

Patient

A 16-year-old female

Chief complaint: none

History of present illness: When she was playing at cavalry battles, she fell off the others' backs and hit her head. Because the CT showed a brain tumor in a medical practitioner, she was referred to our hospital.

Past history: none

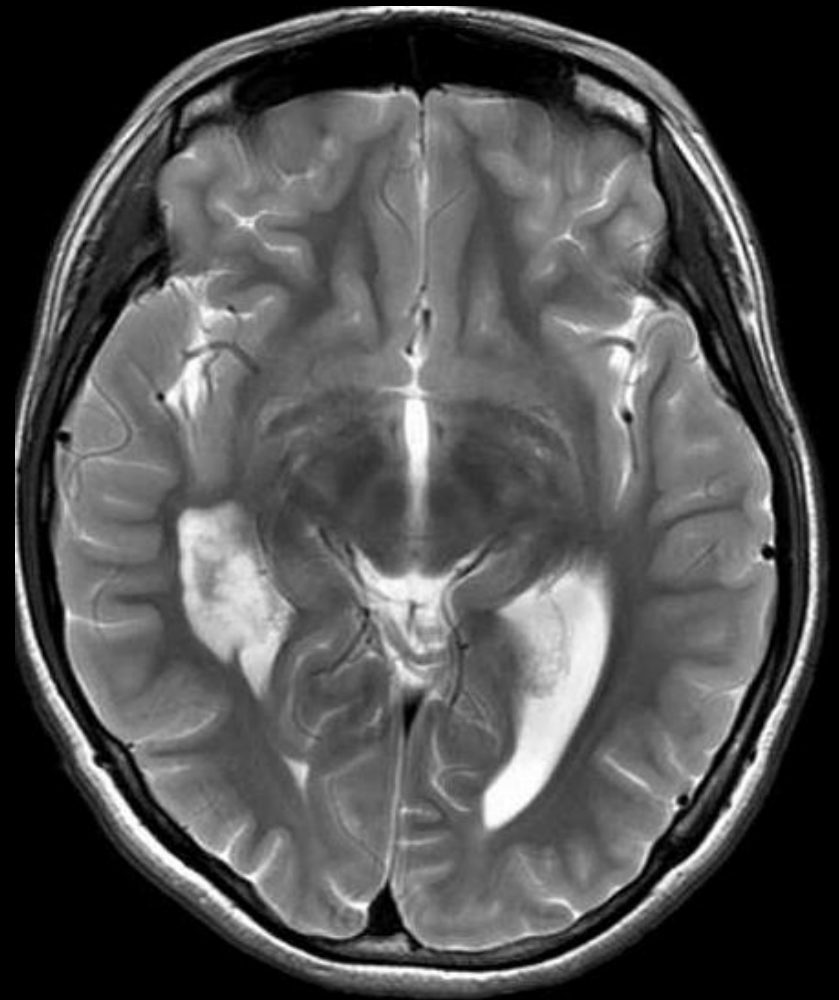
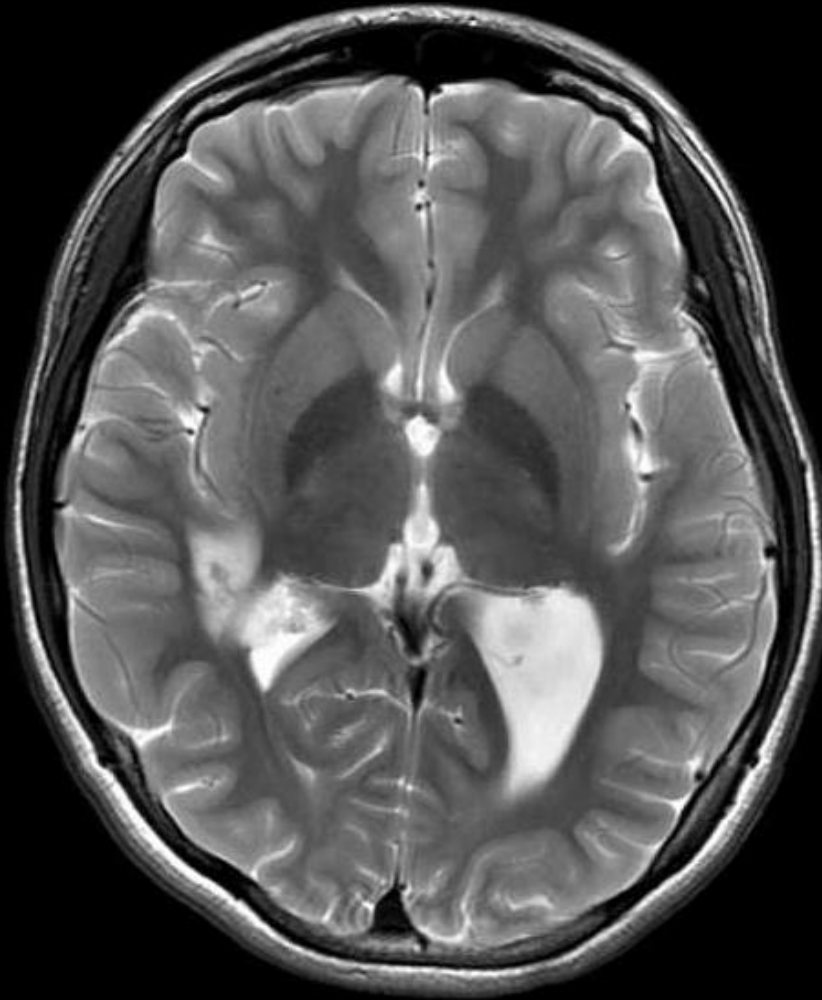
Family history: none

