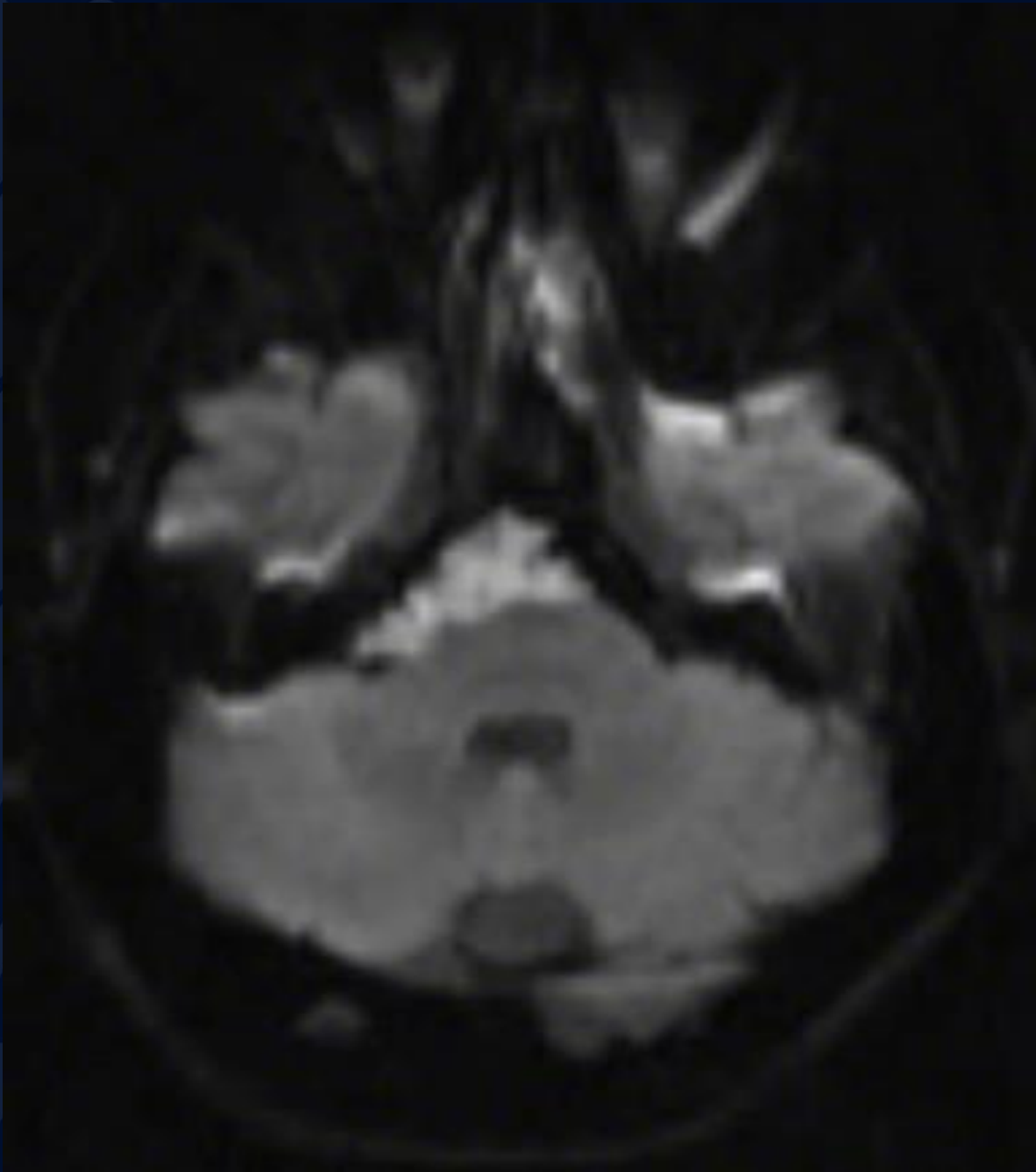
