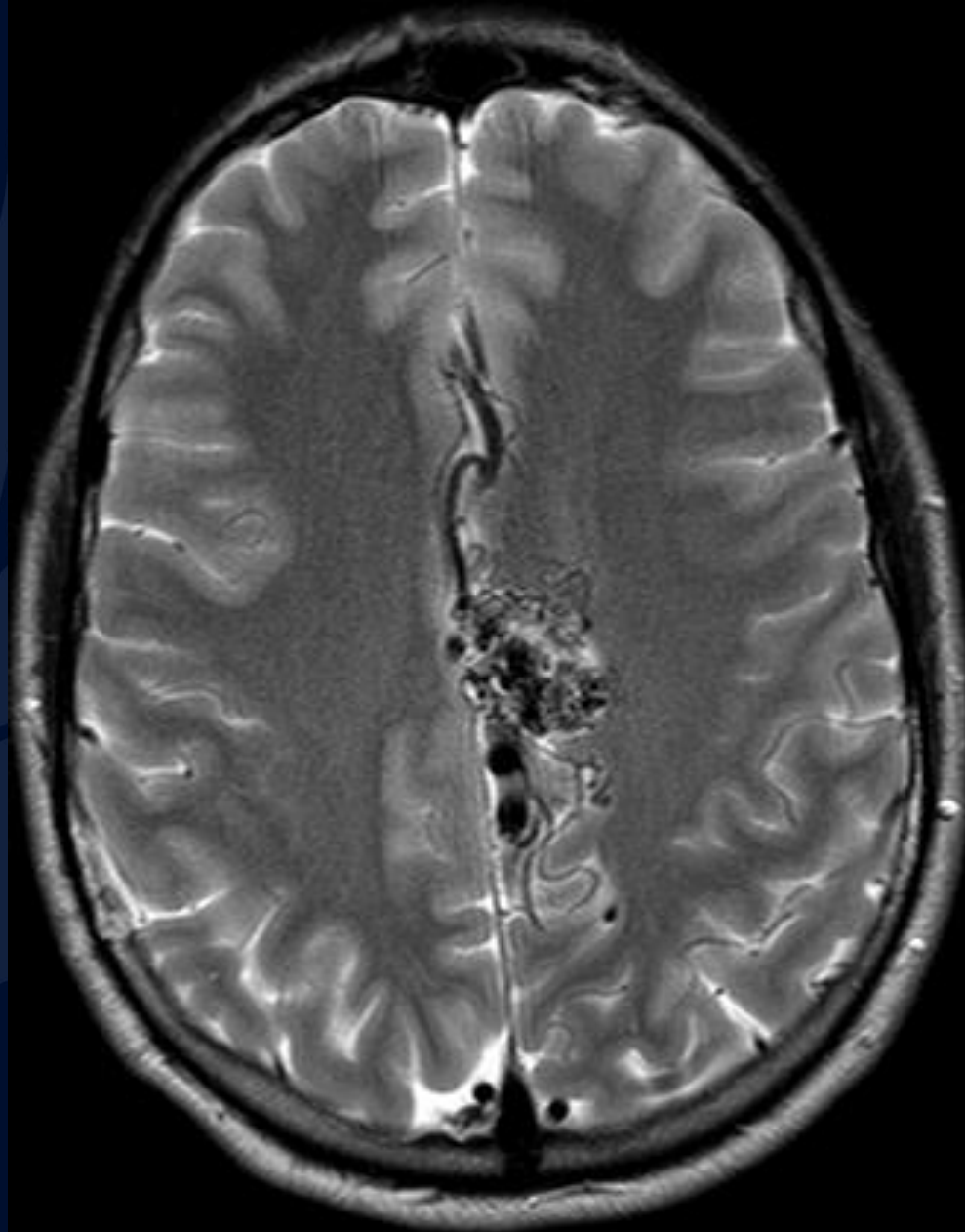


# 50-year-old male presenting with headaches and recurrent seizures

