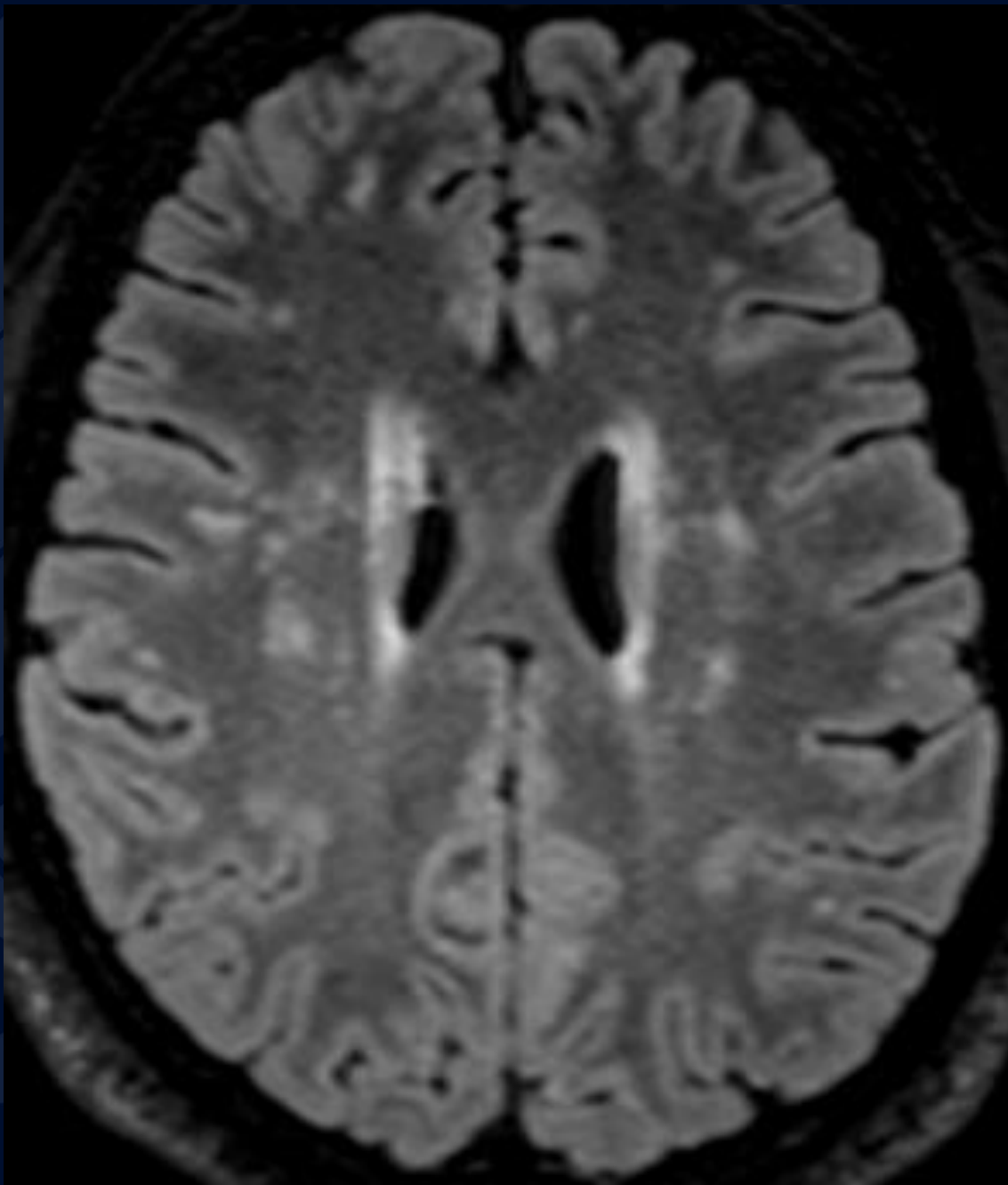


Severe HTN and Blurry Vision Rule Out PRES

Arnika Karthik, MD

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