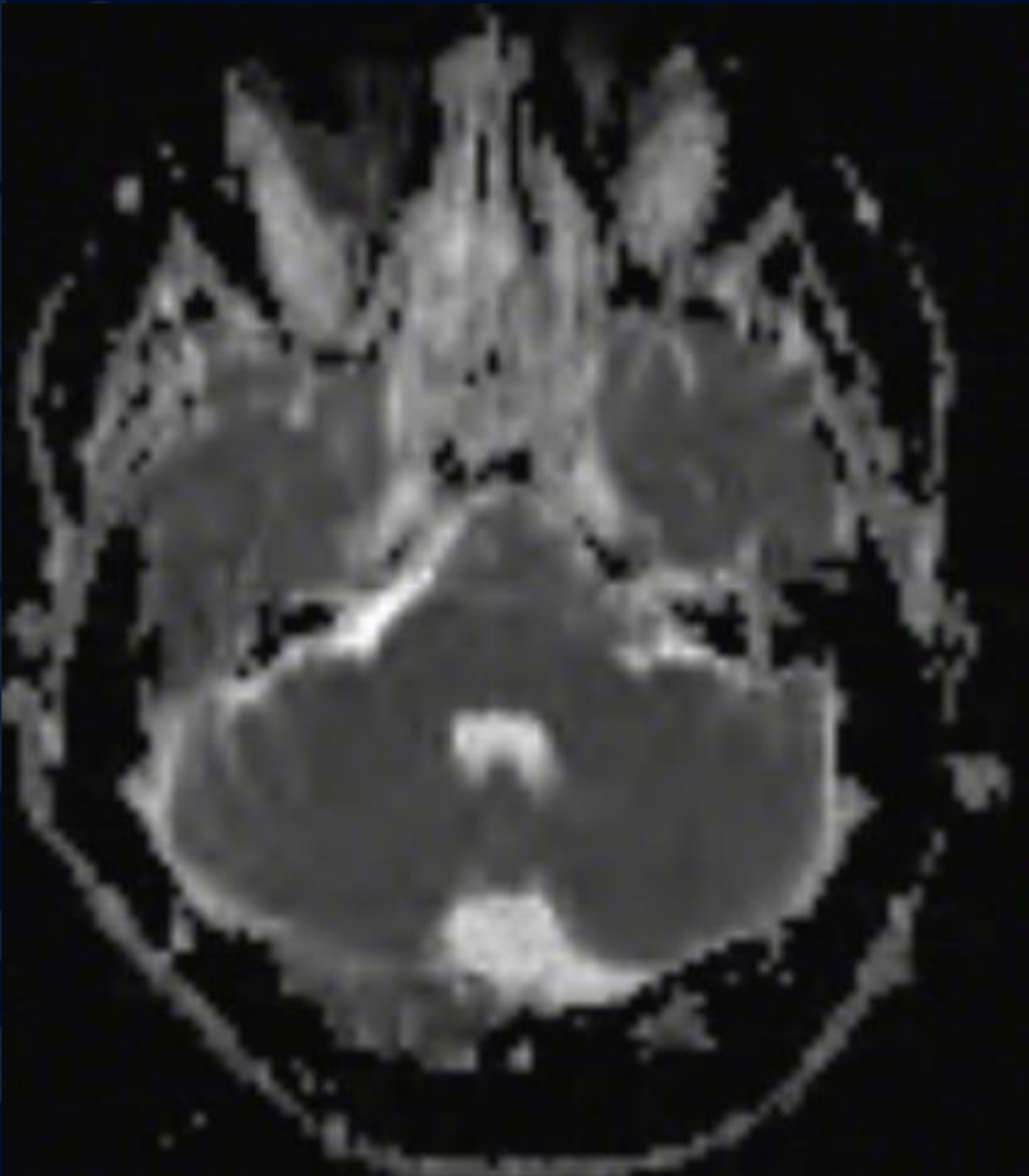


