

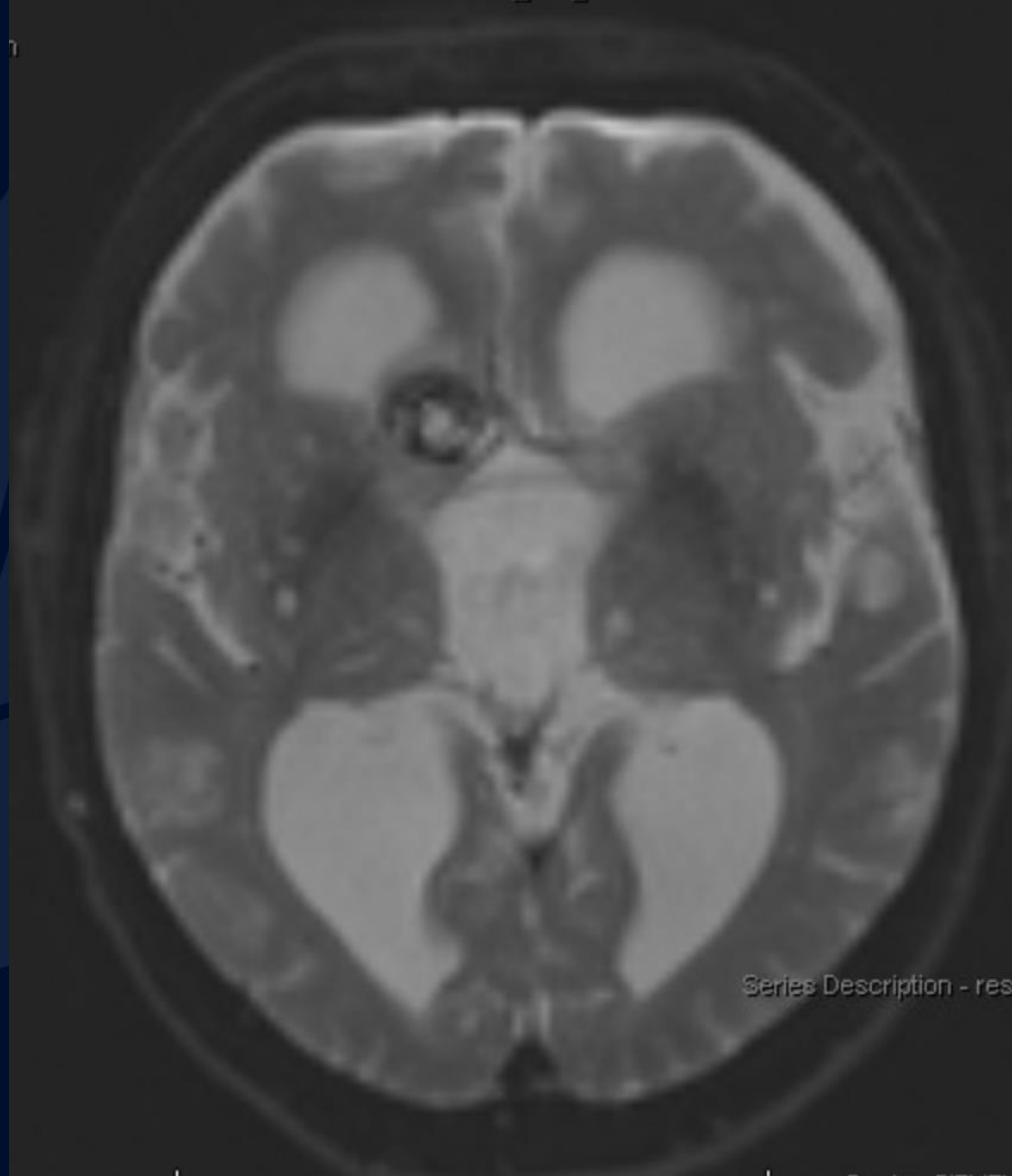
77-year-old male with a history of hypertension and depression presenting with cognitive decline and decreased concentration