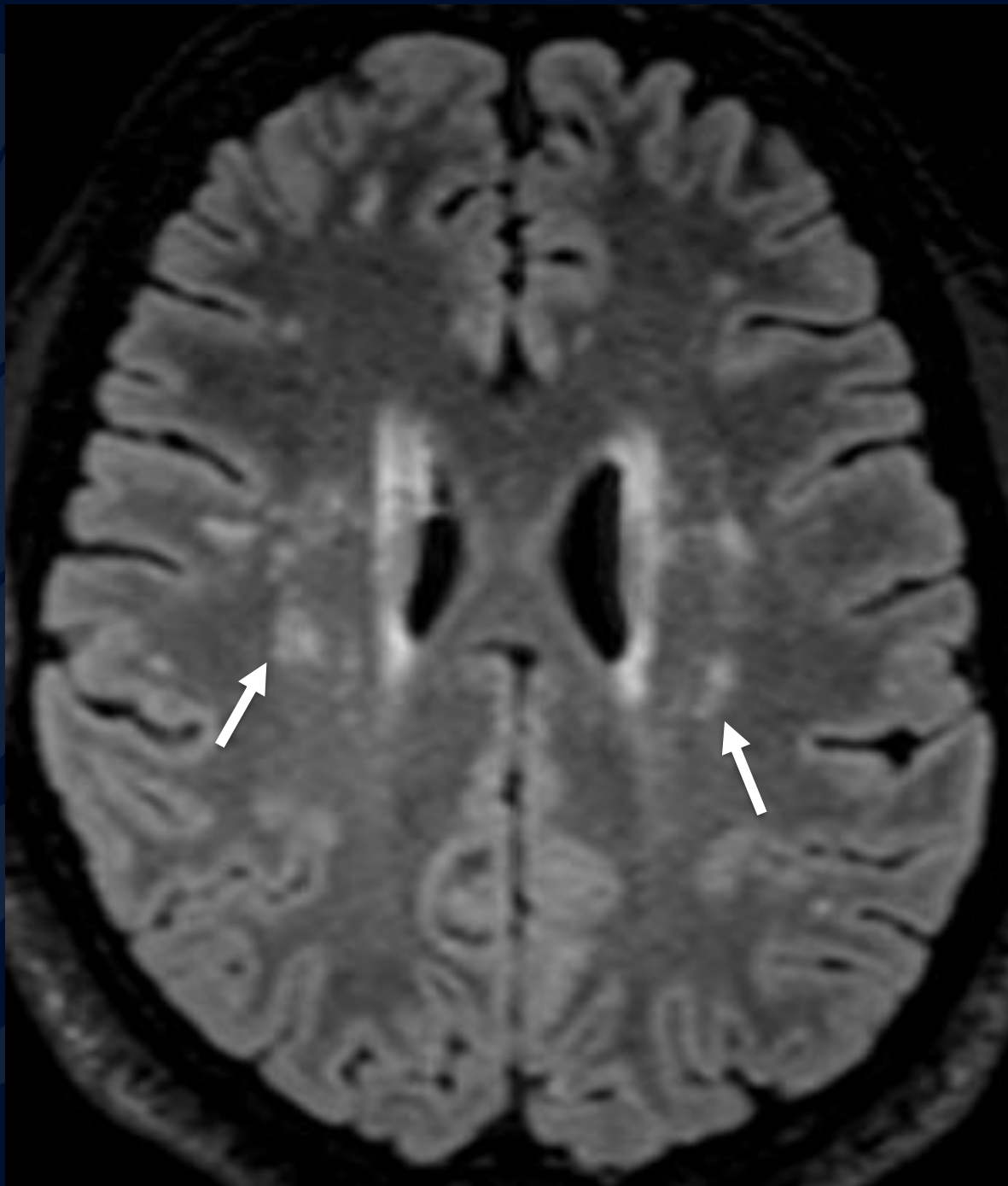
Axial FLAIR



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.

