

CHRONIC MIGRAINES – A CASE REPORT OF MRI FINDINGS OF UNDIAGNOSED CADASIL

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PATIENT

47 y.o male with no significant medical history

Chief Complaint:

- Increasingly frequent headaches for two months.
- Denied having stroke-like symptoms, including motor and sensory deficits.

Working Diagnosis:

- Tension and/or medication overuse headaches

One Month Follow Up:

- Headaches continued to persist
- Bending over and coughing worsened the headaches

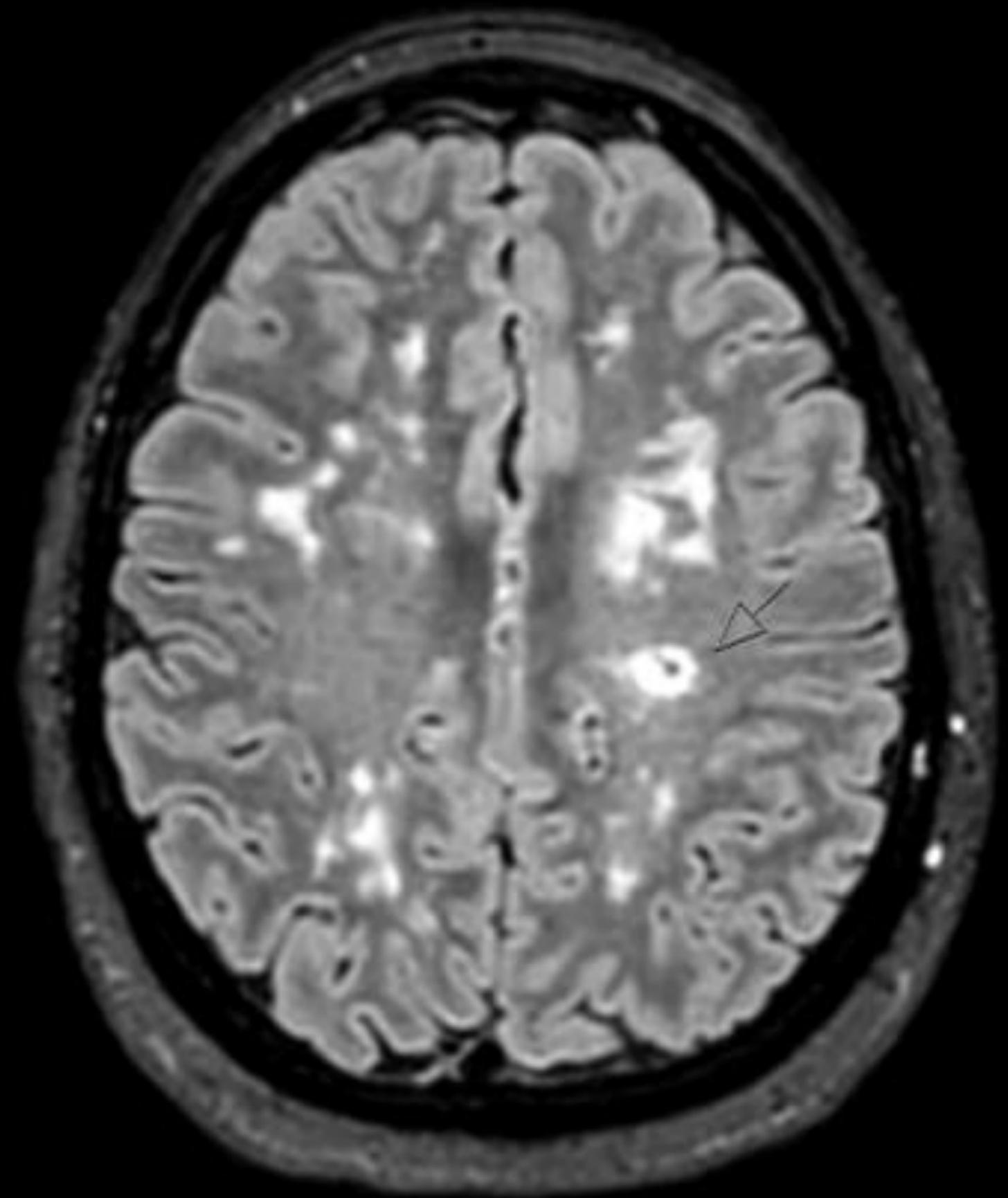
Next step:

