86-year-old female with headaches, altered mental status, and lethargy

Jasmin Williams, MS3

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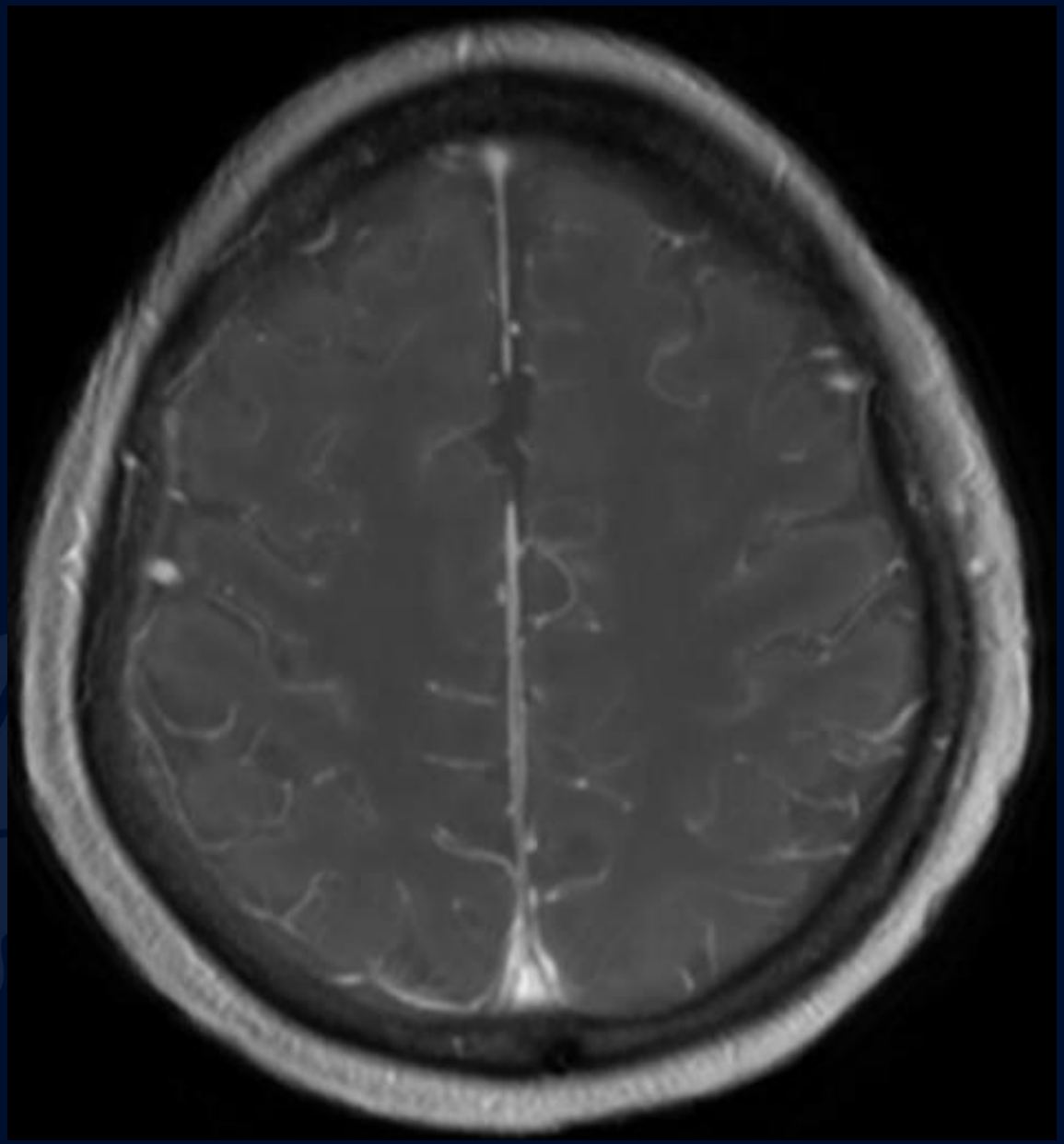
T1