Neurological findings: no abnormality

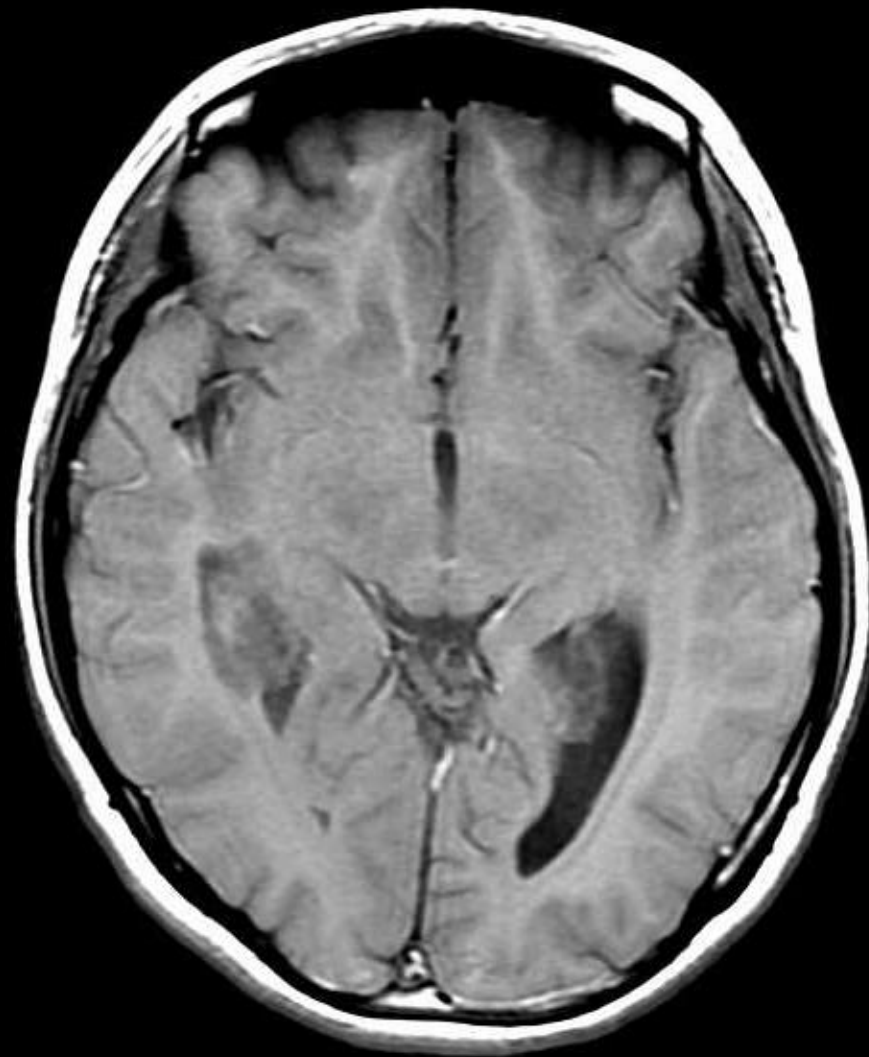
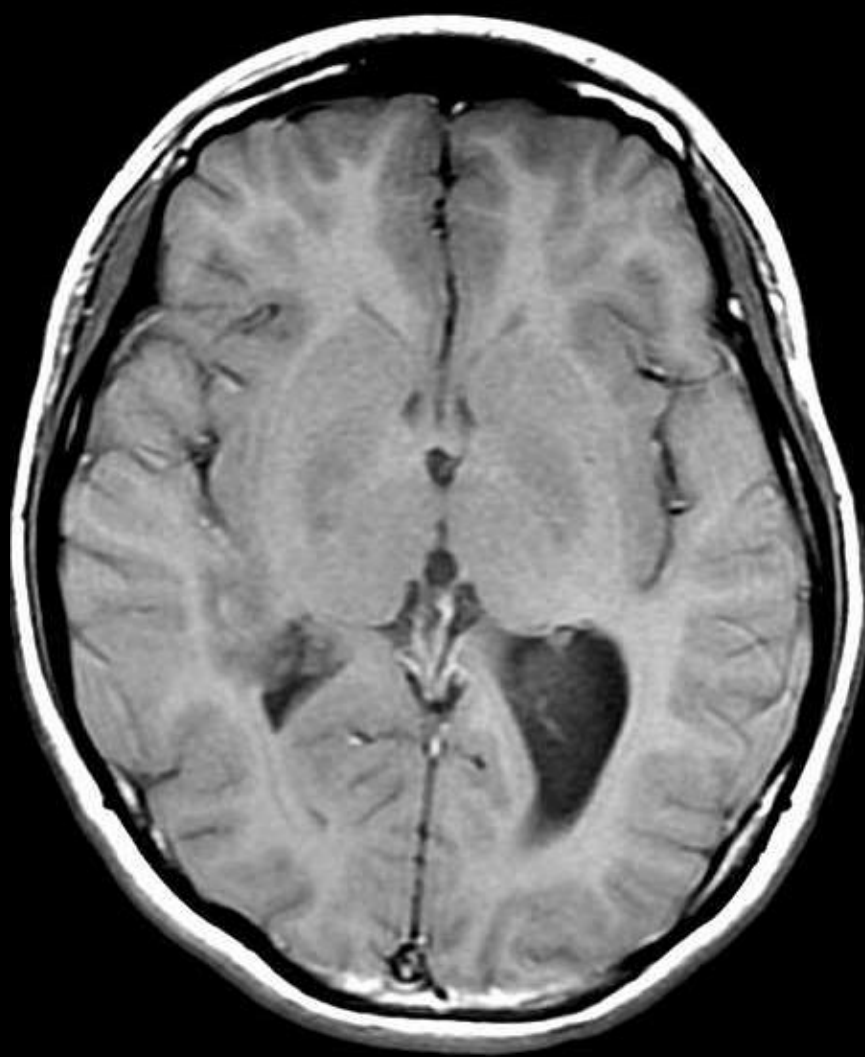
CT