Emma Mastrobattista, MS3

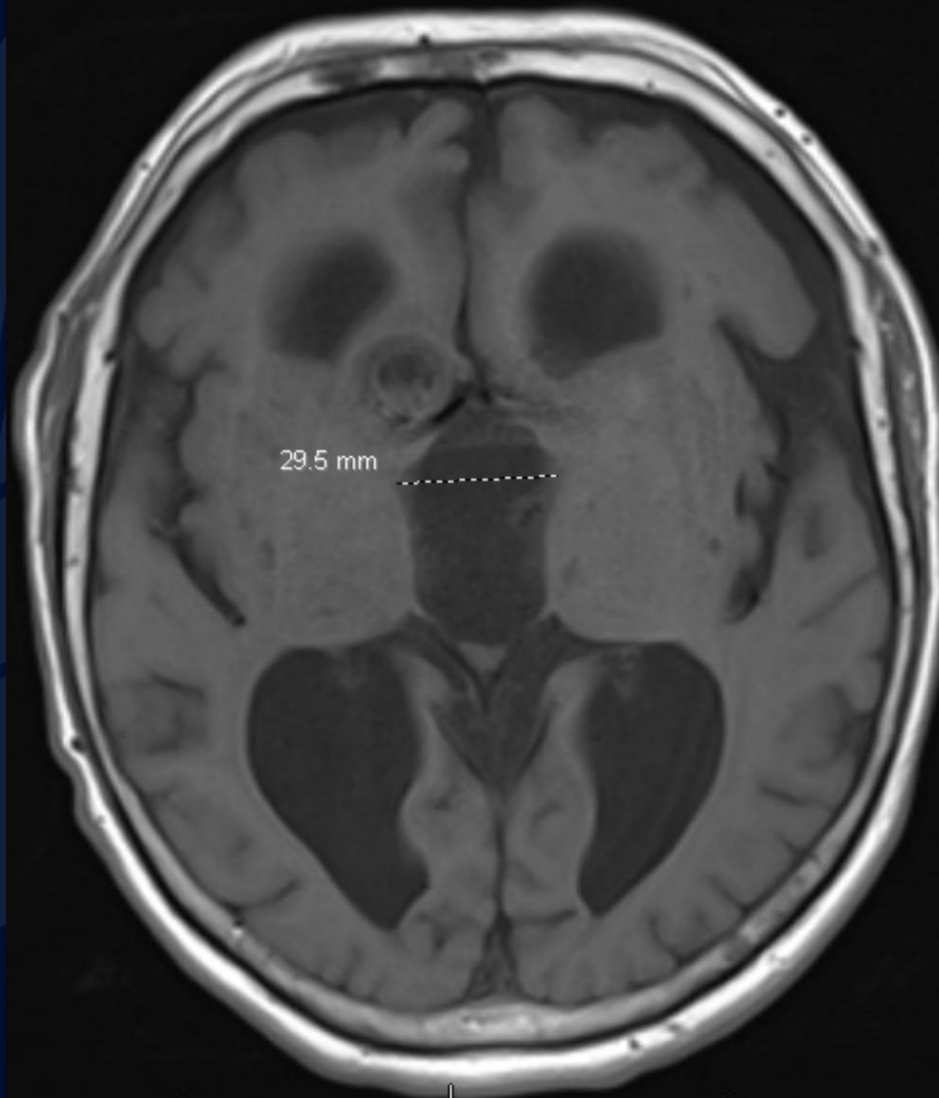
T2



T2 FS



T2 flair



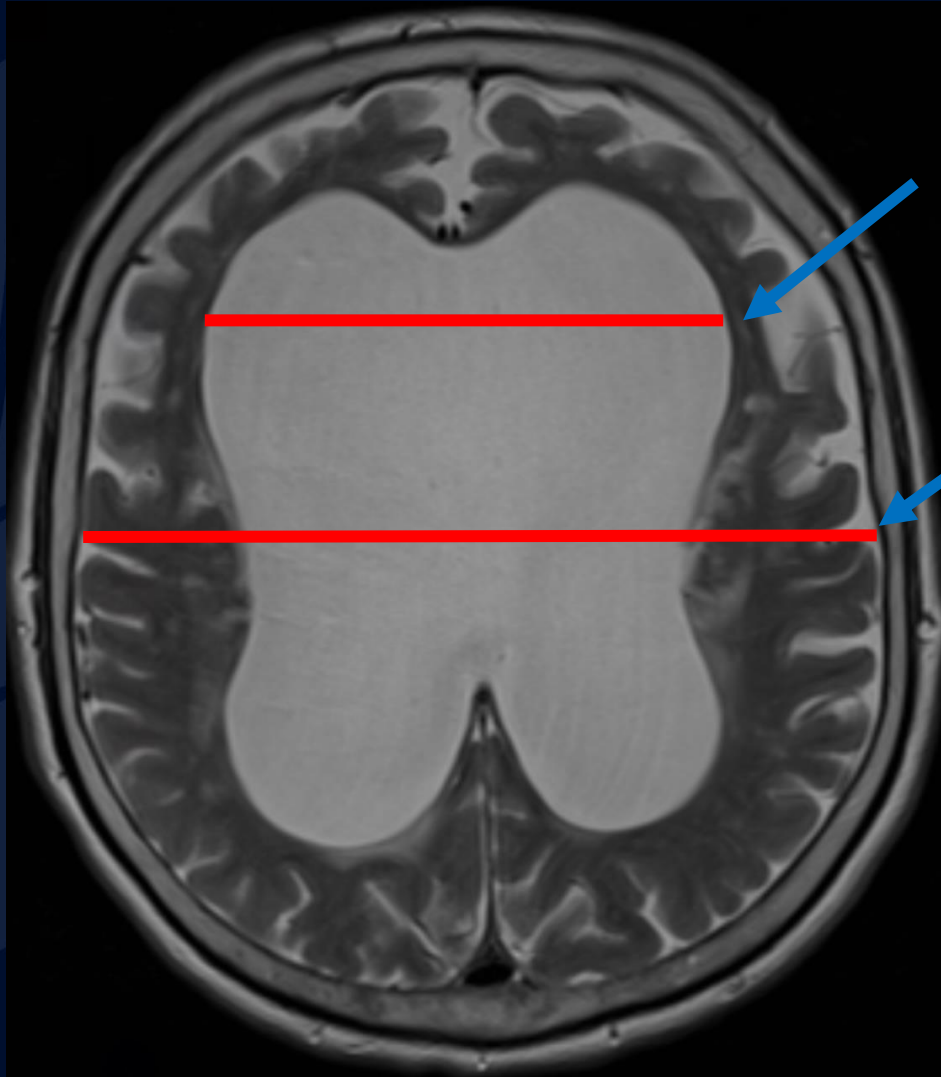
A large, stylized oak leaf graphic in a dark blue color, positioned on the left side of the slide. It features detailed vein patterns and a lobed edge.