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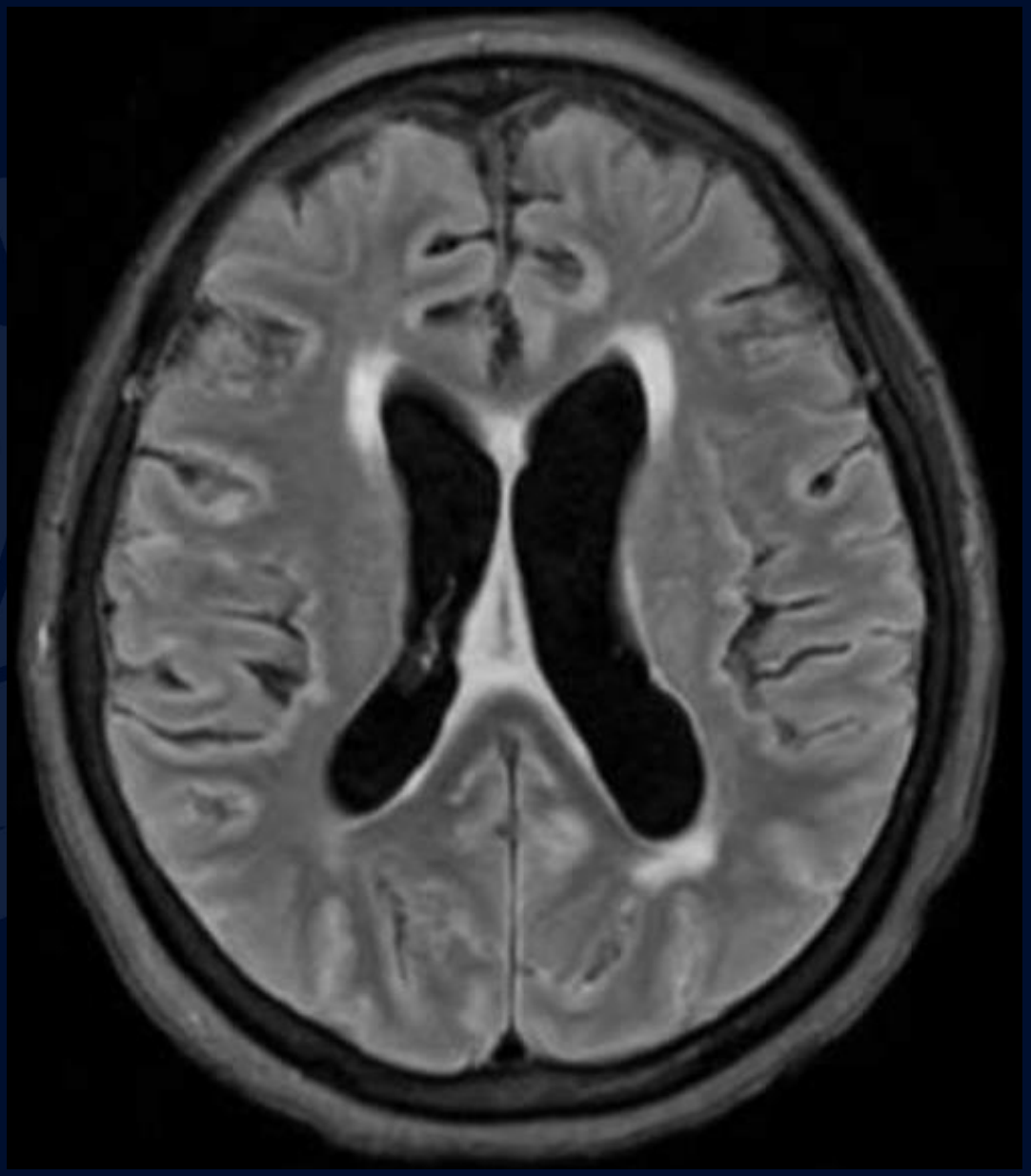
T2



