KREP

2025

KARNATAKA RADIOLOGY EDUCATION PROGRAM

CASE PRESENTATION

MENTOR : Dr. Rahul S, Assistant professor, Dept. of radiodiagnosis
JJM MEDICAL COLLEGE, DAVANAGERE
PRESENTER: Dr. Abhishek , PG Resident

- 19-year-old female was admitted for following complaints

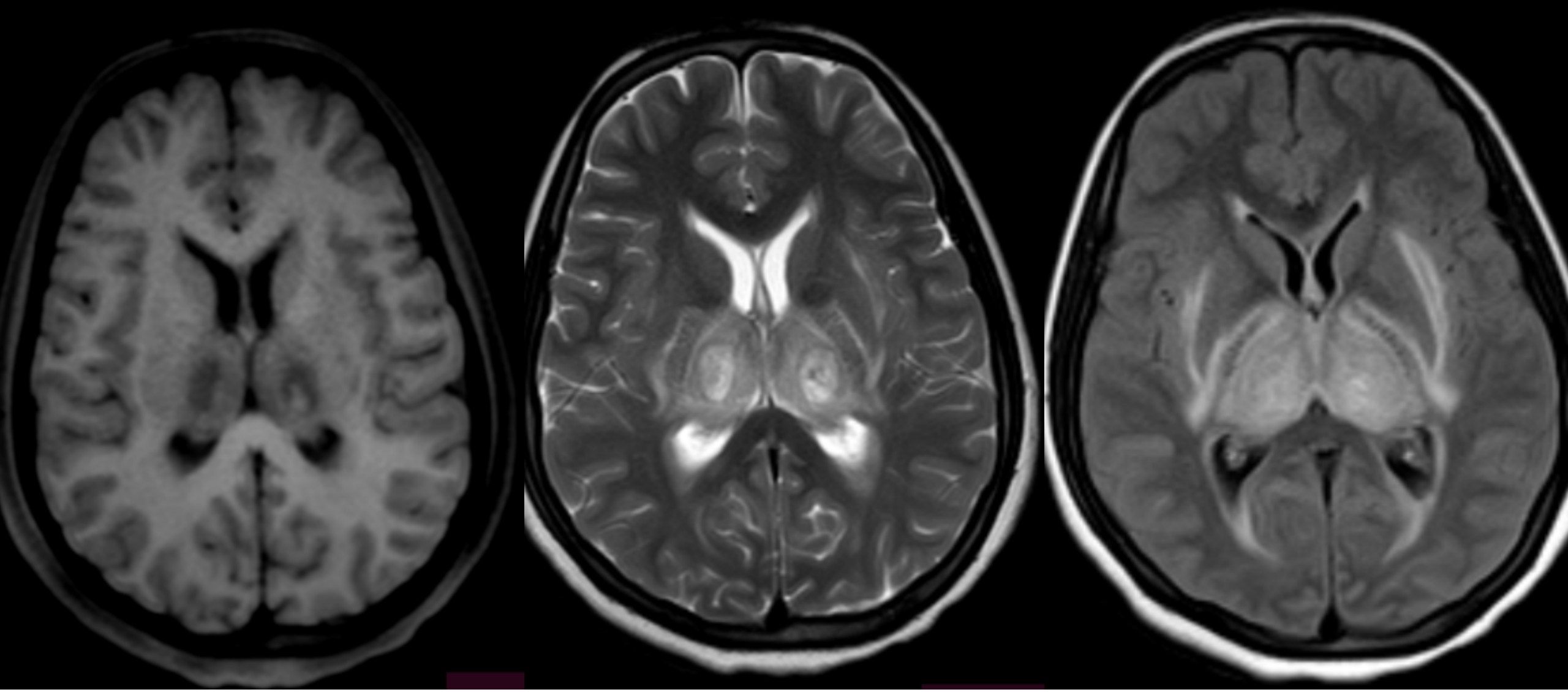
- Fever since 3days
- Headache 1day
- Vomiting 5-6 episodes
- Loose stools 3-4 episodes
- Pain abdomen since 1day
- Altered sensorium in terms of irrelevant talking since 1day
- No skin lesions noted at the time of presentation
- No history of similar complaints in past
- No known comorbidities
- UPT negative and menstrual history- normal