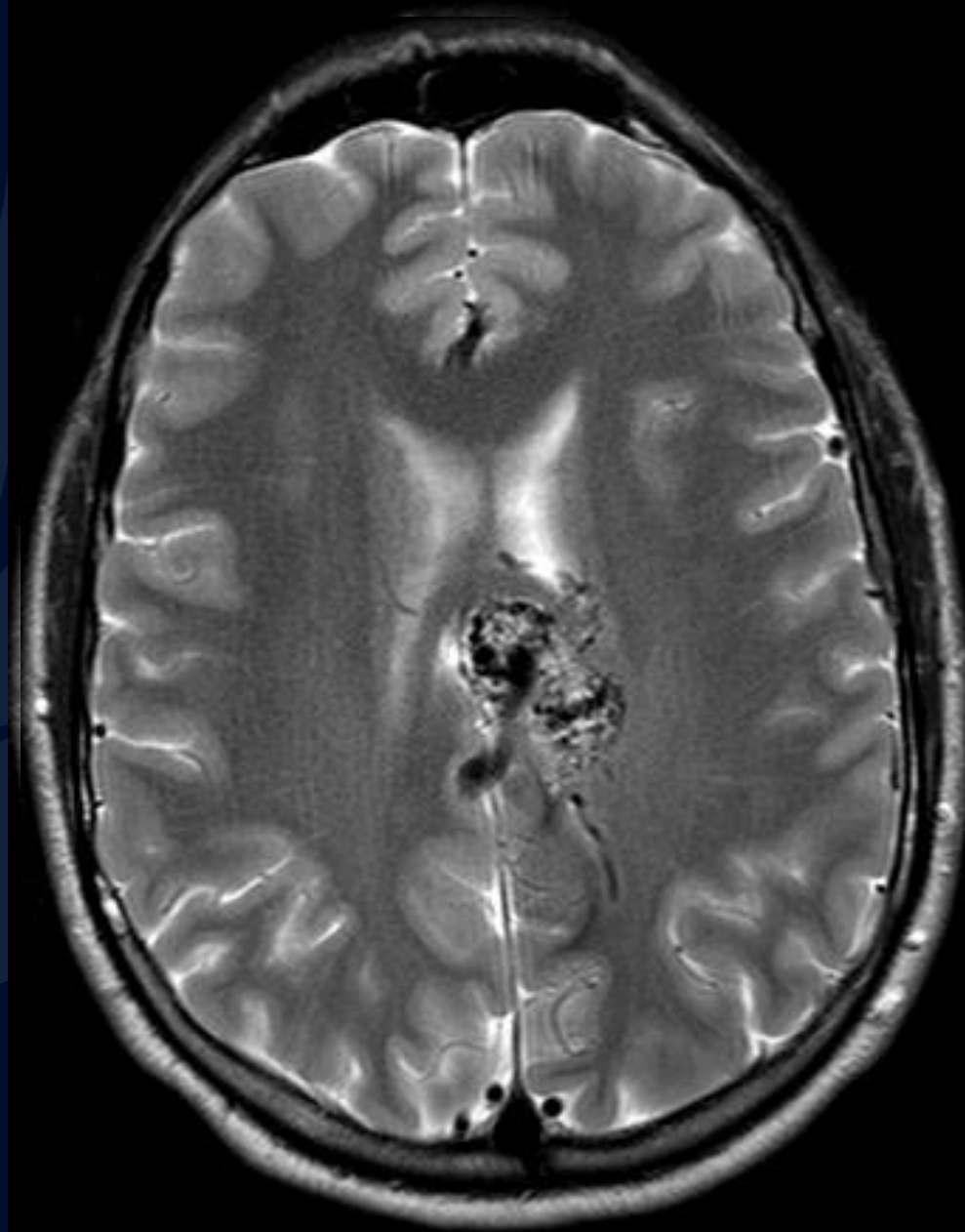
Andrew Klufas, MD, MBA

Racquel Helsing, MD

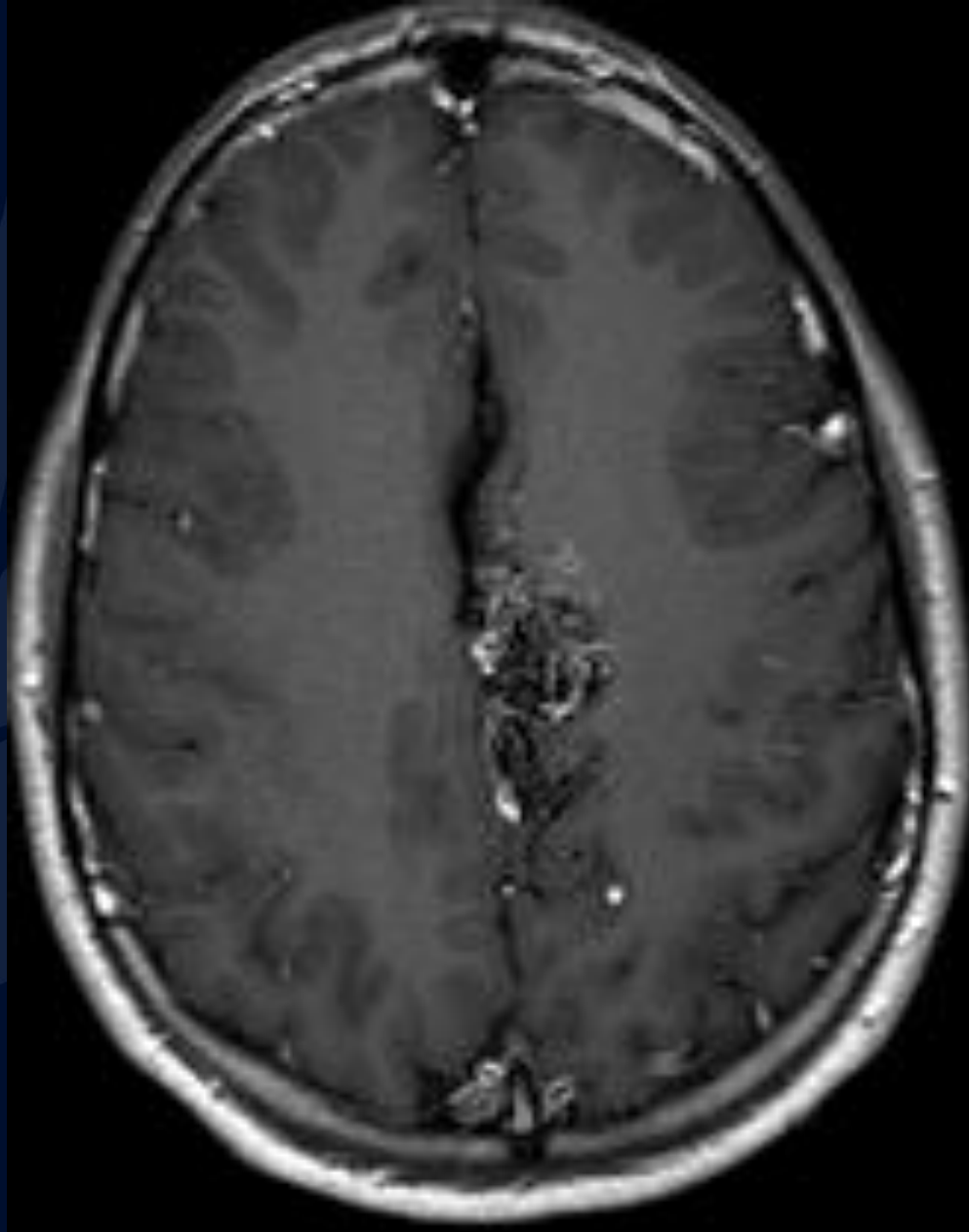