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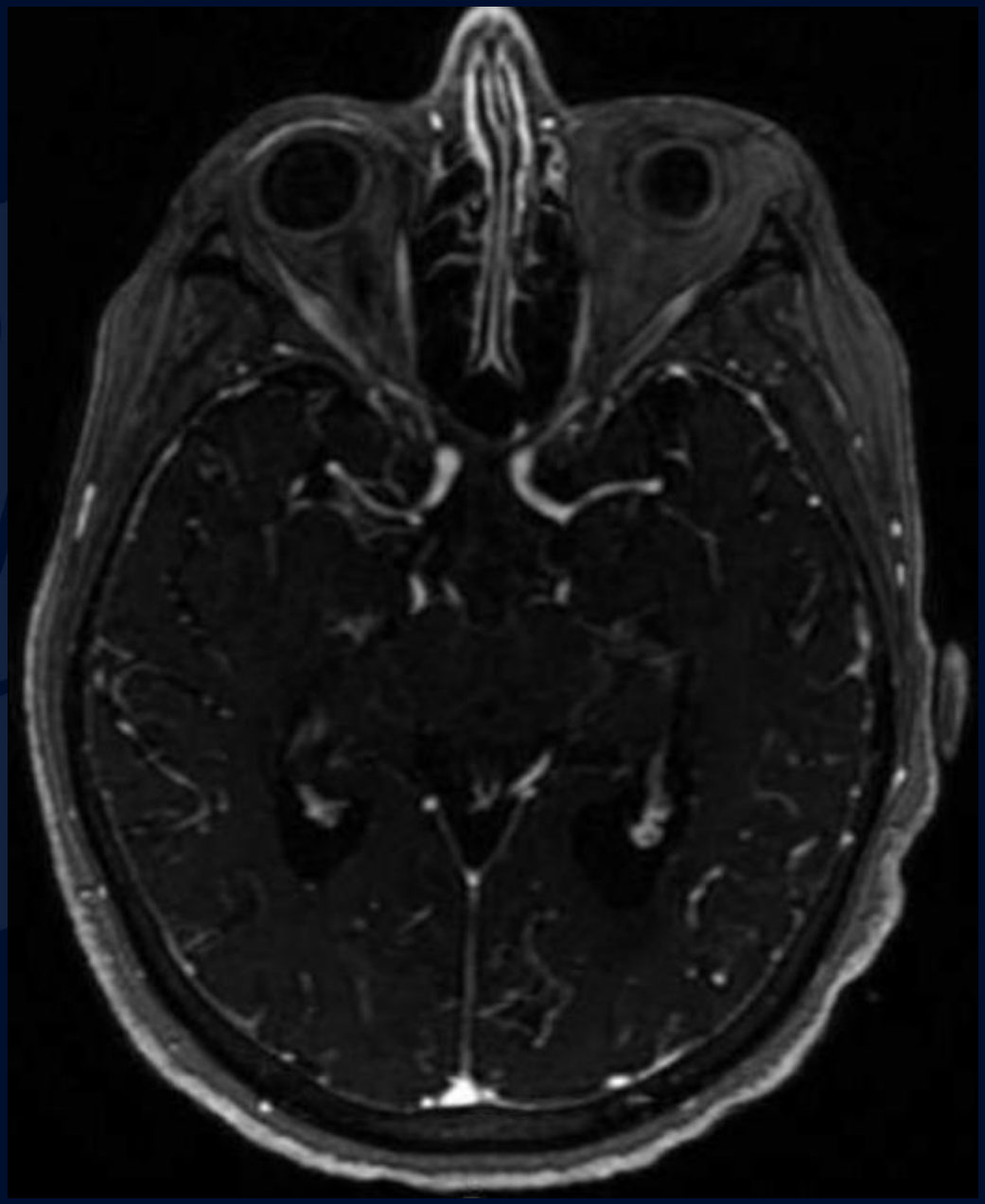
MRA