# 51-year-old male presents with headaches

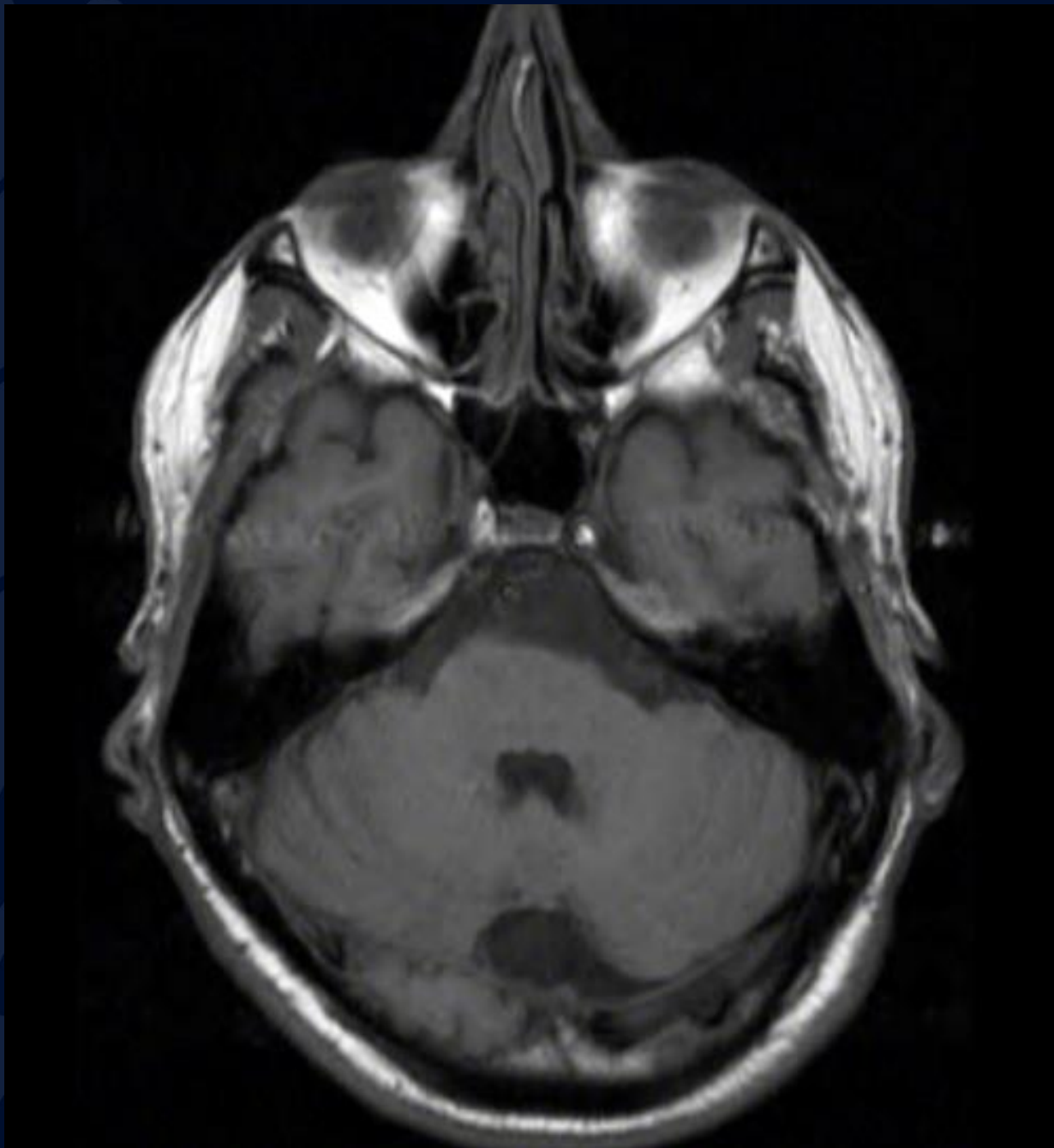
Jignesh Modi, MD