# MRI T2



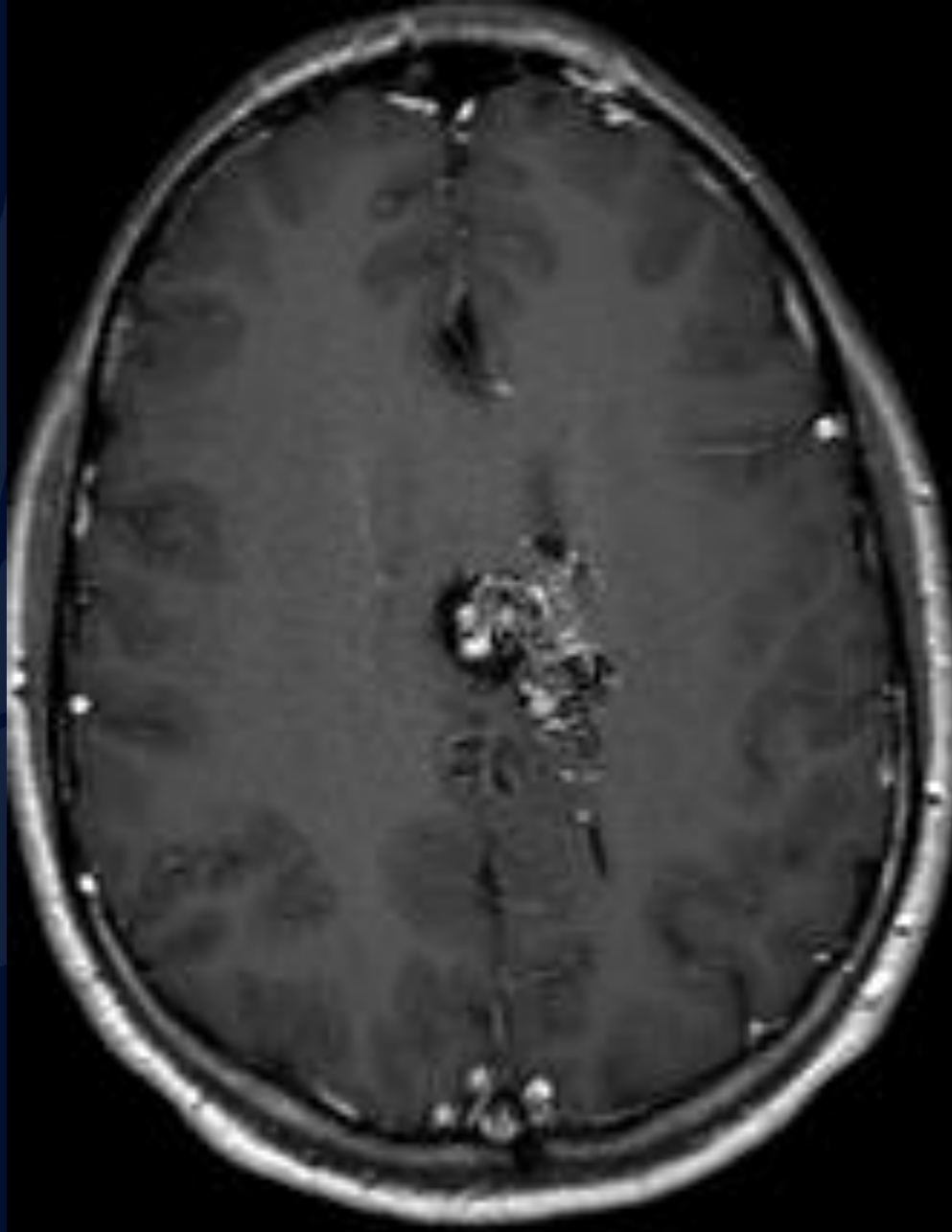
# MRI T2



# MRI T1 + Gad



# MRI T1 + Gad



# MR 3D Angiogram



# MR 3D Angiogram



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.