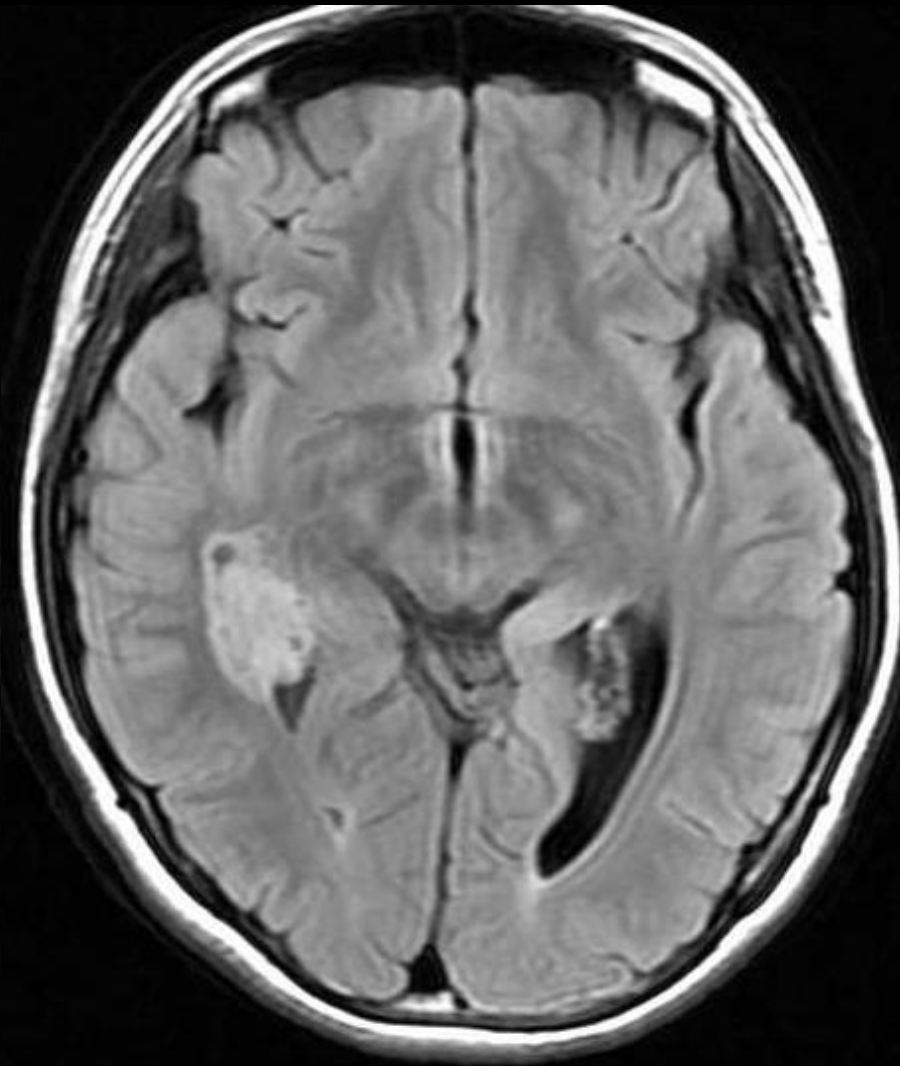
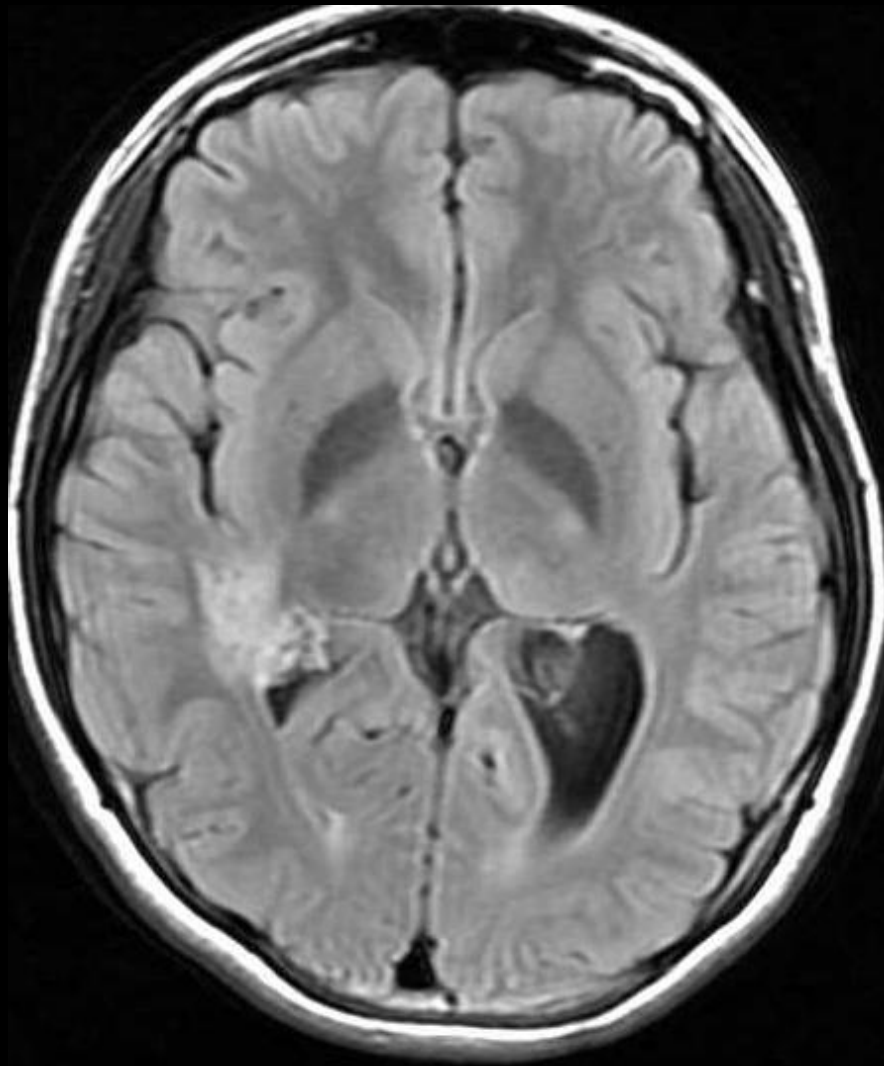
MRI(T2WI)



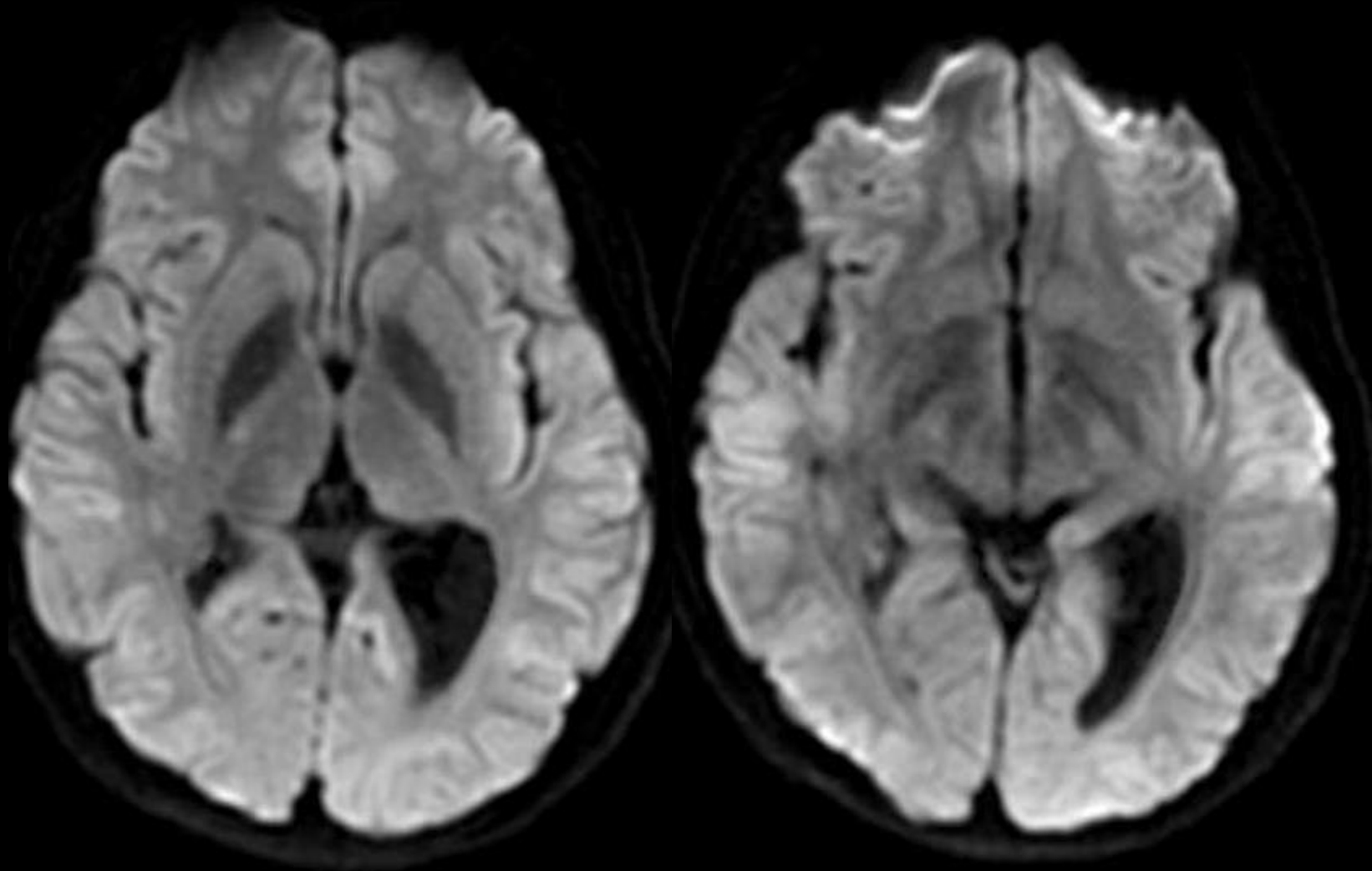
MRI(T1WI)