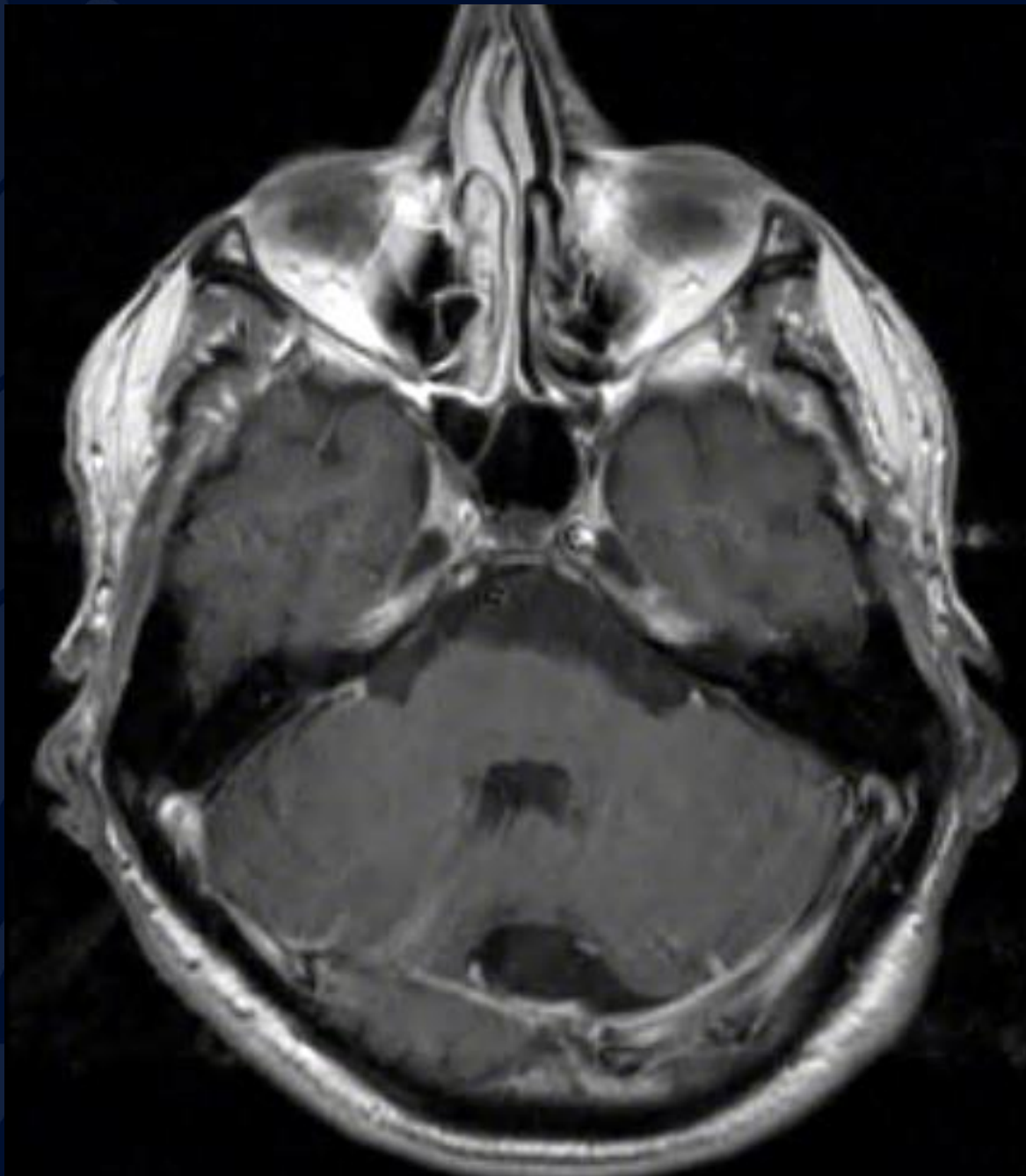
Diffusion Weight  
Image



ADC



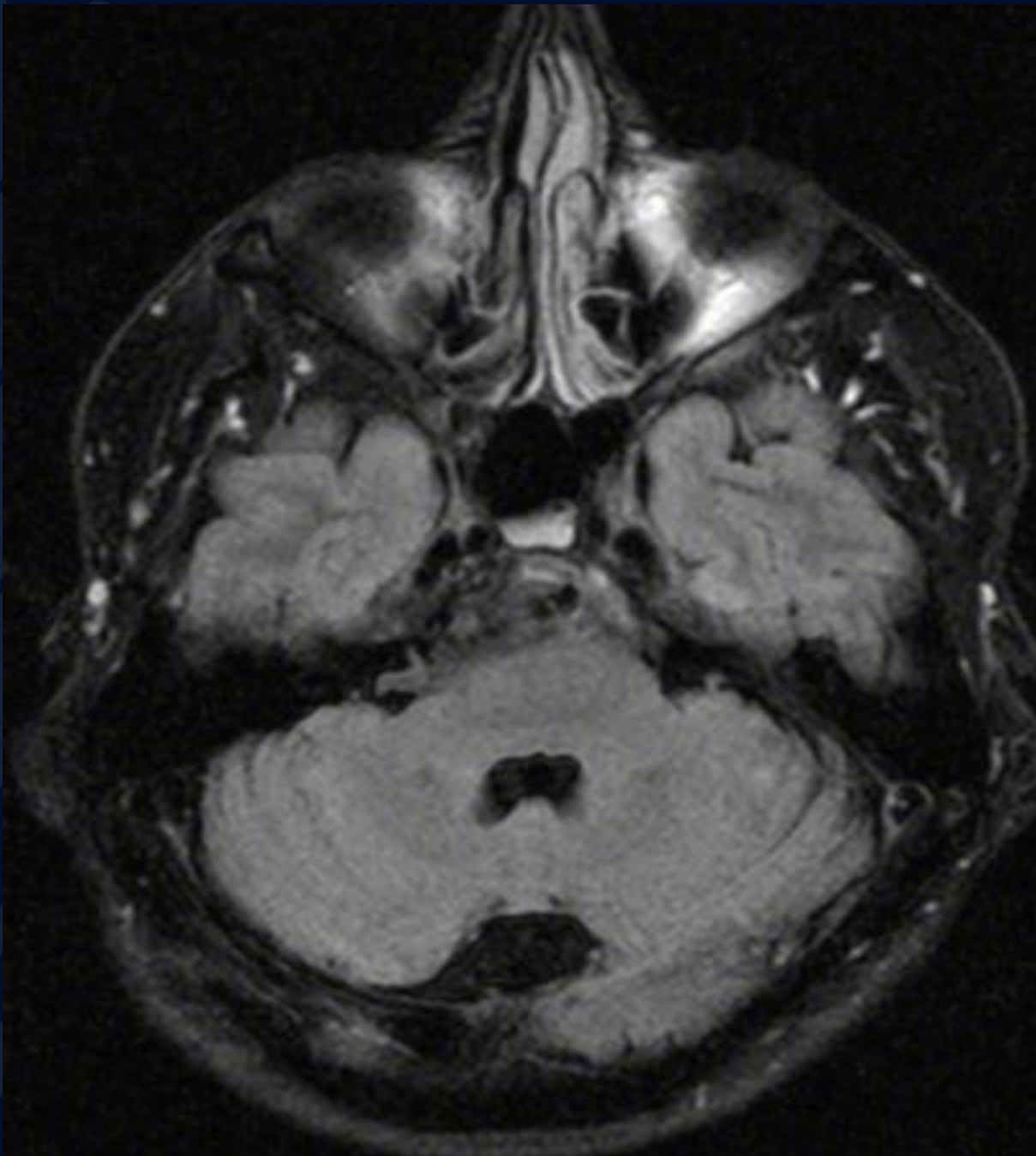