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Communicating Hydrocephalus

T2

Dilation of the lateral ventricles



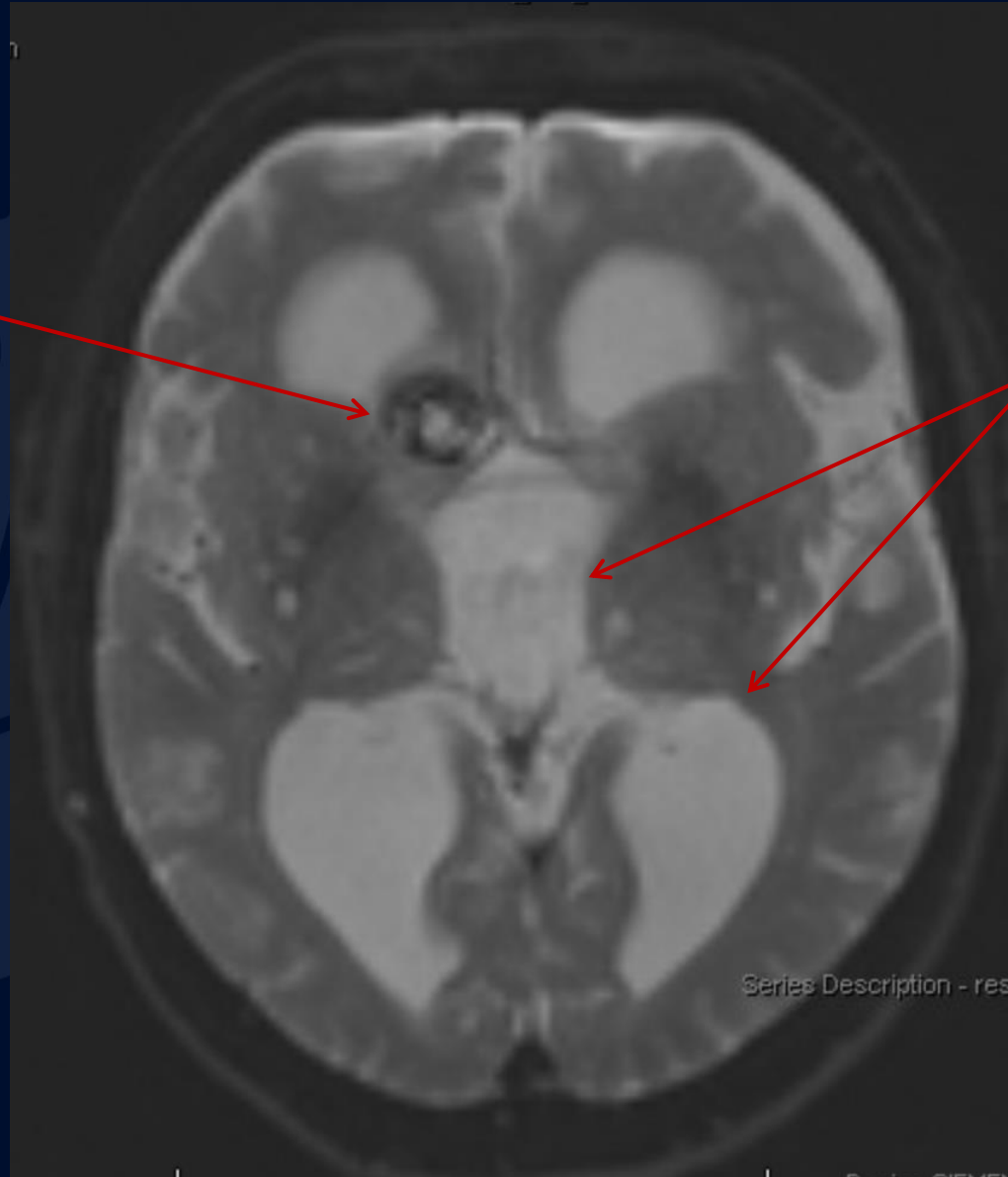
Width of the frontal horns of the lateral ventricles = 92 mm