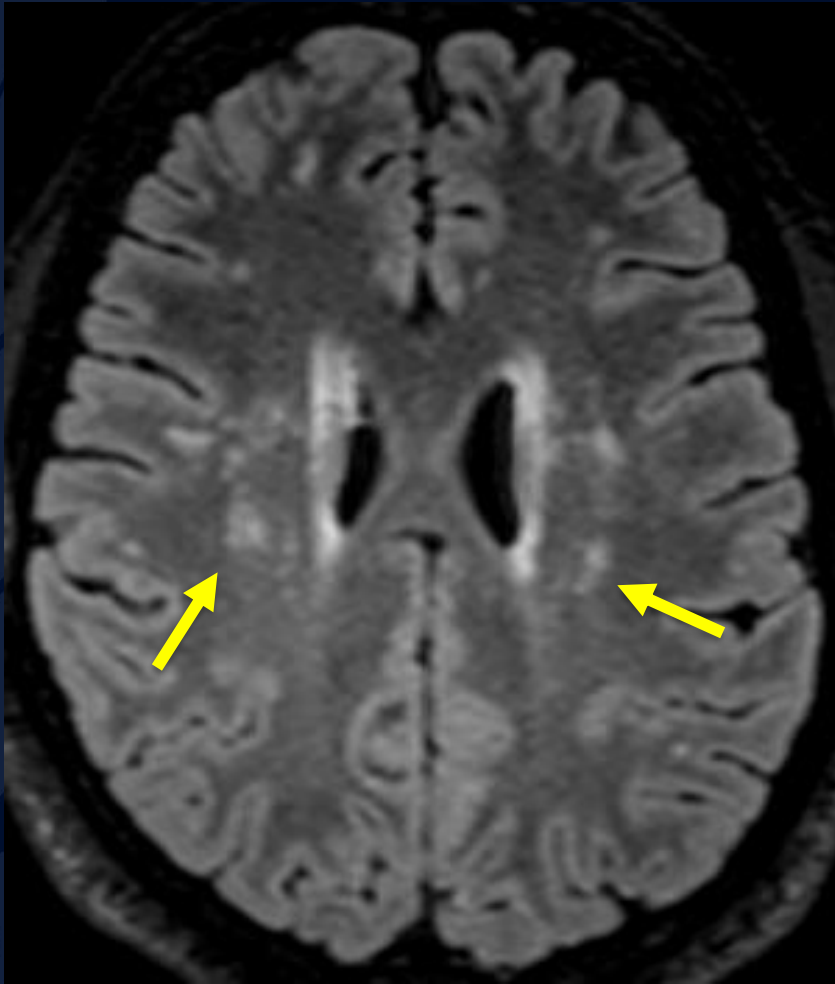
?