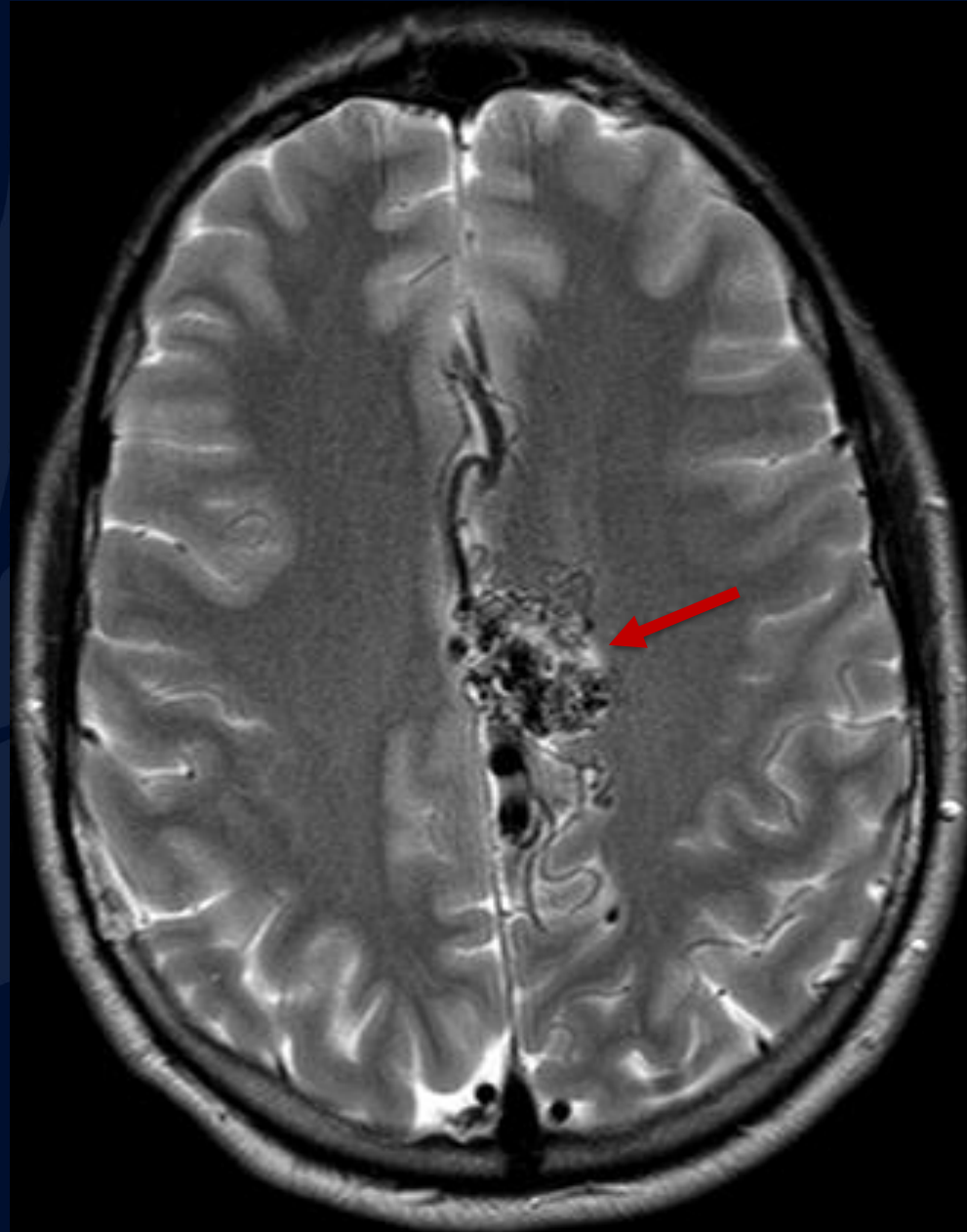
?



A large, stylized oak leaf graphic in a dark blue color, positioned on the left side of the slide, partially overlapping the title text.