MR Imaging & Nortriptyline

IMAGING: MRI

Axial - T2 Flair

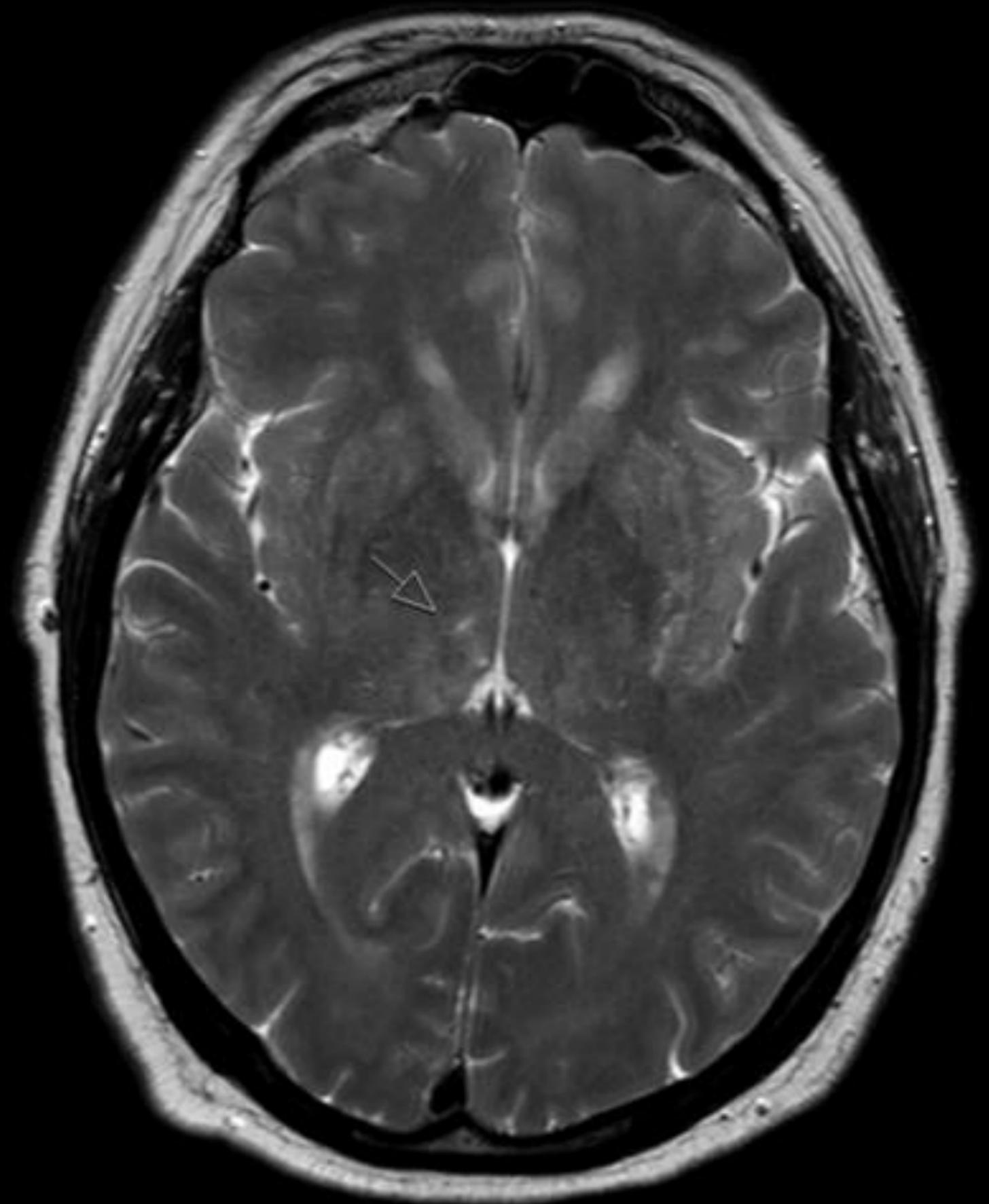
Moderate/marked partially confluent foci of T2/FLAIR hyperintensity