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Cryptococcal Meningoencephalitis

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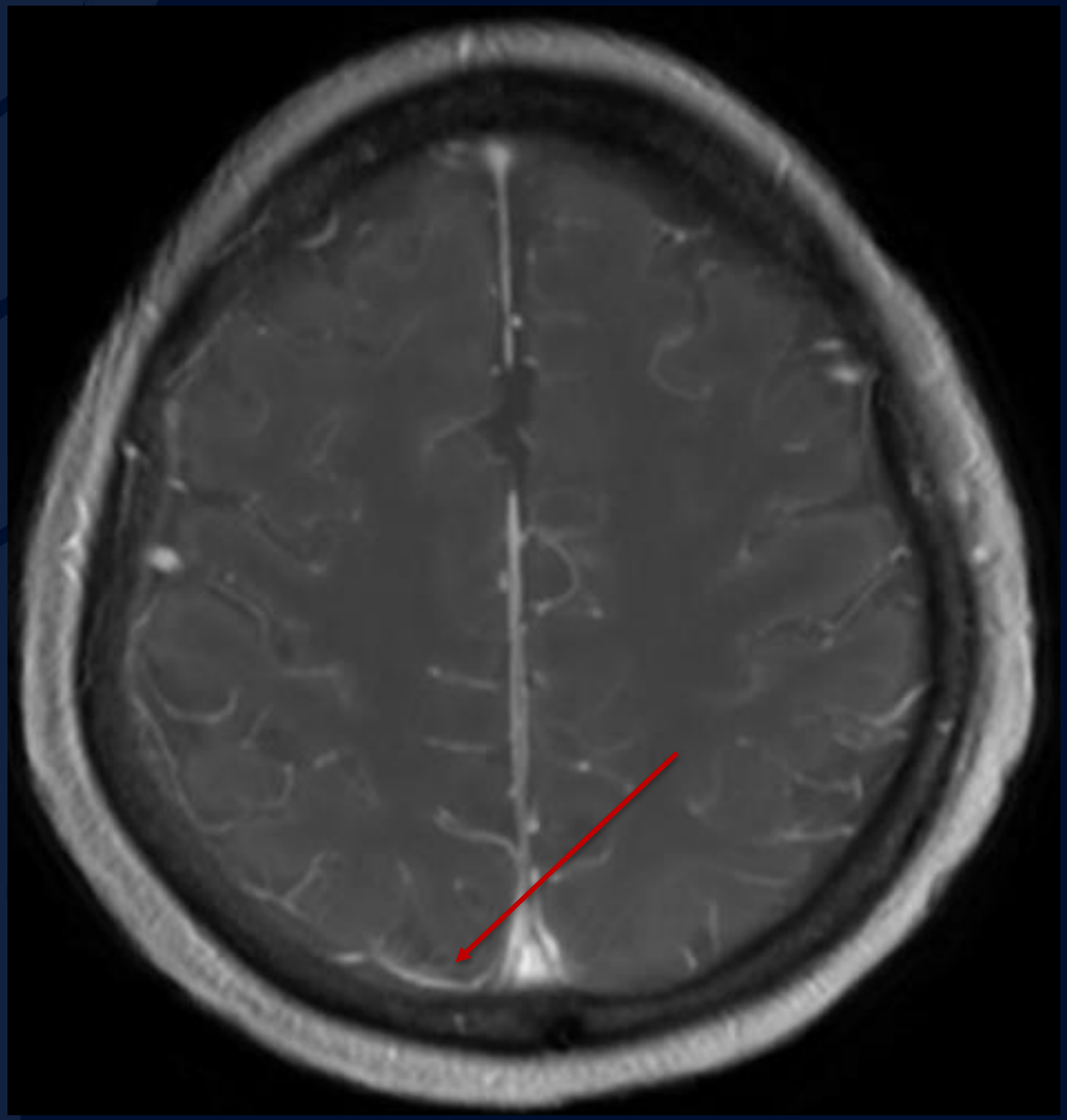
T1