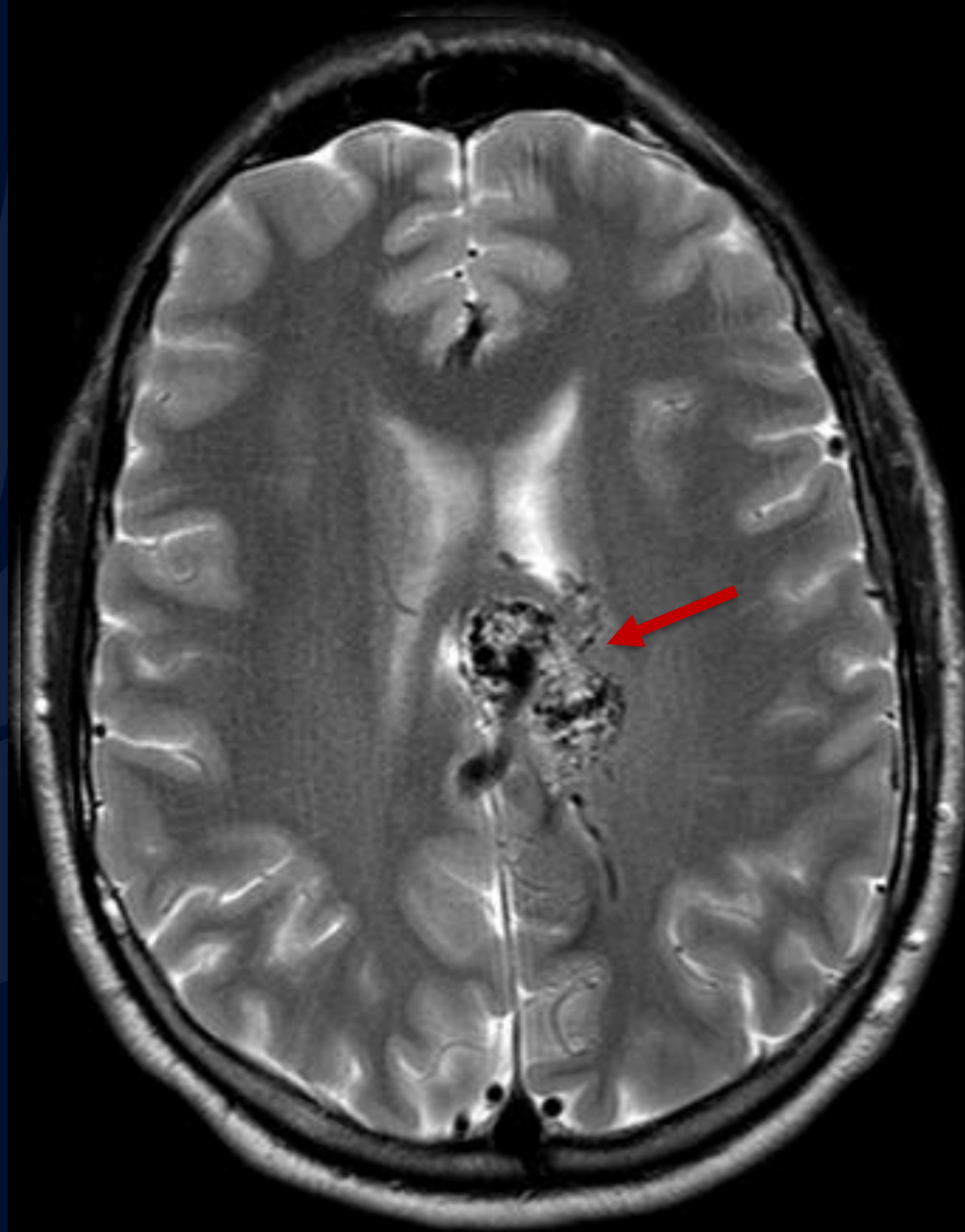
# Arteriovenous Malformation

# MRI T2