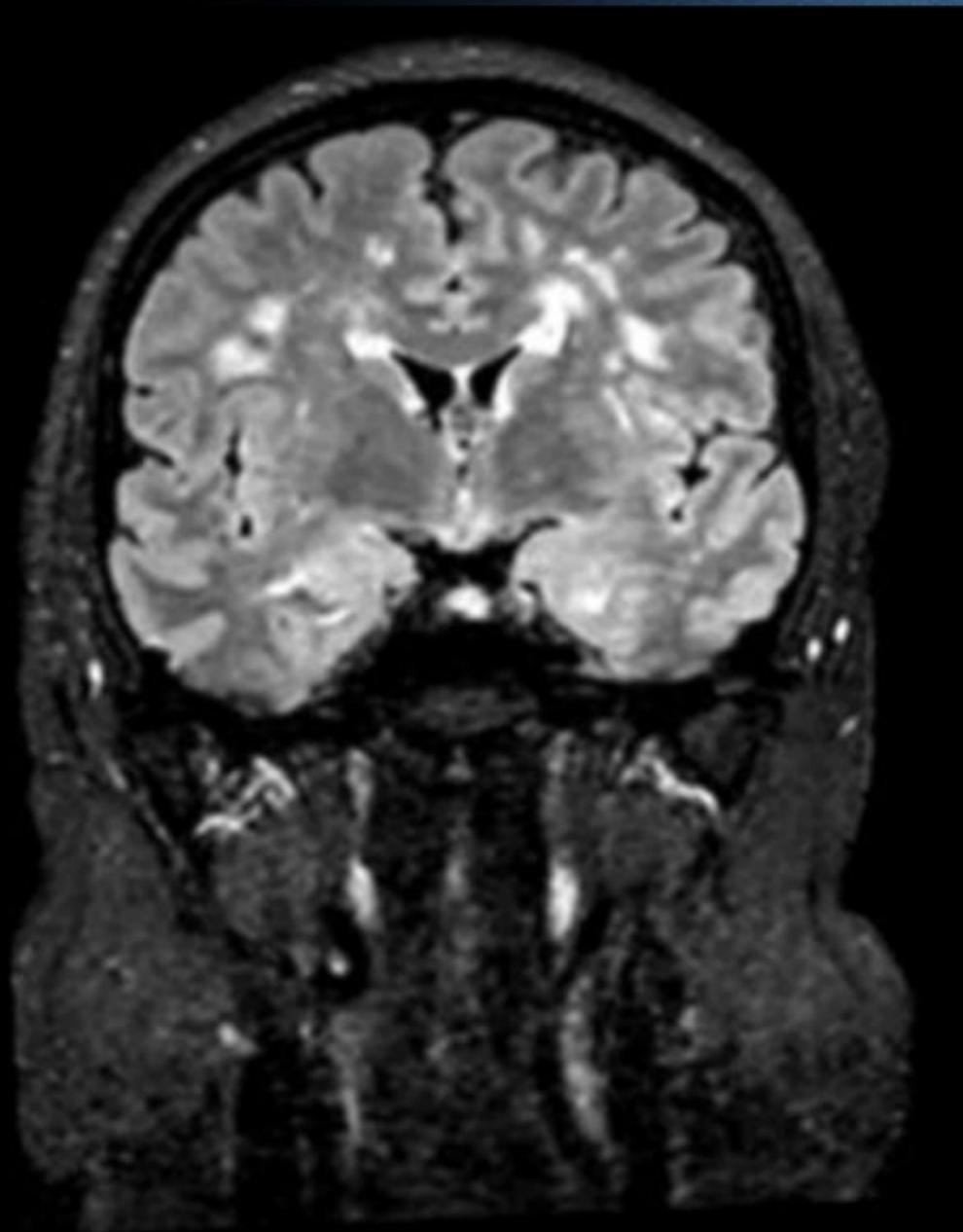
IMAGING: MRI

Axial - T2 Flair

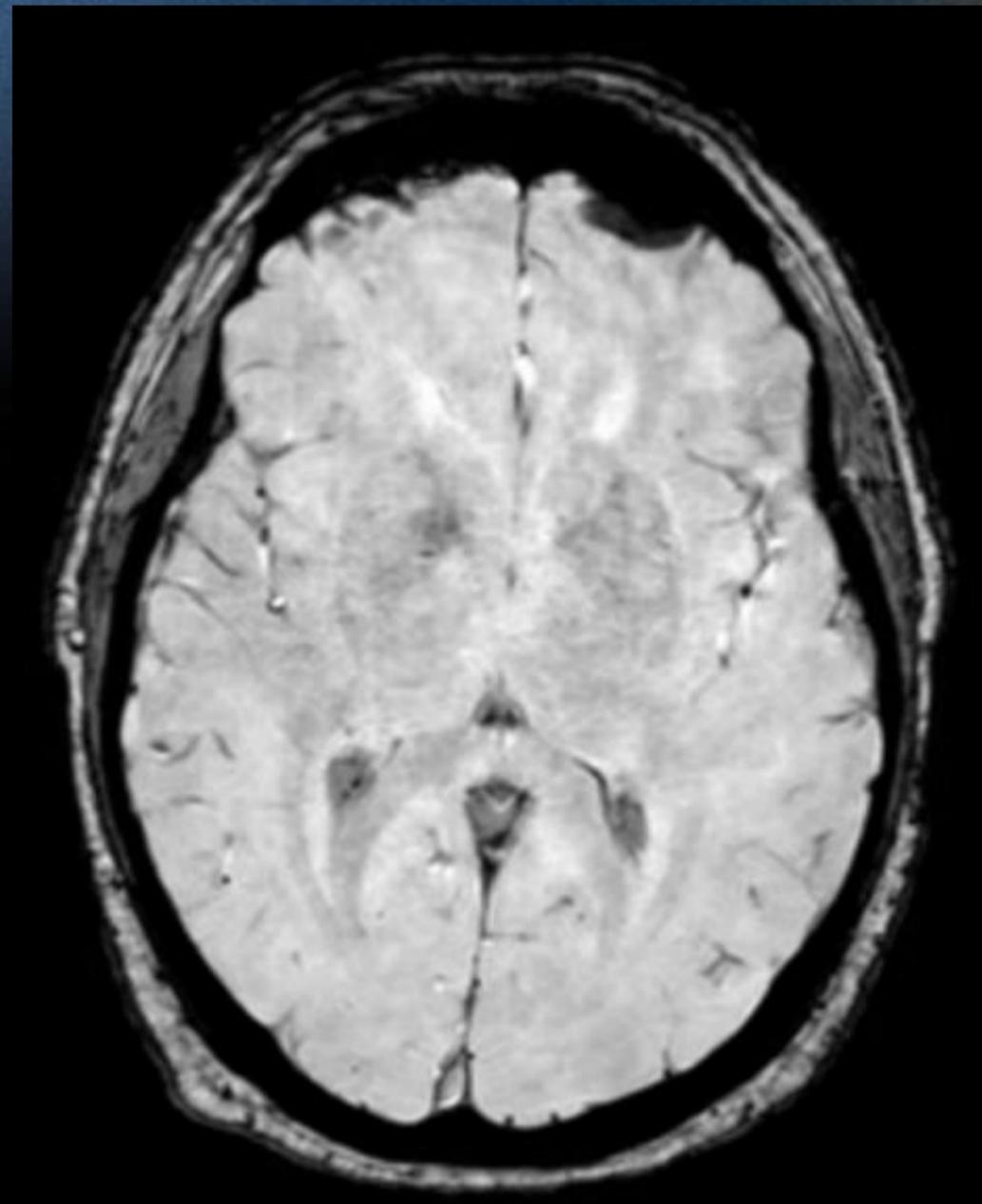
Two small chronic lacunar infarcts/ focal encephalomalacia that are inconsistent with the patient's age and history