Extensive leptomeningeal enhancement along the periphery of the cerebral hemispheres bilaterally and throughout multiple bilateral cerebral sulci

Findings reflective of meningitis or other leptomeningeal pathology

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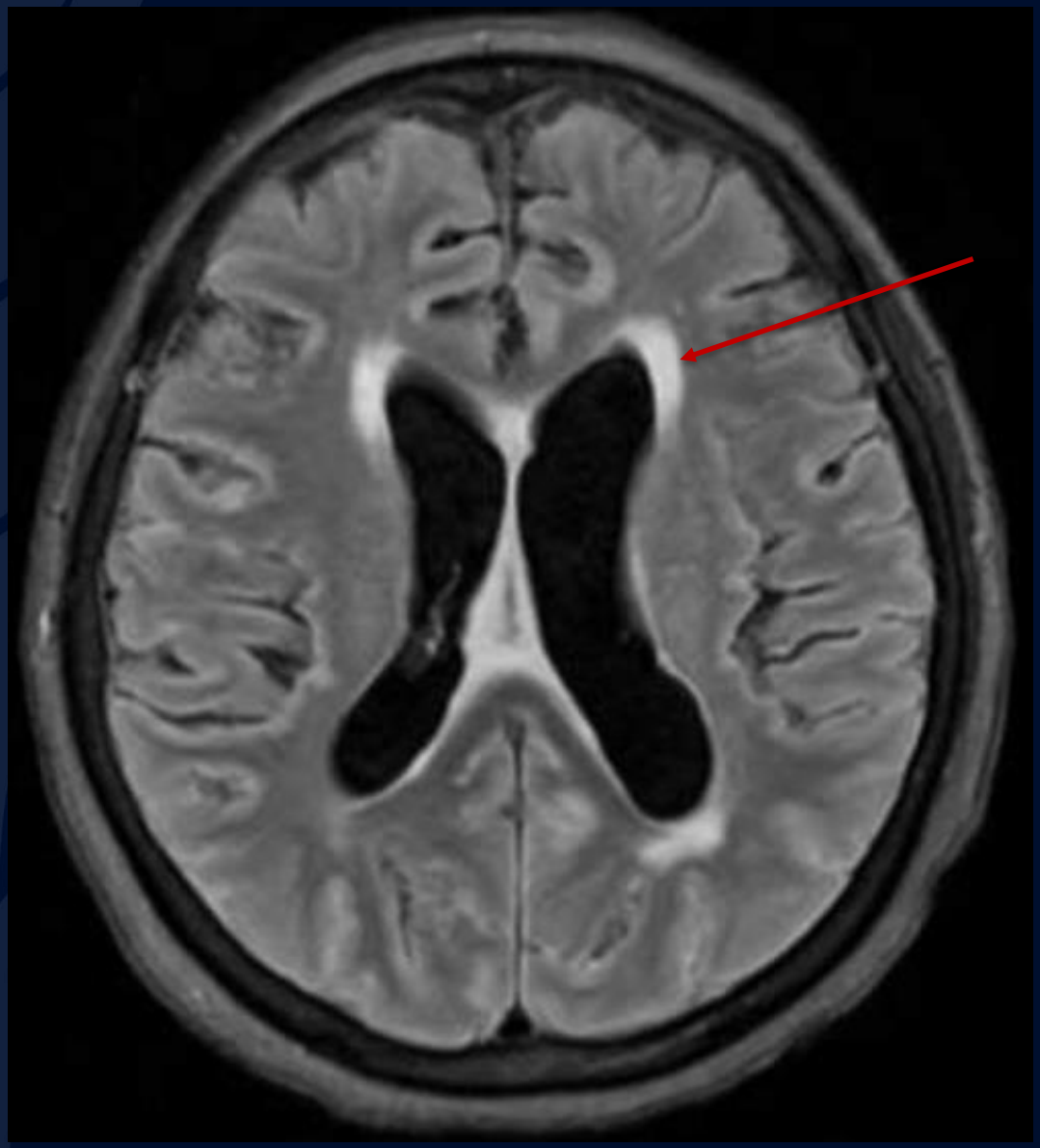
T2