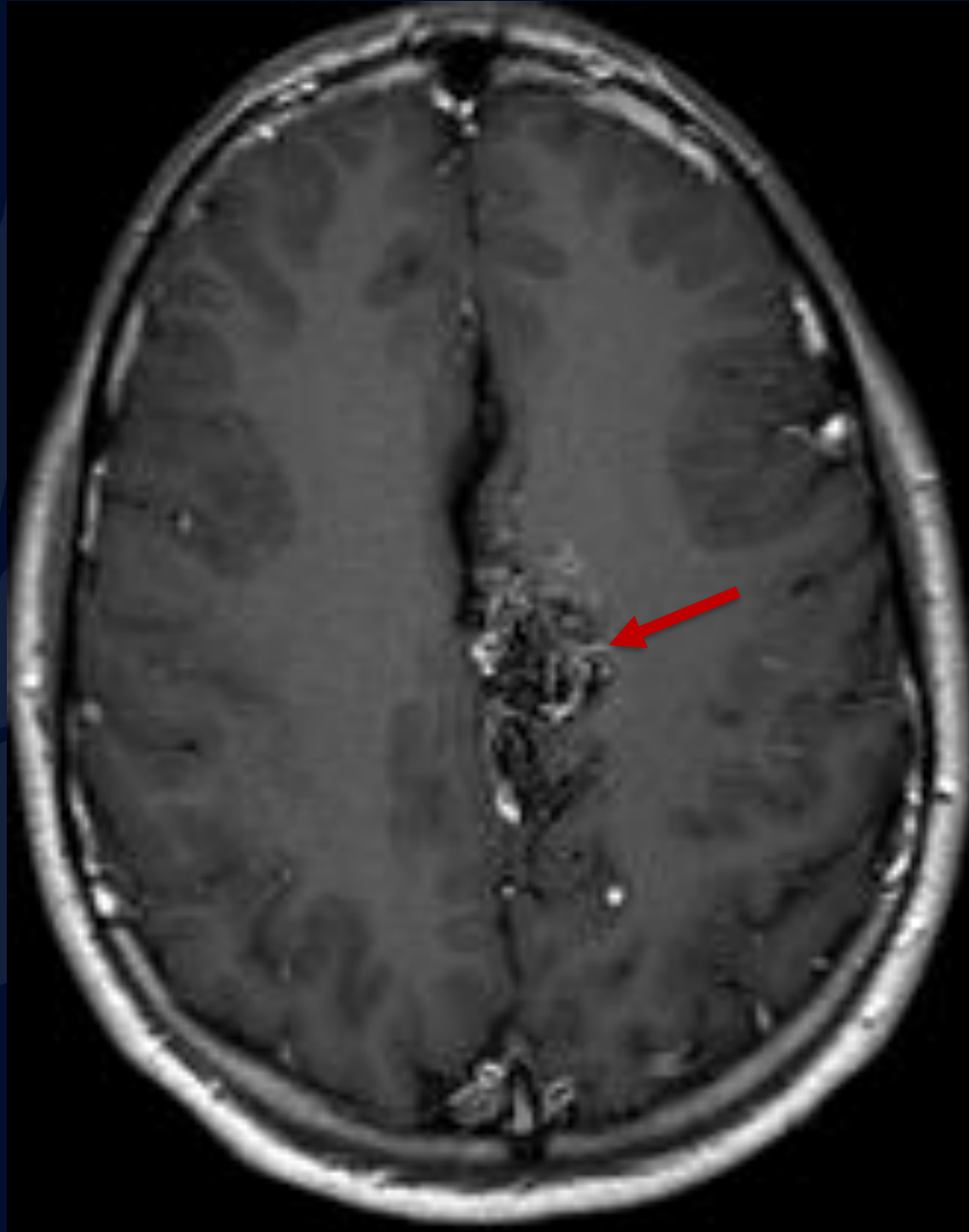
Hypointense “flow void” signal representing arteriovenous malformation