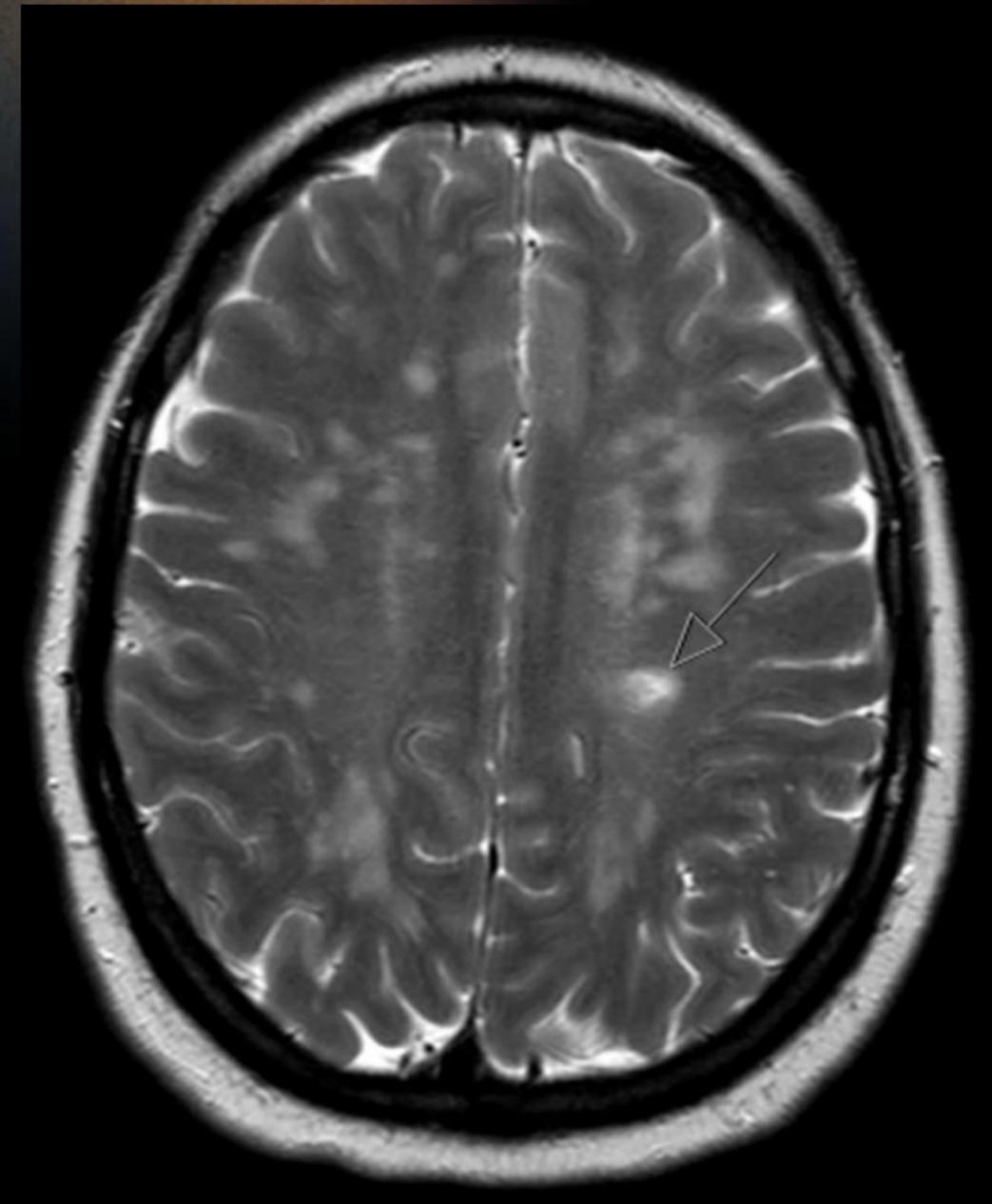
IMAGING: MRI



A



B



C

TAKE HOME POINTS

CADASIL

(Cerebral Autosomal Dominant Arteriopathy with Subcortical Infarcts and Leukoencephalopathy)

Disease Findings:

- Microangiopathic changes without a history of hypertension
- **NOTCH3** gene mutation