Hypertensive Encephalopathy

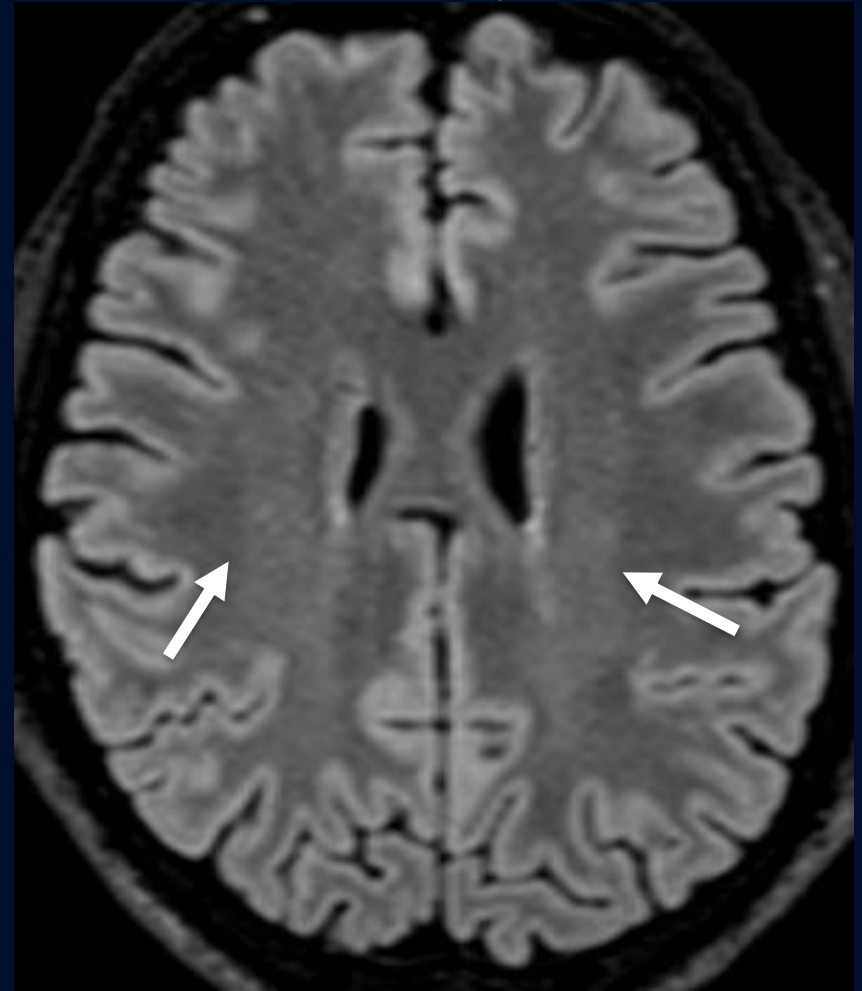


Bilateral
nonspecific
periventricular &
subcortical white
matter FLAIR
hyperintensities

Initial presentation



Follow up – 2 years later



Nonspecific white matter FLAIR hyperintensities (yellow arrows) have essentially disappeared (white arrows)

Hypertensive Encephalopathy

- Abrupt blood pressure increase can exceed autoregulatory capacity of cerebral vessels, disrupt the blood-brain barrier, and produce cerebral edema.
- Symptoms include severe headaches, altered mental status, visual disturbances, and seizures. Coma and death may result if not managed promptly.

Imaging

- T2 / FLAIR MRI- PRES (posterior reversible encephalopathy syndrome) typically presents as bilateral white matter hyperintensity in the posterior cerebral hemispheres often near the cortex.
- PRES may also present in atypical regions such as the basal ganglia, periventricular white matter, thalami, brainstem, and spinal cord.

Imaging

- Follow up imaging can be essential to rule out a diagnosis of PRES in patients with hypertensive encephalopathy and atypical location of white matter changes, as seen in this case.

Management

- Discontinuation of any offending medication
- Gradual lowering of blood pressure
- Antiseizure medications if appropriate

References

- Aracki-Trenkić A, Stojanov D, Trenkić M, et al. Atypical presentation of posterior reversible encephalopathy syndrome: clinical and radiological characteristics in eclamptic patients. *Bosn J Basic Med Sci.* 2016;16(3):180-186. doi:10.17305/bjbms.2016.1201
- Li Y, Castaldo J, Bemporad J, Yacoub HA. Reversible confluent deep white matter abnormalities: a new variant of posterior reversible encephalopathy syndrome. *Case Rep Neurol Med.* 2013;2013:536978. doi:10.1155/2013/536978
- Potter T, Agarwal A, Schaefer TJ. Hypertensive encephalopathy. In: *StatPearls* [Internet]. Treasure Island (FL): StatPearls Publishing; 2026 Jan—. Updated February 2, 2024. Available at: <https://www.ncbi.nlm.nih.gov/books/NBK554499/>
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