Width of internal diameter of the skull = 153 mm

Evans index = 0.60

Normal = 0.2 - 0.25

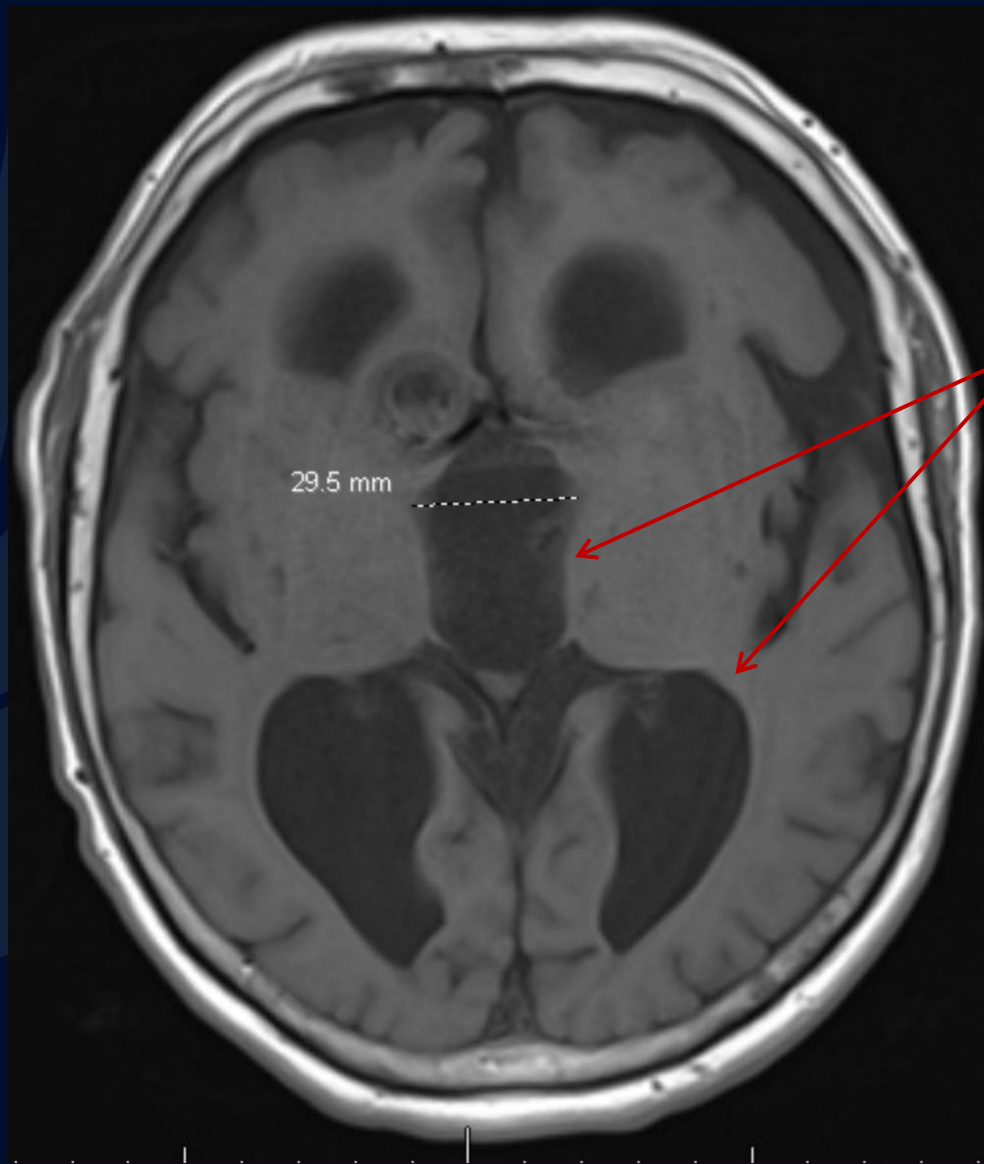
T2 FS



Saccular aneurysm
of the right ICA
incidentally noted

Dilation of the
lateral and 3rd
ventricles

T2 flair



Dilation of the lateral and 3rd ventricles

Communicating Hydrocephalus

Flow of CSF is blocked after it exits the ventricles; termed “communicating because CSF can still flow between ventricles which remain open

- **Diagnosis**
 - Evan’s index assesses for ventriculomegaly as a ratio of the maximum width of the frontal horns of the lateral ventricles and the maximal internal diameter of the skull being greater than 0.3
- **Epidemiology**
 - Global prevalence is 175 per 100,000 in elderly individuals, higher prevalence in Africa and South America
- **Symptoms**
 - Urinary incontinence, gait dysfunction, and cognitive impairment like executive function, concentration, apathy, and psychomotor slowing.
- **Management**
 - VP shunt to drain CSF from lateral ventricle into peritoneal cavity, ventriculoatrial shunt if patient has abdominal abnormalities such as peritonitis or morbid obesity, lumboperitoneal shunt in cases of pseudotumor cerebri
 - Alternatives to shunting: Endoscopic third ventriculostomy to permit CSF in the 3rd ventricle to enter the prepontine basal cistern (used in cases of aqueductal stenosis), external ventricular drain placement in emergent acute hydrocephalus, lumbar puncture in posthemorrhagic or postmeningitic hydrocephalus

References

Koleva, M. and O. De Jesus, *Hydrocephalus*, in *StatPearls*. 2022: Treasure Island (FL).

Filis, A.K., K. Aghayev, and F.D. Vrionis, *Cerebrospinal Fluid and Hydrocephalus: Physiology, Diagnosis, and Treatment*. Cancer Control, 2017. **24**(1): p. 6-8.

Edwards, R.J., et al., *Chronic hydrocephalus in adults*. Brain Pathol, 2004. **14**(3): p. 325-36.

Kartal, M.G. and O. Algin, *Evaluation of hydrocephalus and other cerebrospinal fluid disorders with MRI: An update*. Insights Imaging, 2014. **5**(4): p. 531-41.