Axial T1 pre-contrast



Axial T1 post-contrast



Axial T2



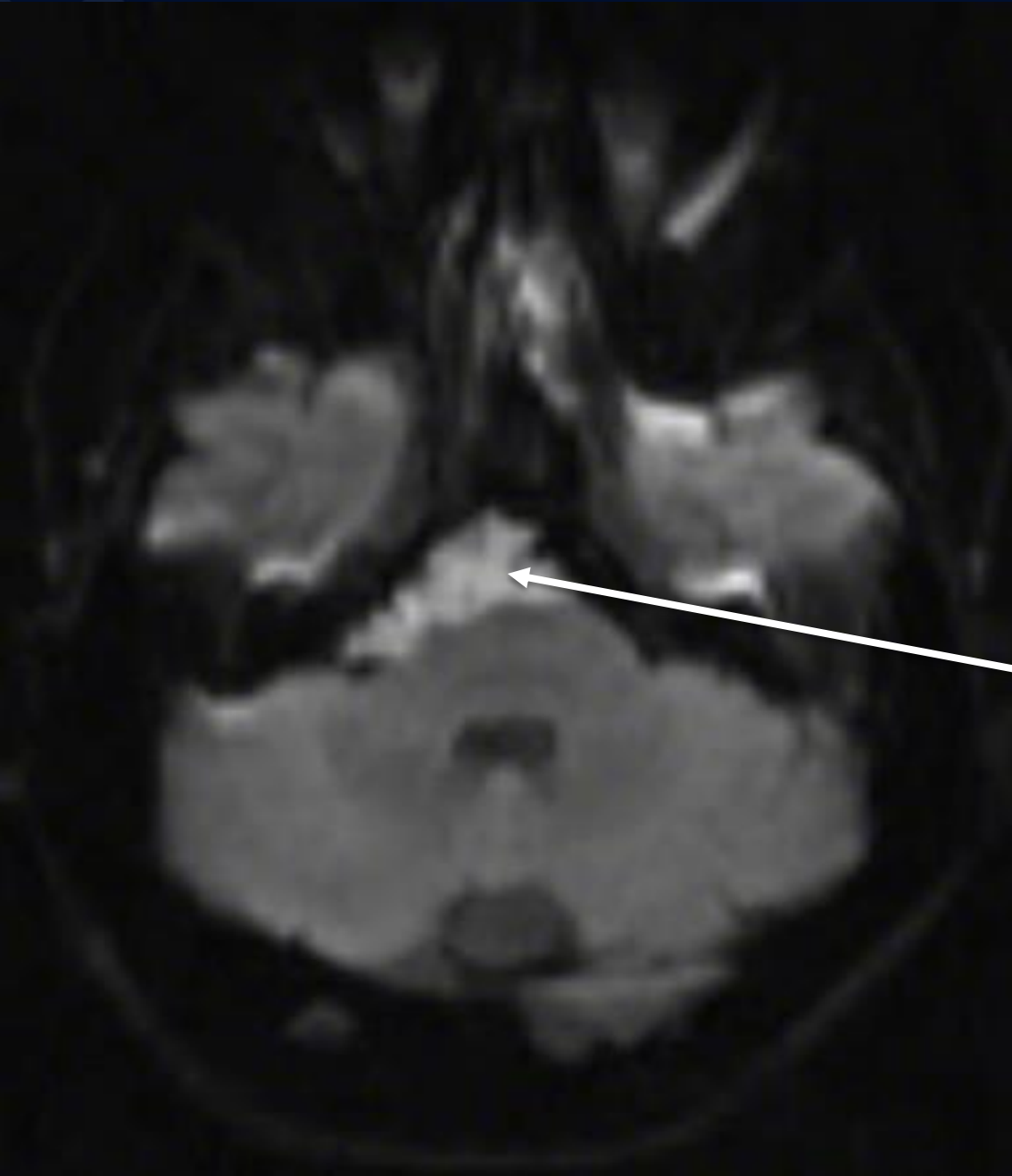
Axial Flair



?