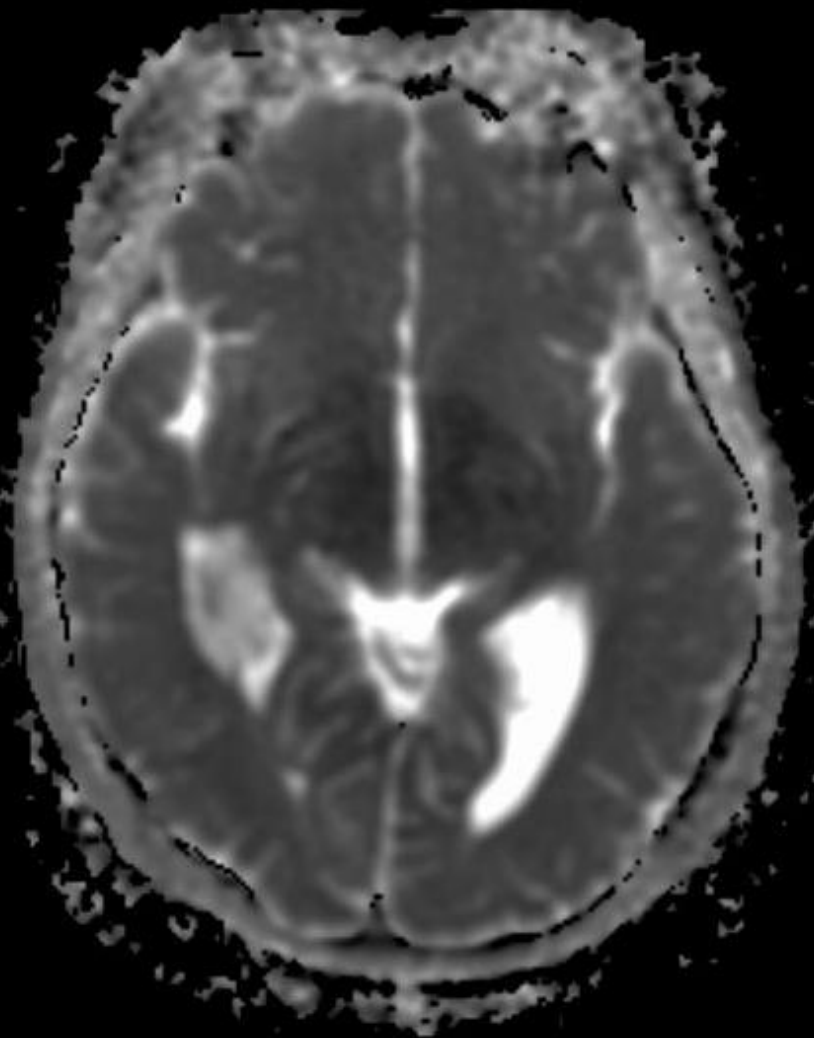
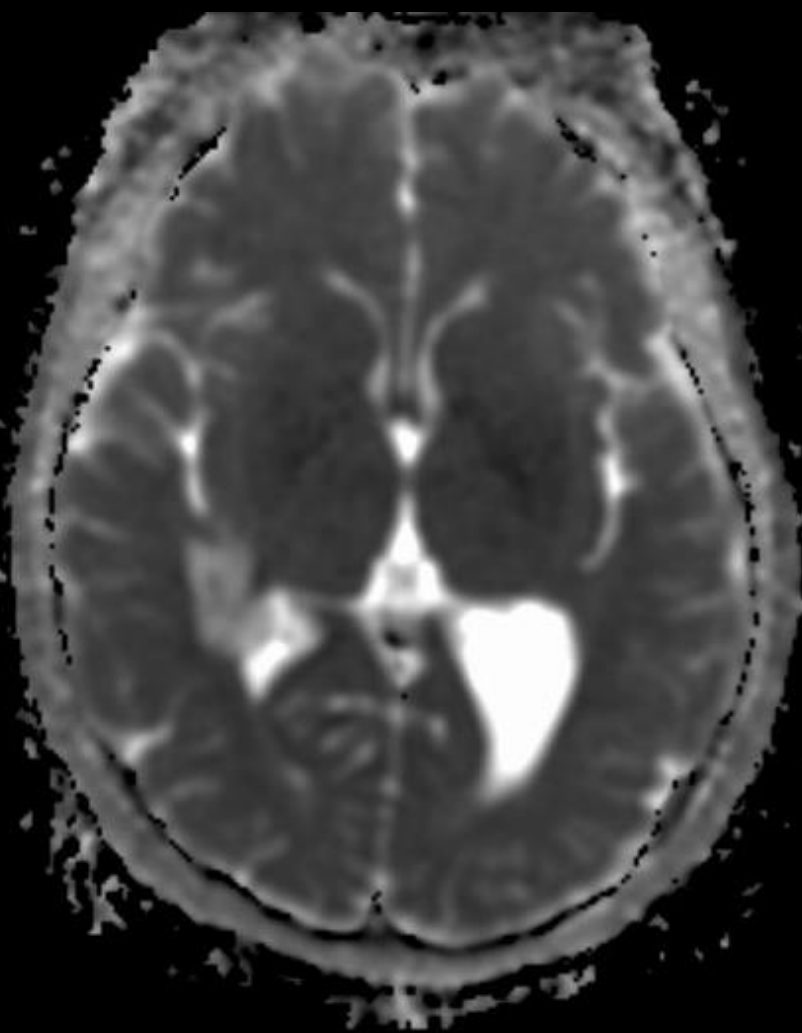
MRI (FLAIR)