Lateral ventriculomegaly with periventricular T2 signal

Findings concerning for hydrocephalus with trans ependymal CSF effusion

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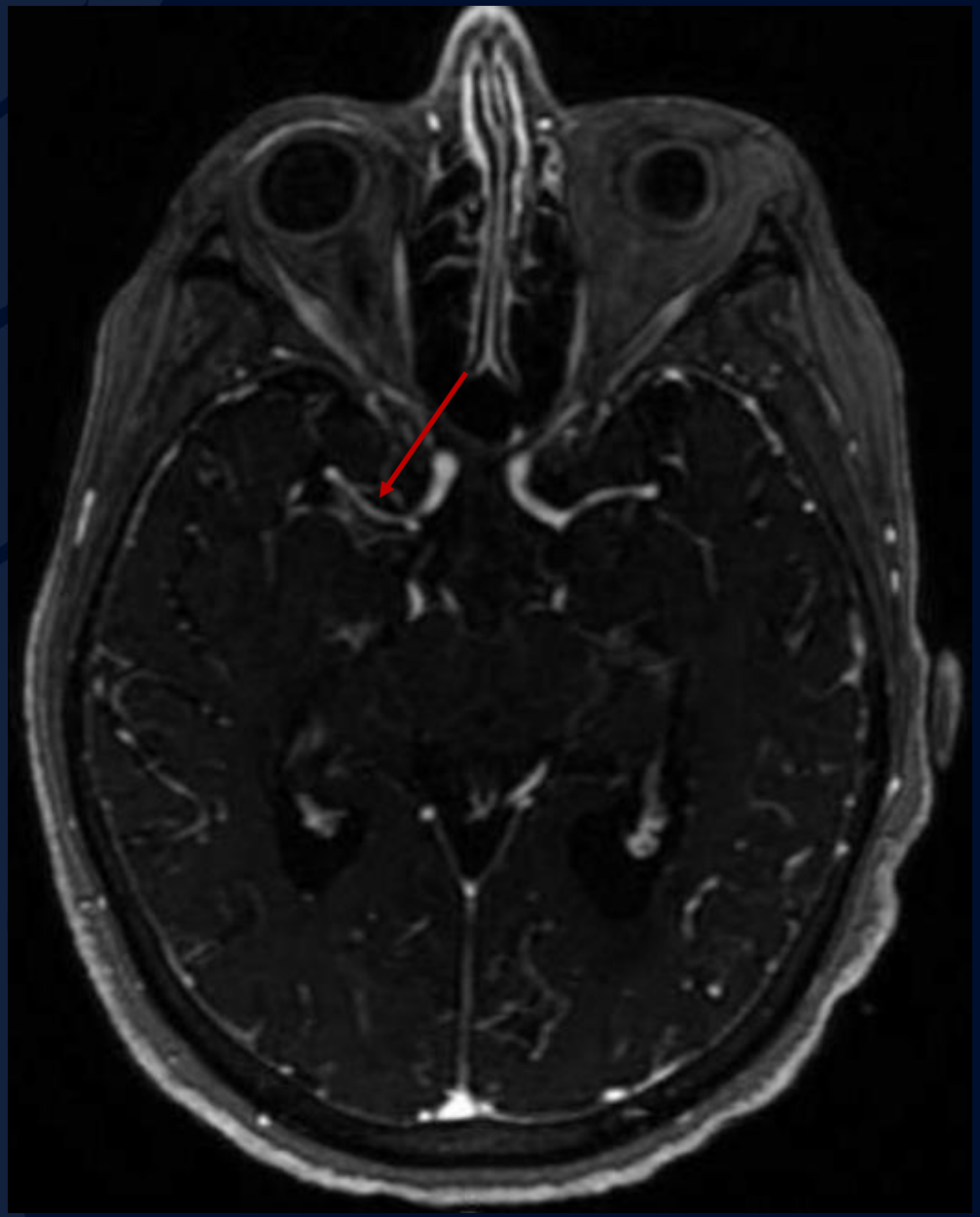