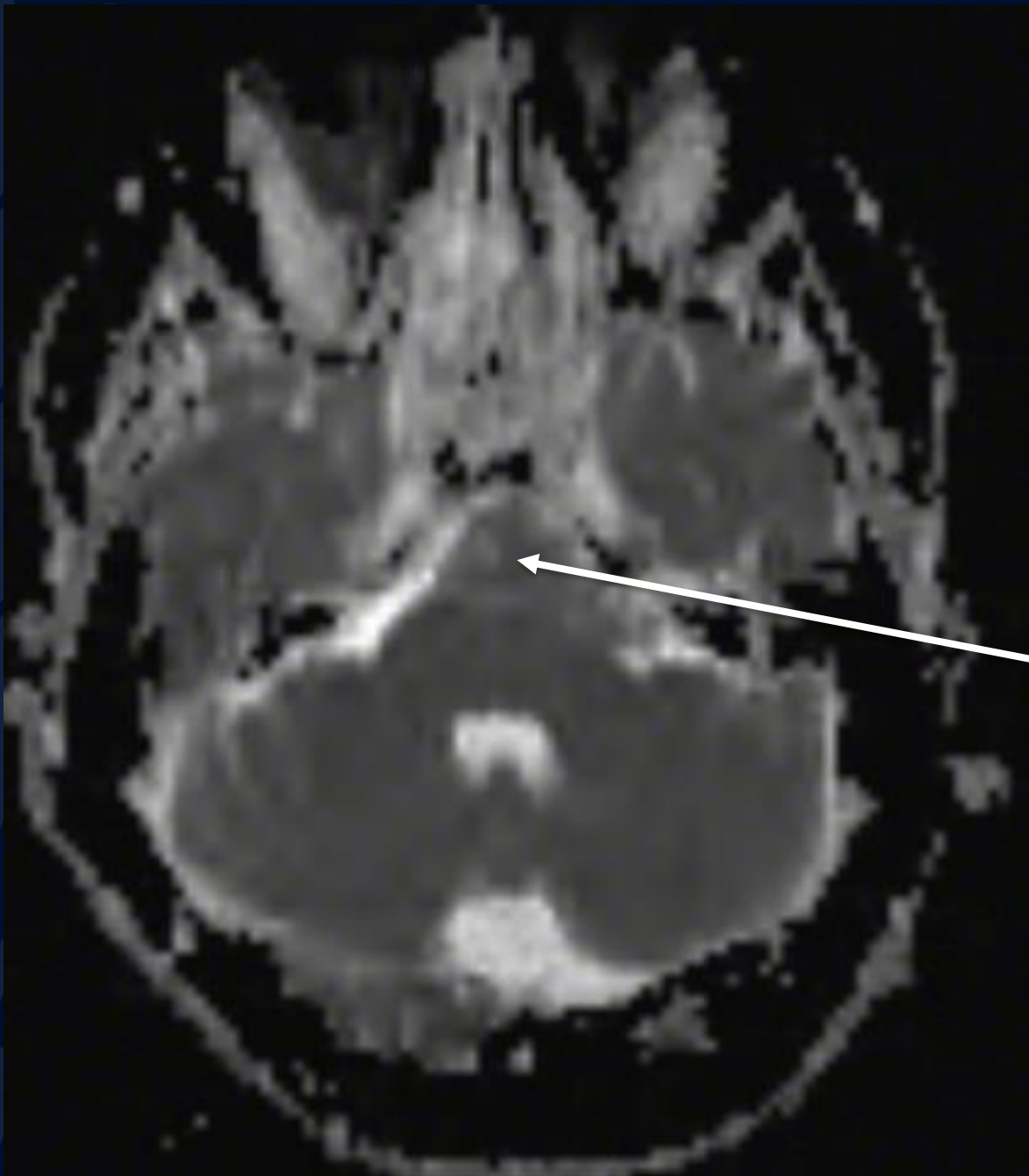


# Epidermoid Cyst



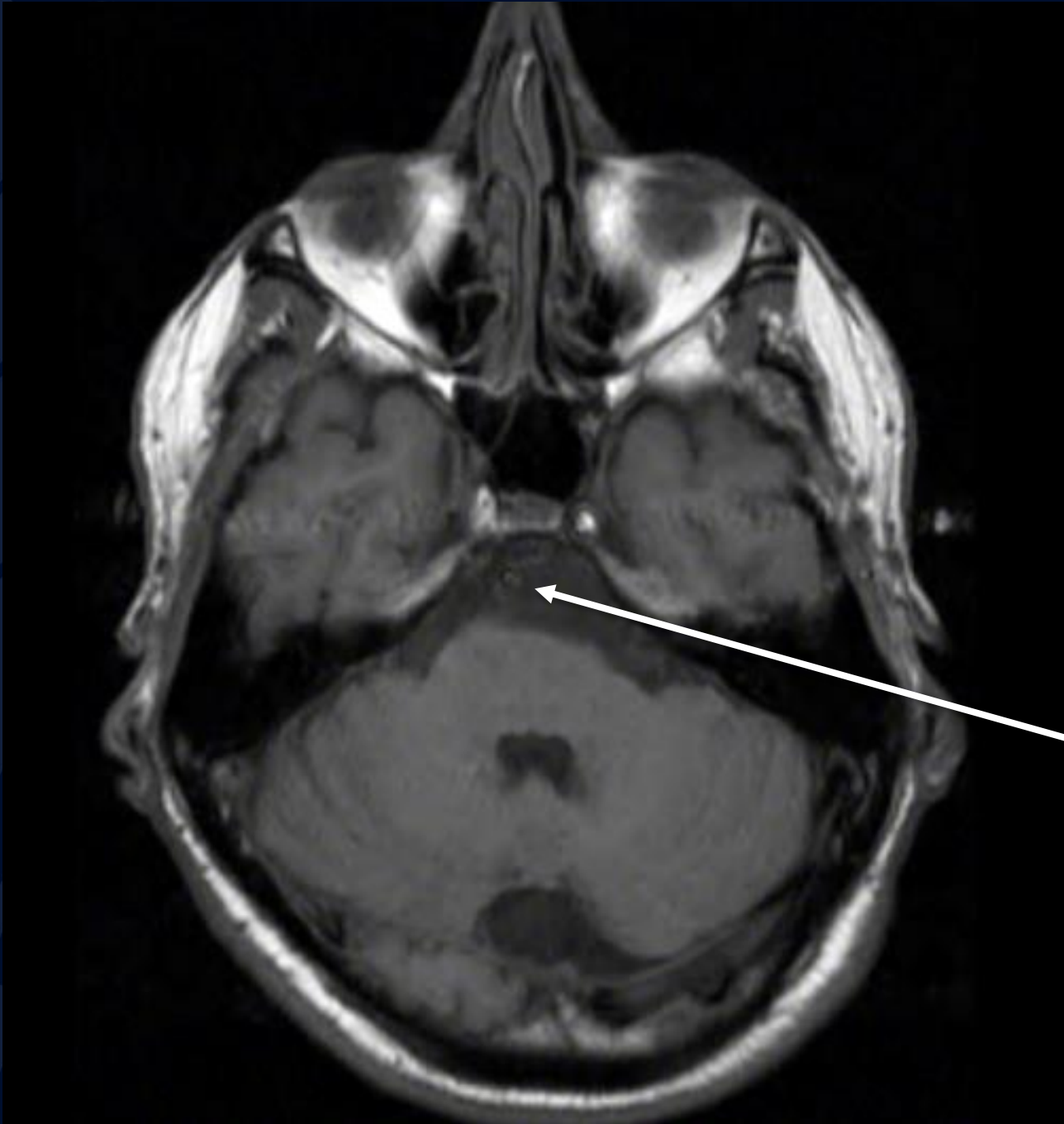
Diffusion Weight  
Image

Bright signal



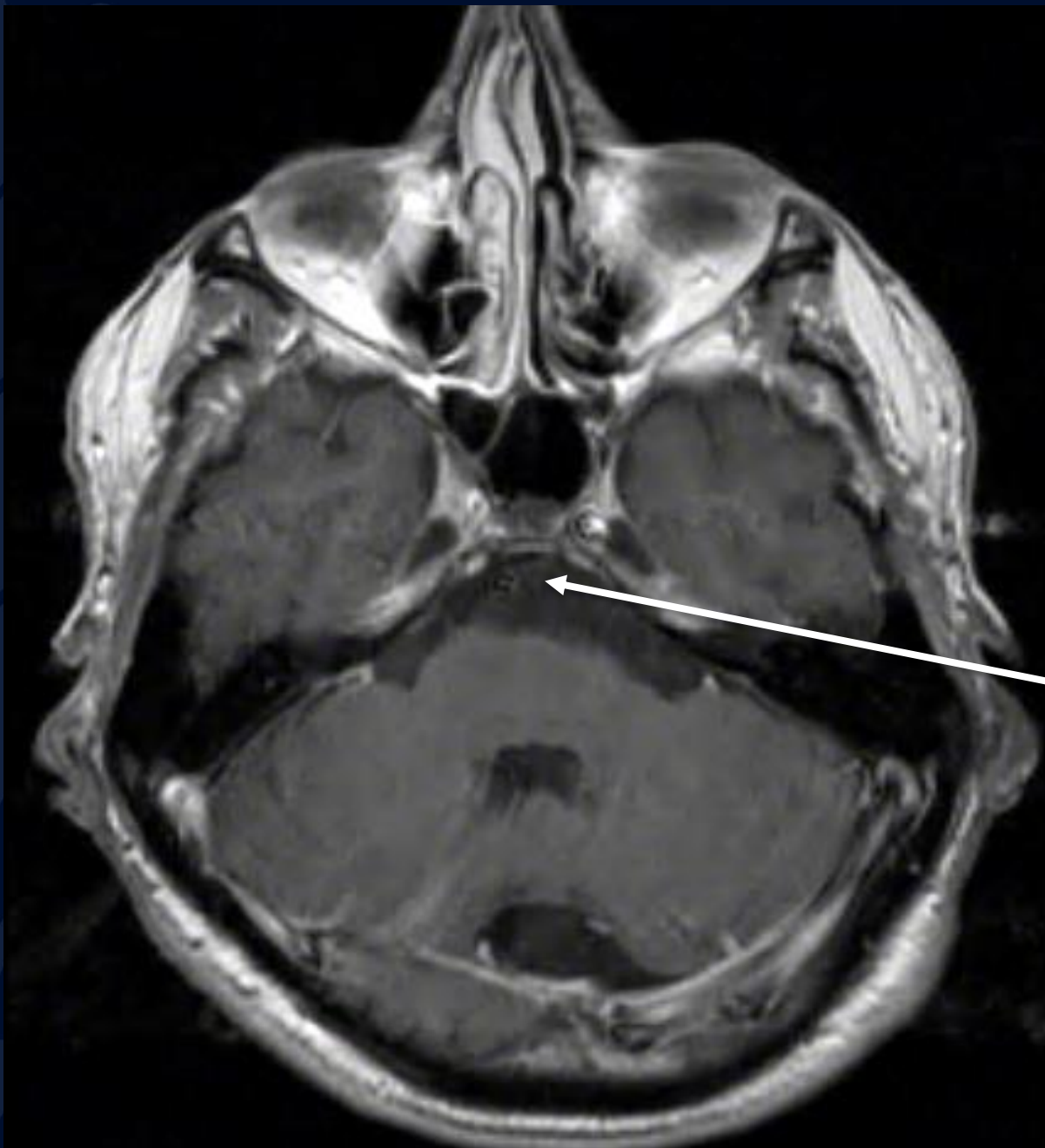
ADC

Isointense to brain  
parenchyma



Axial T1 Pre-  
Contrast

Hypointense



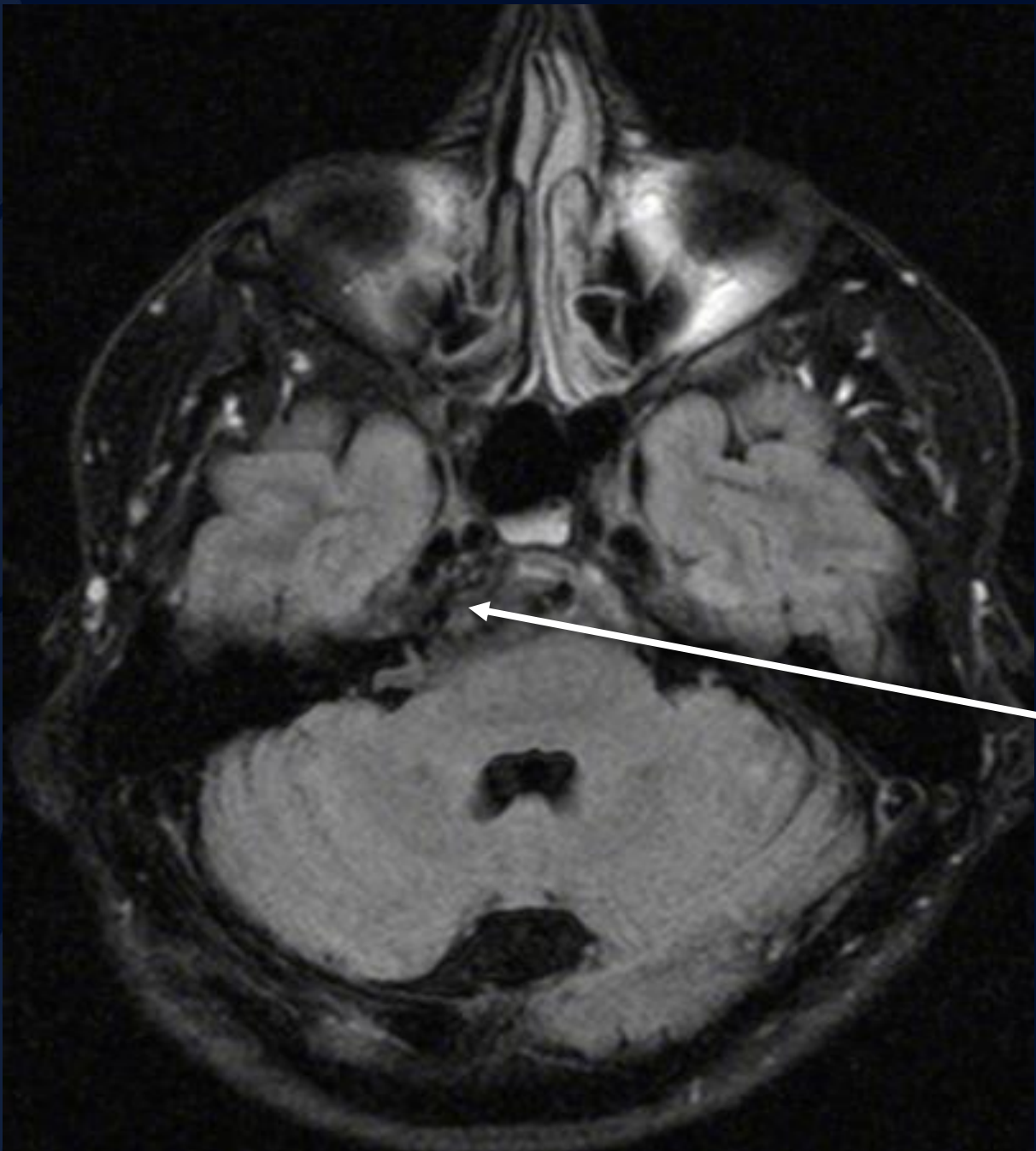
Axial T1 post-contrast

Hypointense



Axial T2

Hyperintense



Axial Flair

Dirty signal

# Epidermoid Cysts

## Etiology

- Congenital: most common, arise from ectodermal inclusion during neural tube closure
- Acquired: post-surgical or post-traumatic implantation

**Pathologically**, intracranial epidermoid cysts are identical to the petrous apex and middle ear congenital cholesteatomas.

## Location

- Intradural: 90%