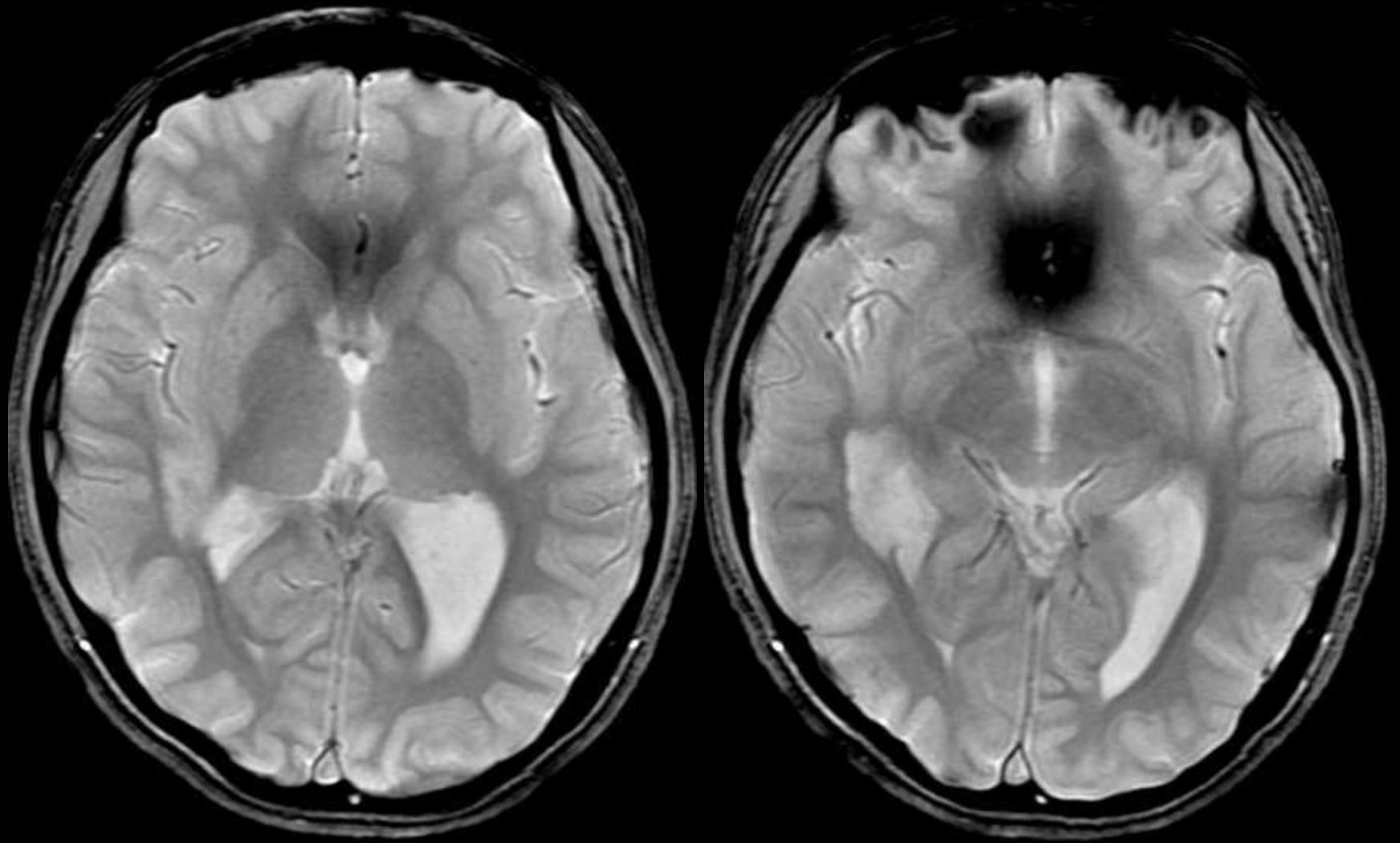
MRI(DWI)



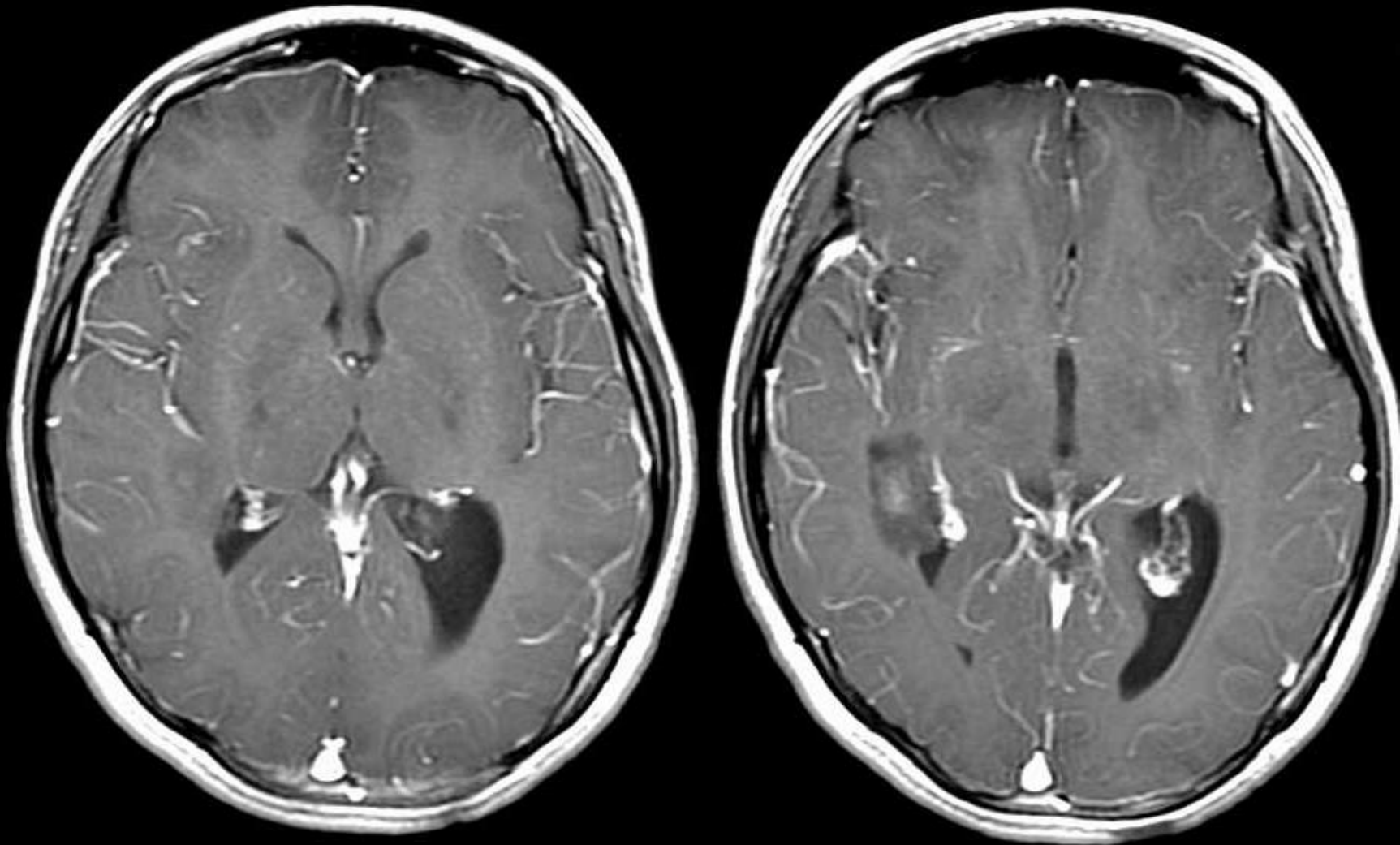
MRI(ADCmap)