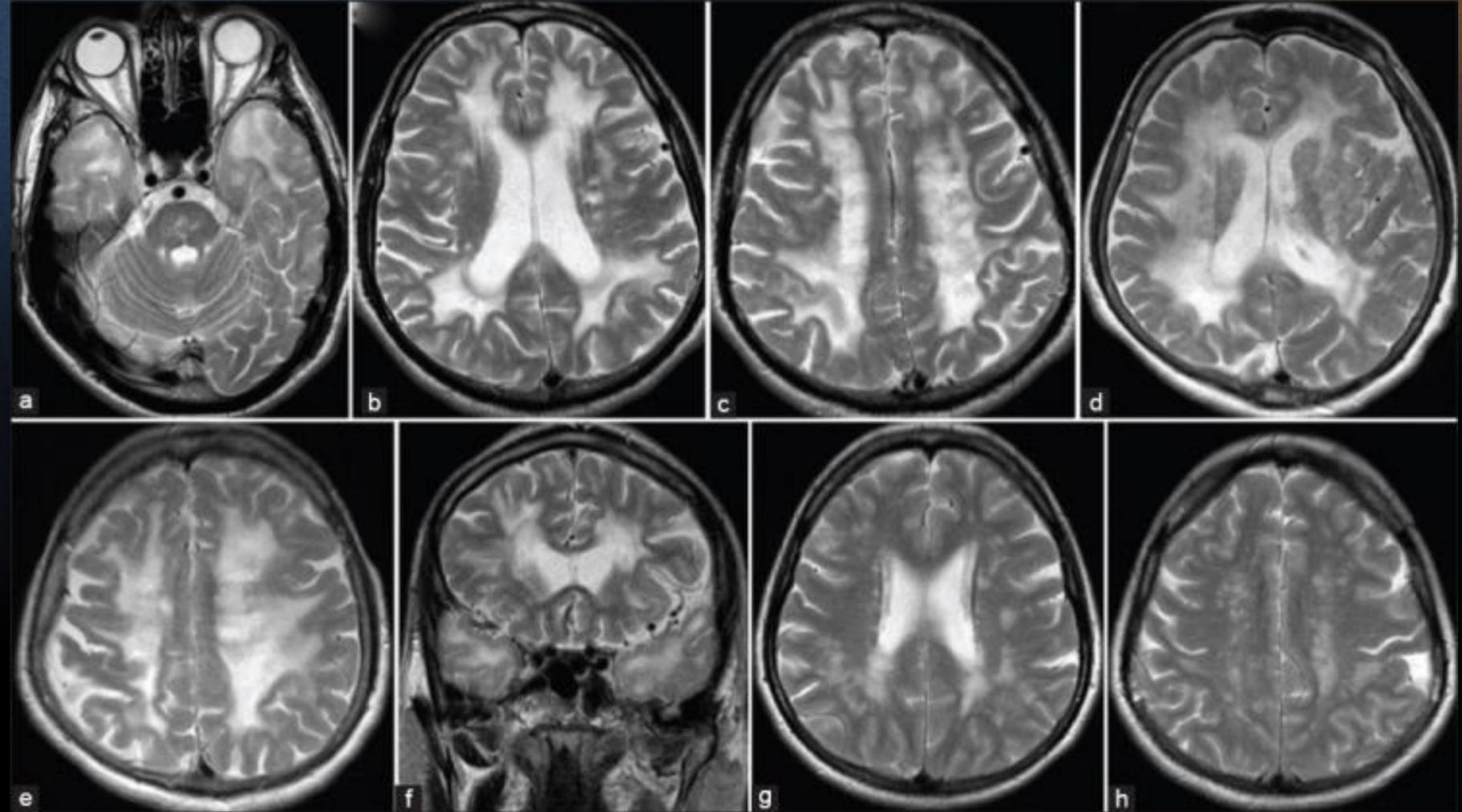
Clinical Presentation:

- Chronic migraines and multiple strokes

Imaging findings:

- MRI: begin to become apparent in patients around age 30 years of age
- typically shows diffuse white matter disease
- Foci of restricted diffusion on DWI/ADC sequences

