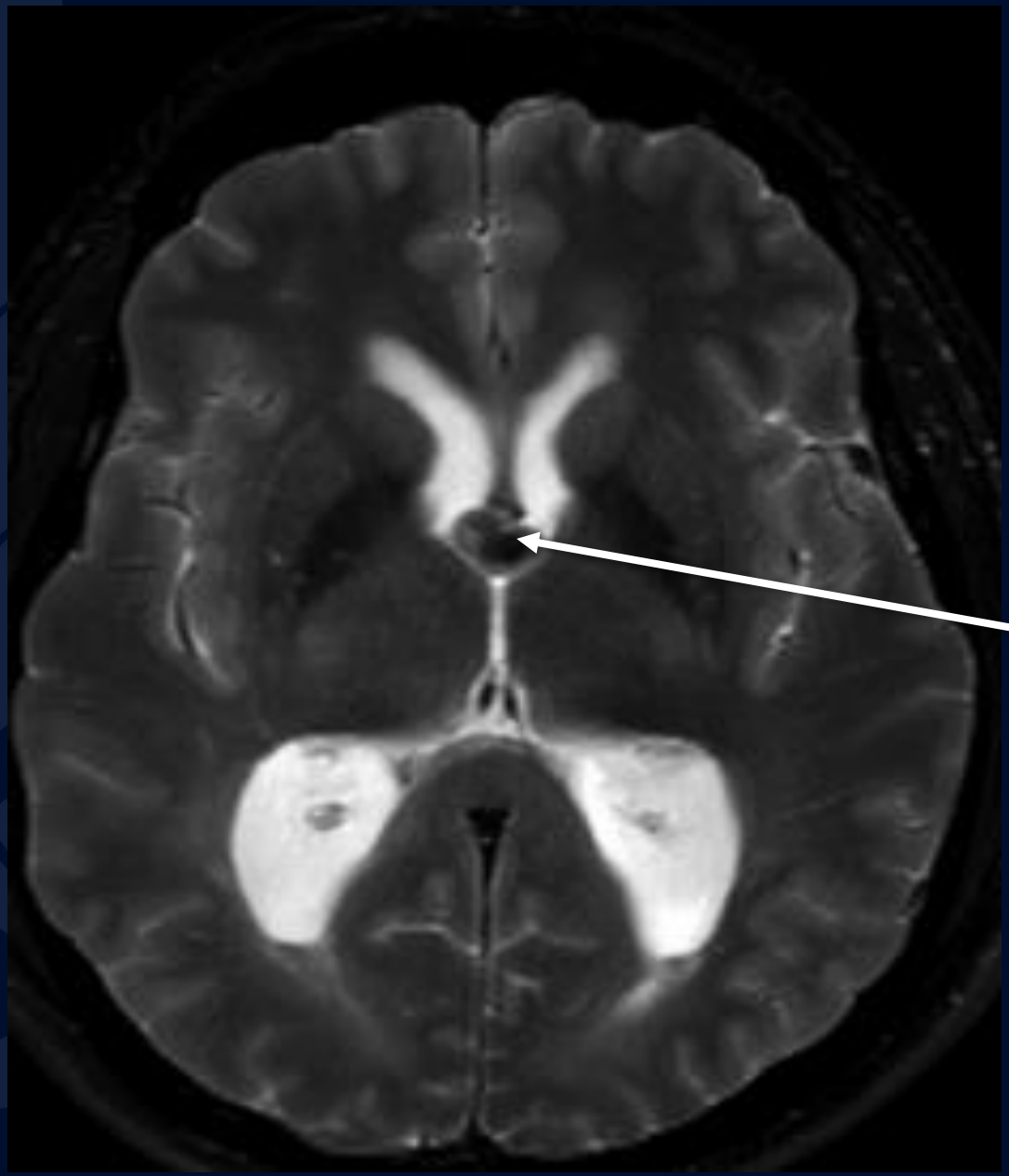

Axial T2

Decreased signal intensity lesion

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Colloid Cyst

- 0.1-1 % of primary brain tumors and 15-20% of intraventricular masses.
- Although congenital lesions, CCs (COLLOID CYST) rarely present in the pediatric population and typically come to attention in the **4th and 5th decades**.
- CCs occur almost exclusively within the **third ventricle near the foramen of Monroe** where they may obstruct CSF flow resulting in sudden neurologic deterioration and death.
- **A CC risk score (CCRS)** has been proposed in the neurosurgical literature that, in addition to patient age and presence of a headache, incorporates the following imaging variables:
  - **Risk zone** (location in the third ventricle near the foramen of Monroe or aqueduct of Sylvius), **cyst size > or =7 mm**, and **hyperintensity on T2-FLAIR**

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Imaging Appearance

- **CT**: Typically well-defined , rounded lesion at the roof of third ventricle, unilocular, typically hyperdense, calcification and iso or hypodense cyst are uncommon
- **MRI**: T1: Variable, 50% usually high T1 signal, T1 post contrast: rarely thin rim enhancement, T2: Variable, most are low T2 or T2* signal due to thick “motor oil” consistency of fluid, Flair: similar to CSF signal- difficult to see
- **Key features for report**: Size of cyst, T2 signal (low signal- difficult to aspirate), Hydrocephalus present or absent, Cavum septum presence or not, Internal cerebral vein location, and other vascular abnormality such as DVA present or not.

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Treatment & Prognosis

- Colloid cyst gradually increased in size over time and if resection needed usually via endoscopically or microsurgical method via trans cortical or transcallosal approach.
- Large and symptomatic, decision to operate can be life saving.
- Smaller lesions without symptoms, careful discussion between patient and surgeon.
- Colloid Cyst Risk Score (CCRS): Prognostic predictor of the risk associated with lesion such as obstructive hydrocephalus.
- Hyperintensity on Flair, Homogenous, rim or dot sign associated with larger cyst size and young patient age, and is an imaging risk factor for obstructive ventriculomegaly in literature.
- No association between T1 hyperintensity, CT attenuation and obstructive ventriculomegaly in literature.

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References

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