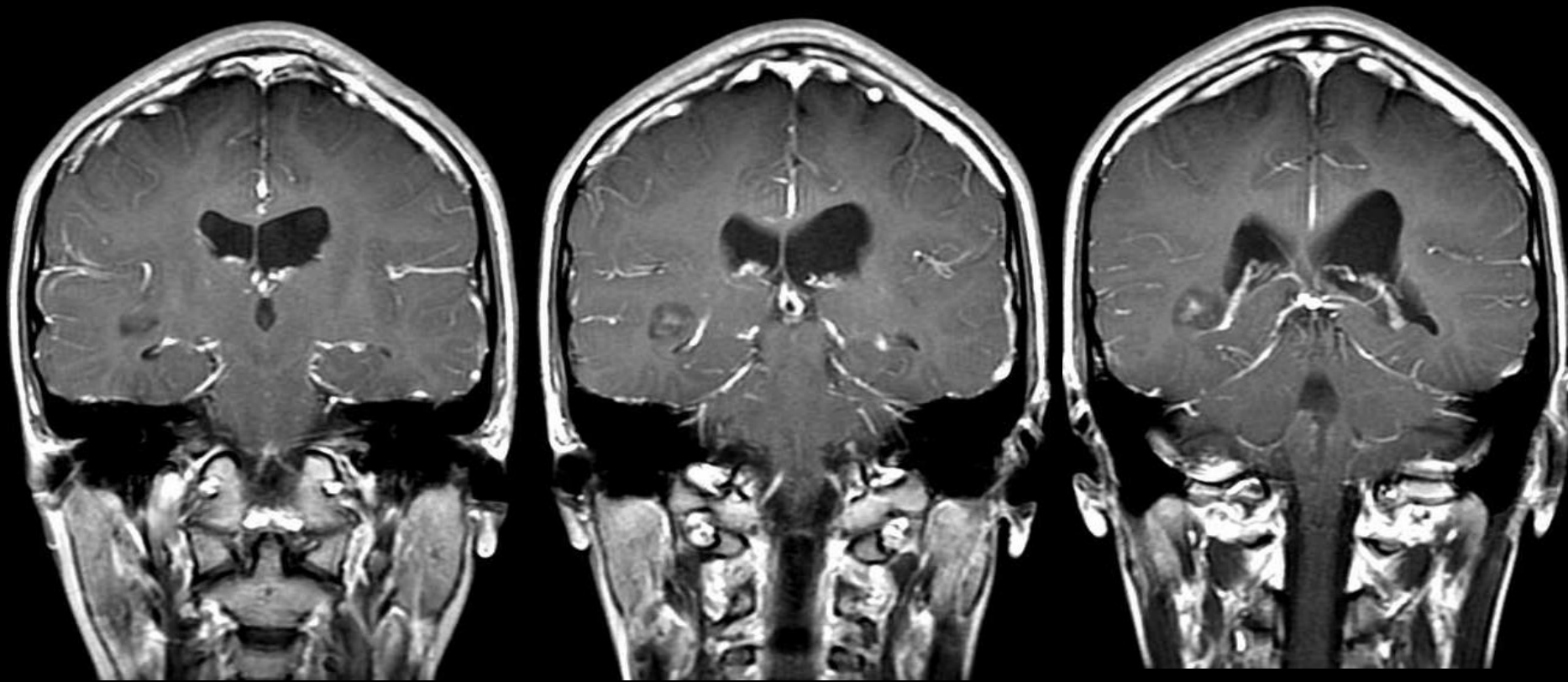
MRI(T2*WI)



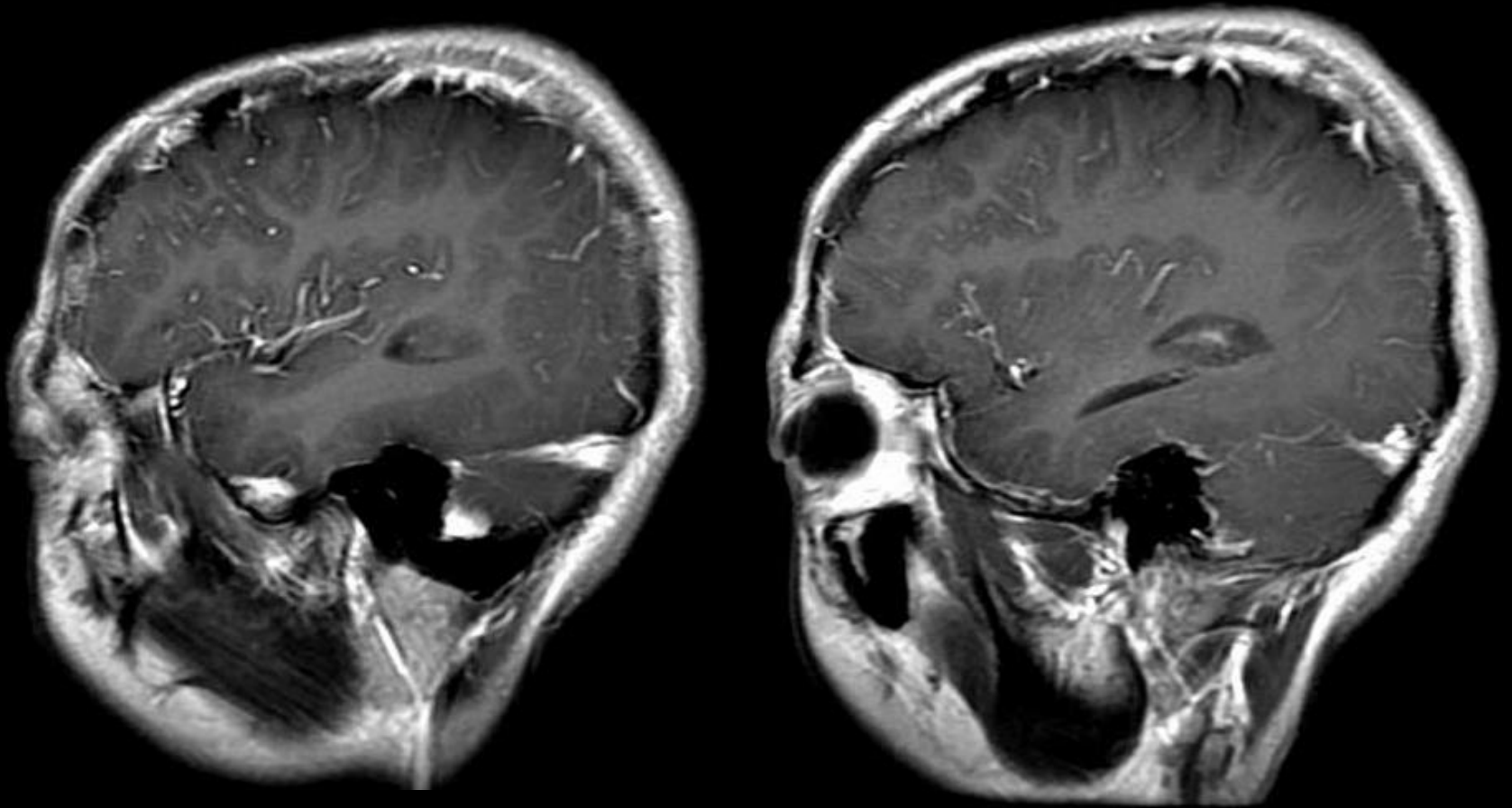
MRI(Gd-T1WI)



MRI(Gd-T1WI)



MRI(Gd-T1WI)



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Imaging findings

A well demarcated nodule adjacent to atrium of right lateral ventricle

	center	periphery
CT	calcification	low
T1WI	low ~ iso	low
T2WI	low	high
FLAIR	high	high
ADC	low	high
enhancement	+	-
T2*WI	iso ~ high	high

Intraoperative findings

- Total resection was performed
- Well-demarcated light gray parenchymal mass with solid architecture
- The border layer was soft and friable but most of the tumor was hard. The tumor was cut with scissors and resected piece by piece.