DDx: Multiple Sclerosis



OUTCOME & CONCLUSION

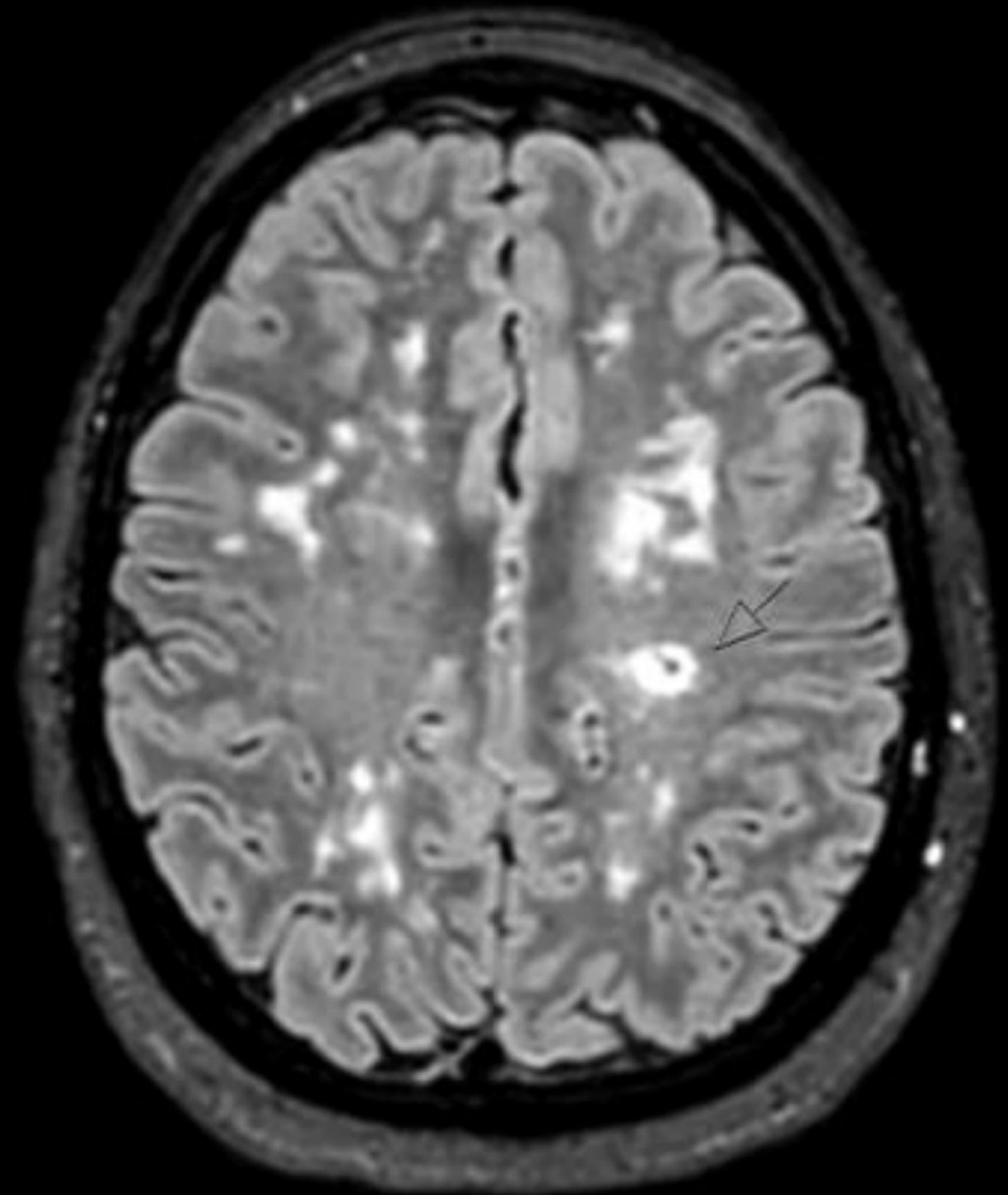
47_y.o male with CADASIL

Further Imaging:

- CT angiogram for vessel irregularities
- Underwent MR imaging again (one month after diagnosis)- no changes were seen

Medical management:

- Nortriptyline, aspirin, statins
- Exercise and dietary modification
Encouraged to have his son undergo genetic testing for CADASIL



RESOURCES

1. Hung, K.; Chen, C.-H.; Wu, W.-C.; Su, J.-J.; Chen, Y.-F.; Tang, S.-C. Comparing the Imaging Characteristics of Middle-Aged Patients with Multiple Sclerosis and CADASIL: A Retrospective Cross-Sectional Study. *Multiple Sclerosis and Related Disorders* **2024**, *91*, 105856. <https://doi.org/10.1016/j.msard.2024.105856>.
1. Stojanov, D.; Vojinovic, S.; Aracki-Trenkic, A.; Tasic, A.; Benedeto-Stojanov, D.; Ljubisavljevic, S.; Vujnovic, S. Imaging Characteristics of Cerebral Autosomal Dominant Arteriopathy with Subcortical Infarcts and Leucoencephalopathy (CADASIL). *Bosn J of Basic Med Sci* **2015**, *15* (1). <https://doi.org/10.17305/bjbms.2015.247>.
1. Blitstein, M. K.; Tung, G. A. MRI of Cerebral Microhemorrhages. *American Journal of Roentgenology* **2007**, *189* (3), 720–725. <https://doi.org/10.2214/AJR.07.2249>.

THANK YOU

Questions?