Irregular narrowing of the right M1 MCA and multiple distal MCA, PCA, and ACA branches

Findings concerning for the presence of vasculitis in the setting of underlying leptomeningeal disease

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Cryptococcal Meningoencephalitis

- Cryptococcal meningoencephalitis
  - An infection caused by the fungus *Cryptococcus* after it spreads from the lungs to the brain.
- Clinical presentation

  Increased intracranial pressure, headache, cranial nerve abnormalities, reduced level of consciousness, fever, neck pain, nausea and vomiting, sensitivity to light, Ccnfusion or changes in behavior

Imaging Findings (no findings of_pathologic abnormalities is common)

- Dilated Virchow-Robin spaces.
  - As infection disseminates along the VRS that adjacent to perforating arteries, perivascular spaces may become large with mucoid organism.
- Multiple cystic lesions.
  - Pseudocysts are lesions of round or oval hyper-intensity on T2WI and hypo-intensity on both T1WI and FLAIR without restricted diffusion on DWI
- Hyperintensity shown on T2WI.
  - Punctate hyper-intensities on T2WI representing pseudocysts and dilated perivascular spaces are generally seen in basal ganglia, thalamus, midbrain and cerebellum.

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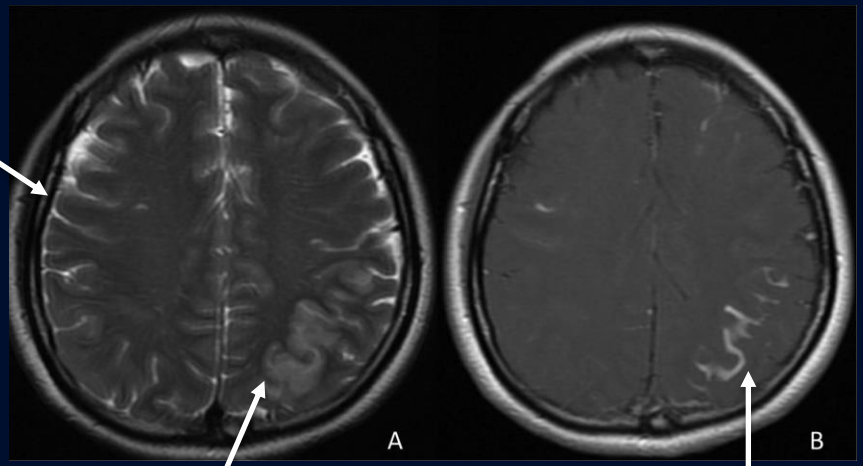
Imaging Findings (Cont.)

- Meningitis or meningoencephalitis is defined as leptomeningeal or dural thickening combined with focal parenchymal edema.
- **FLAIR** and contrast enhanced **MRI** are the most sensitive sequences to show the meningitis or meningoencephalitis.
- Not all the meningitis or meningoencephalitis have obvious contrast enhancement and the reason maybe relate with the stage of inflammation and body immunity.



A. Left parietal cortex shown with swelling on T2WI and the adjacent sulcus shown to be narrowed.
B. Linear contrast enhancement of left parietal lobe.

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References

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