Diagnosis

Papillary Glioneuronal Tumor (PGNT)

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epidemiology

- A rare brain tumor that belongs to the mixed neuronal-glial tumor (WHO grade I)
- Affects children, young adults (range 4-75 years, mean 27 years)
- A female predominance
- Most cases are asymptomatic (symptomatic patients manifested seizures, headache, visual disturbances, mood changes, aphasia)

Papillary Glioneuronal Tumor (PGNT)

General features

- Cerebral hemispheres, especially in the temporal lobe (38% of cases) most common site
- Both the cortex and the white matter may be involved
- Well demarcated
- Parenchymal mass with solid, cystic, or cyst-mural nodule architecture
- Dimensions of reported tumors vary from 1 to 9cm

Papillary Glioneuronal Tumor (PGNT)

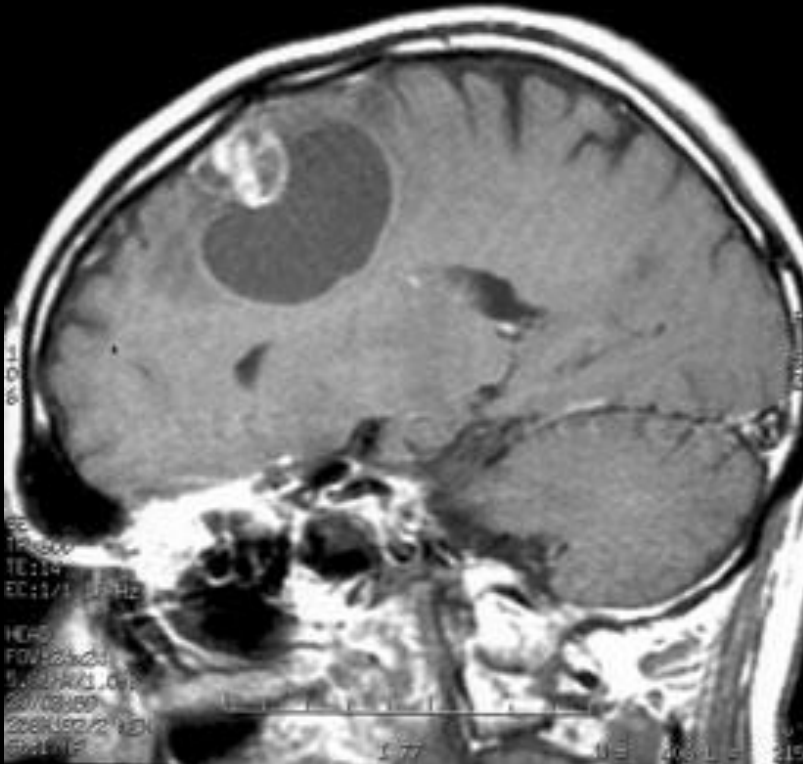
CT

- The presence of calcifications in 40%

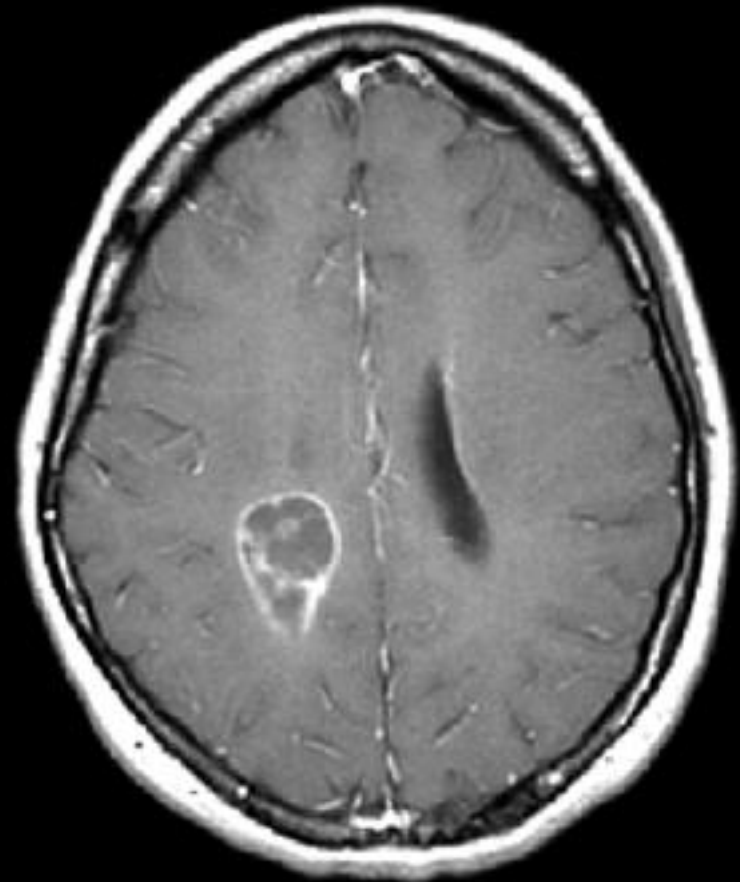
MR

- Iso/hypointense with/without hypointense cysts on T1WI
- Inhomogeneously hyperintense on T2WI
- Inhomogeneously hyperintense nodule on FLAIR
- Ring and/or nodular mural contrast enhancement on Gd-T1WI with/without little mass effect
- Significant peritumoral edema was described in masses larger than 6cm