# MRI T2



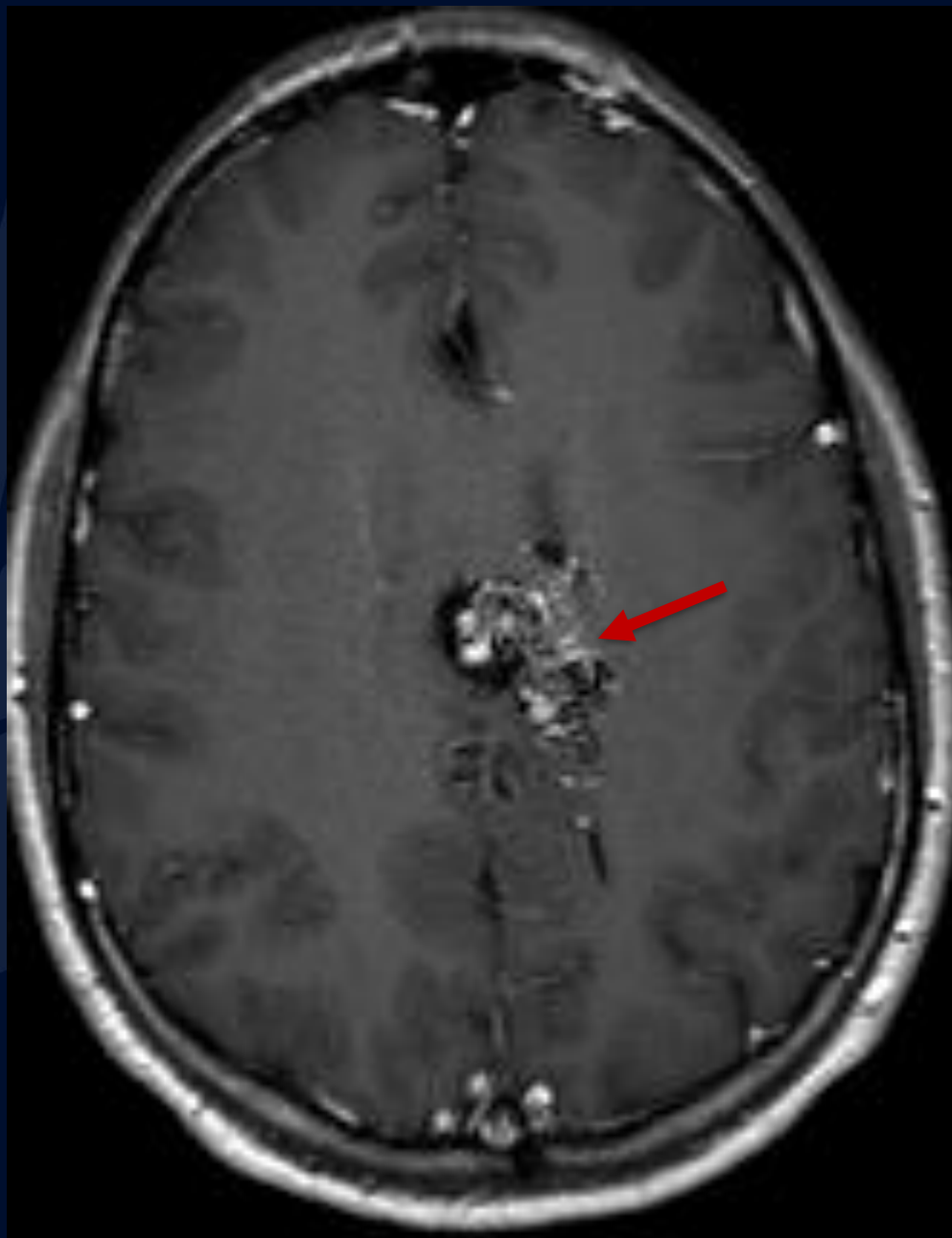
Hypointense “flow void” signal representing arteriovenous malformation

# MRI T1 + Gad



Multiple enlarged, tortuous vessels and flow voids

# MRI T1 + Gad



Multiple enlarged, tortuous vessels and flow voids

# MR 3D Angiogram

Hyperintense  
signal  
abnormality  
representing  
arteriovenous  
malformation



# MR 3D Angiogram

Hyperintense  
signal  
abnormality  
representing  
arteriovenous  
malformation



# Arteriovenous Malformation

AVMs are congenital vascular malformations which are often found during evaluation of cerebral hemorrhage

- Often asymptomatic, when symptomatic typically present with seizures, headaches, or ischemic events
- Tend to be supratentorial and superficial
- Often solitary
- MRI is needed for assessment and diagnosis

## Differential

- Cerebral proliferative angiopathy
- Dural arteriovenous fistula
- Glioblastoma
- Non-specific vascular tumor



# Imaging Findings

## CT

- Non-contrast- Hyperdense compared to adjacent parenchyma

## CTA

- "Bag of Worms" appearance due to complex architecture

## MRI

- T1- Usually hypointense
- T1 + Gad - Mild enhancement
- T2- Hypointense, Fast flow generates "flow voids"

## MRA

- Beneficial in separating an AVM from a hematoma in the setting of acute cerebral hemorrhage

# References

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