  - Cerebellopontine angle: 40-50%
    - Third most common CPA mass, after acoustic schwannomas and meningiomas; accounts for approximately 5-10% of all tumors in this region.
  - Suprasellar cistern: 10-15%
  - Fourth ventricle: ~17%
  - Middle cranial fossa
  - Interhemispheric: < 5%
  - Spinal (rare)
- Extradural: only 10% , most within skull



# Imaging Features

- Epidermoids are often indistinguishable from arachnoid cysts or dilated CSF spaces on many MR sequences, except for DWI/ADC which helps to differentiate them.
- DWI: bright
- ADC: Isointense to brain parenchyma
- Flair: Heterogenous/dirty signal, higher than CSF signal
- T1/T2: Usually isointense to CSF
  - Usually isointense to CSF (65%)
  - Slightly hyperintense (35%) to grey matter
  - Rarely hypointense to grey matter, usually in the setting of the so-called white epidermoid (the term refers to the T1 appearance)
- Thin rim of peripheral enhancement may sometimes be seen
- To differentiate from arachnoid cysts, epidermoid will have abnormal restricted diffusion and T2 shine through.

# Treatment & Prognosis

- Surgical excision is the treatment of choice if symptomatic.
- Complete resection is difficult as not all tissue can be removed, especially from around cranial nerves and vessels. Recurrence is therefore not uncommon, although growth is typically slow and many years can elapse without new symptoms.

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