Typical findings of PGNT on Gd-T1WI

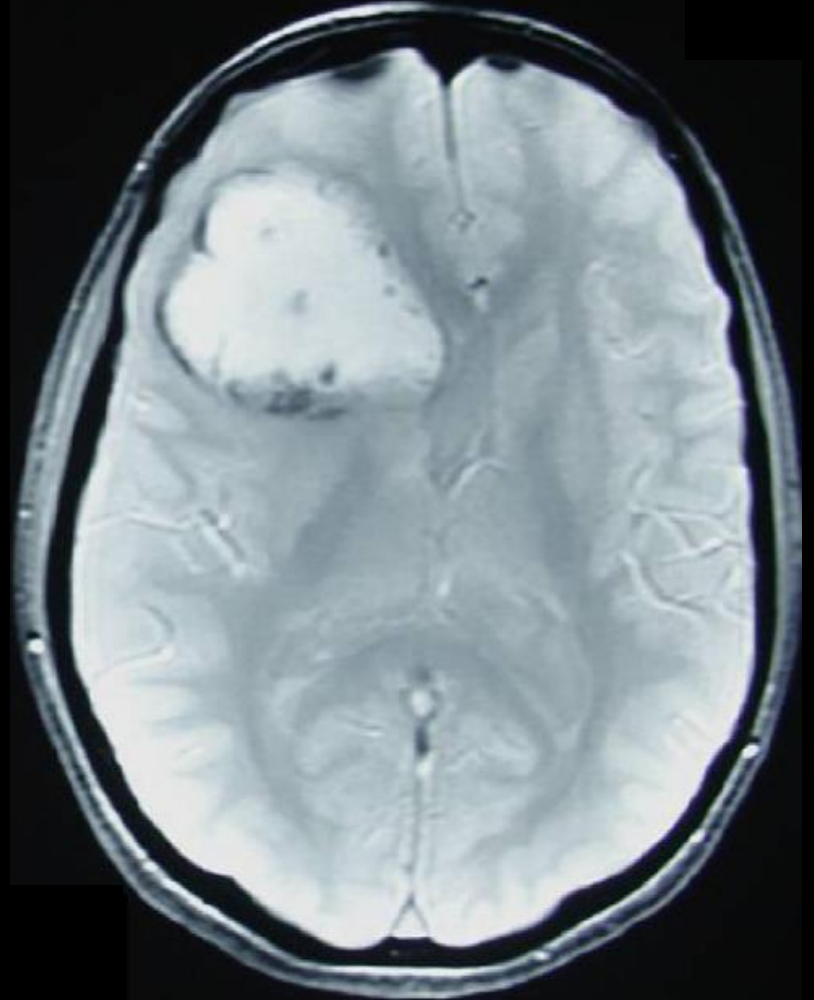
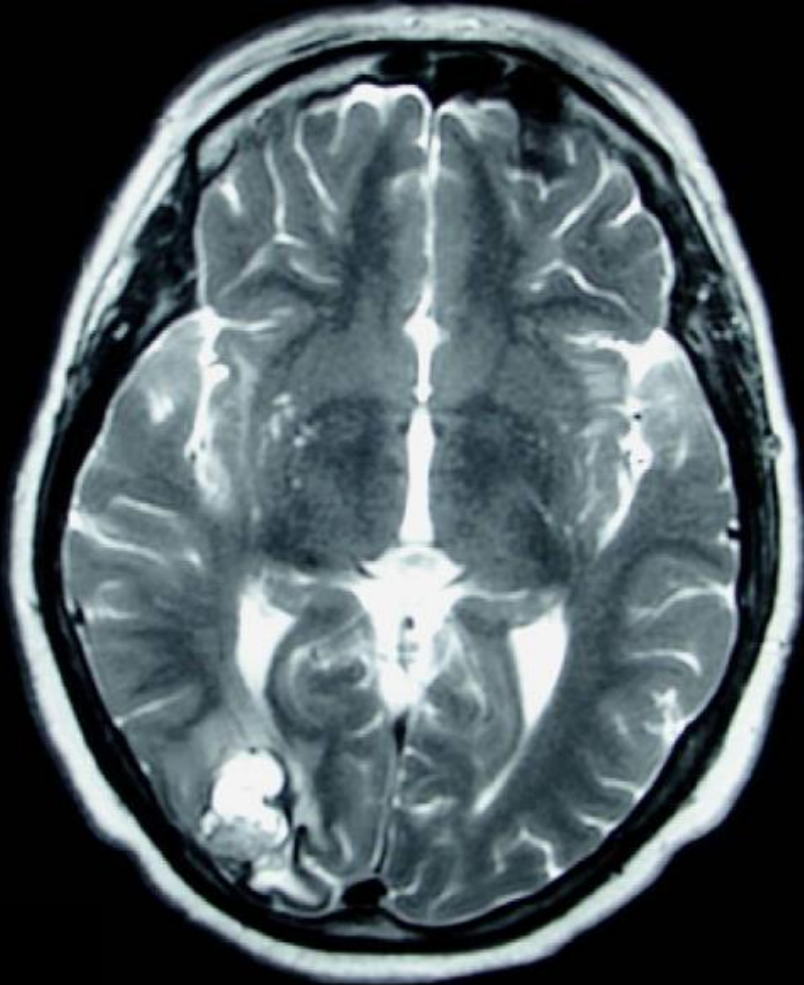


Rosenblum MK, et al. Brain Pathol. 2007



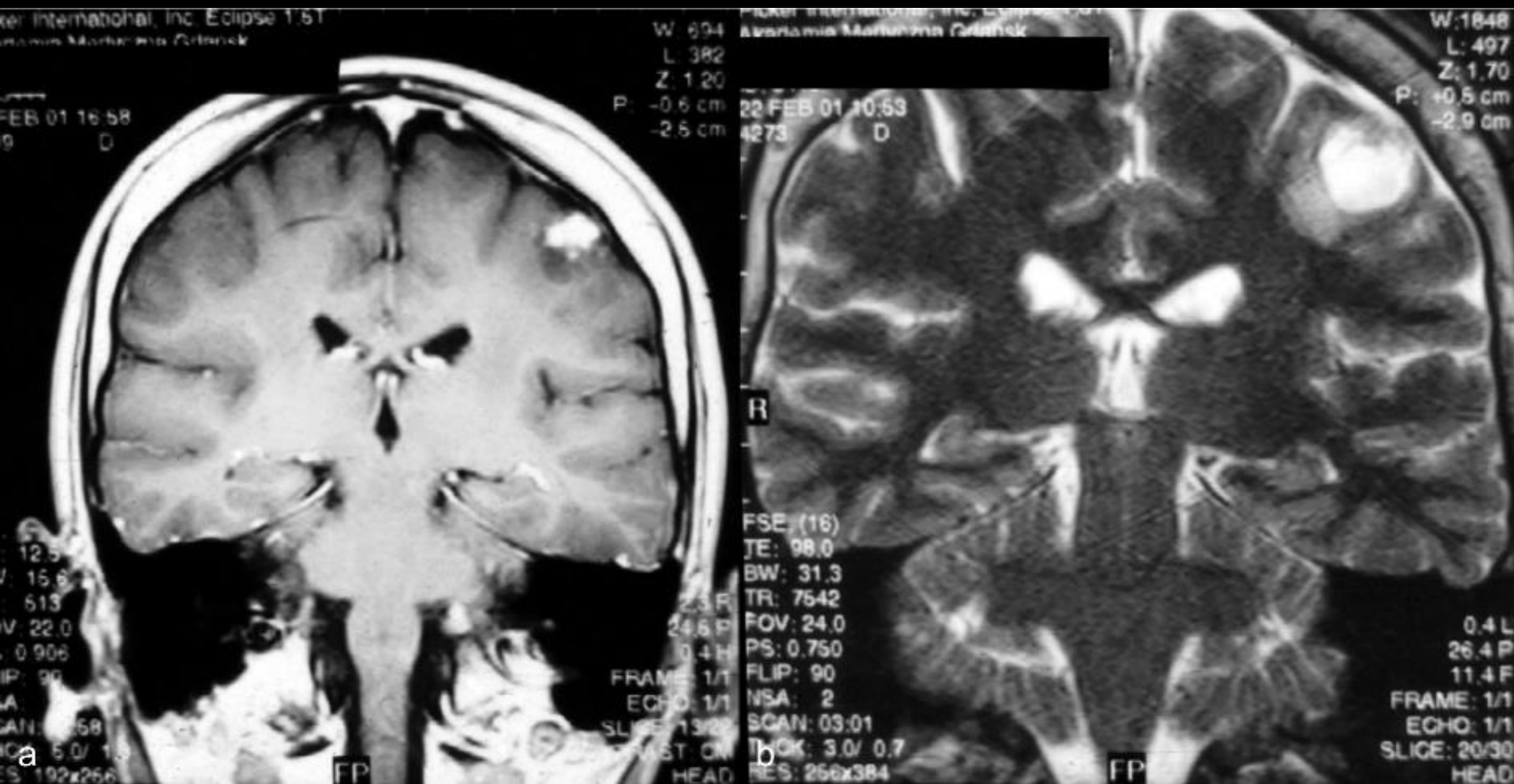
Stosic-Opincal T, et al. AJR. 2005

PGNT with hemorrhage



Benzagmout M, et al. Clin Neurol Neurosurg. 2013

PGNT with gyral location



Iżycka-Świeszewska E, et al. Folia Neuropathol 2008