CLINICAL INVESTIGATIONS

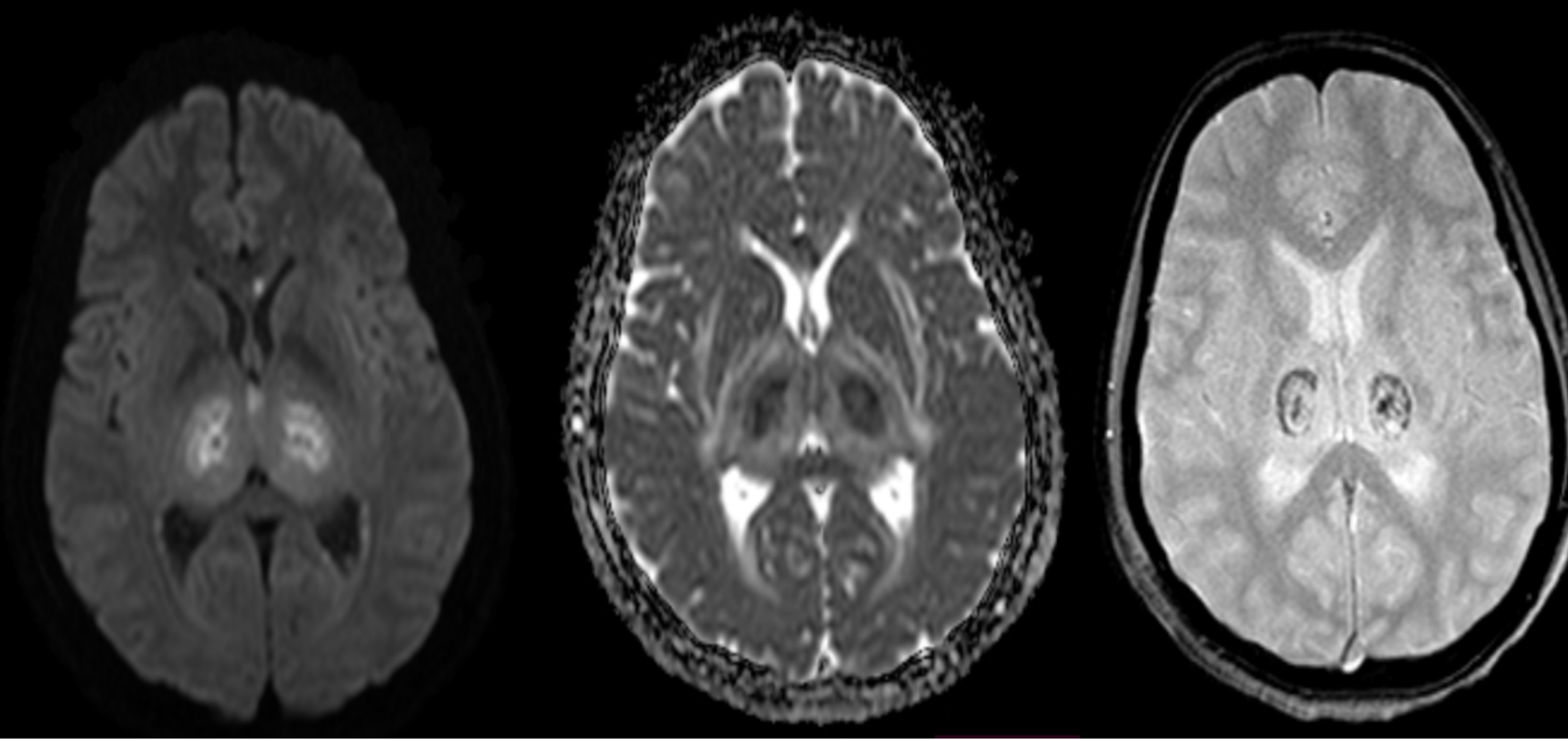
- TLC- 19,000 cells
- Platelets count-2.2 lakhs
- Dengue-antigen and antibody test negative
- CSF analysis- >50 cells,90% lymphocytes ,increased protein and glucose levels ,normal chloride levels - S/o Viral etiology
- LFT and RFT -normal

❑ Clinically diagnosed and admitted as case of acute gastroenteritis with hypovolemic shock under evaluation.

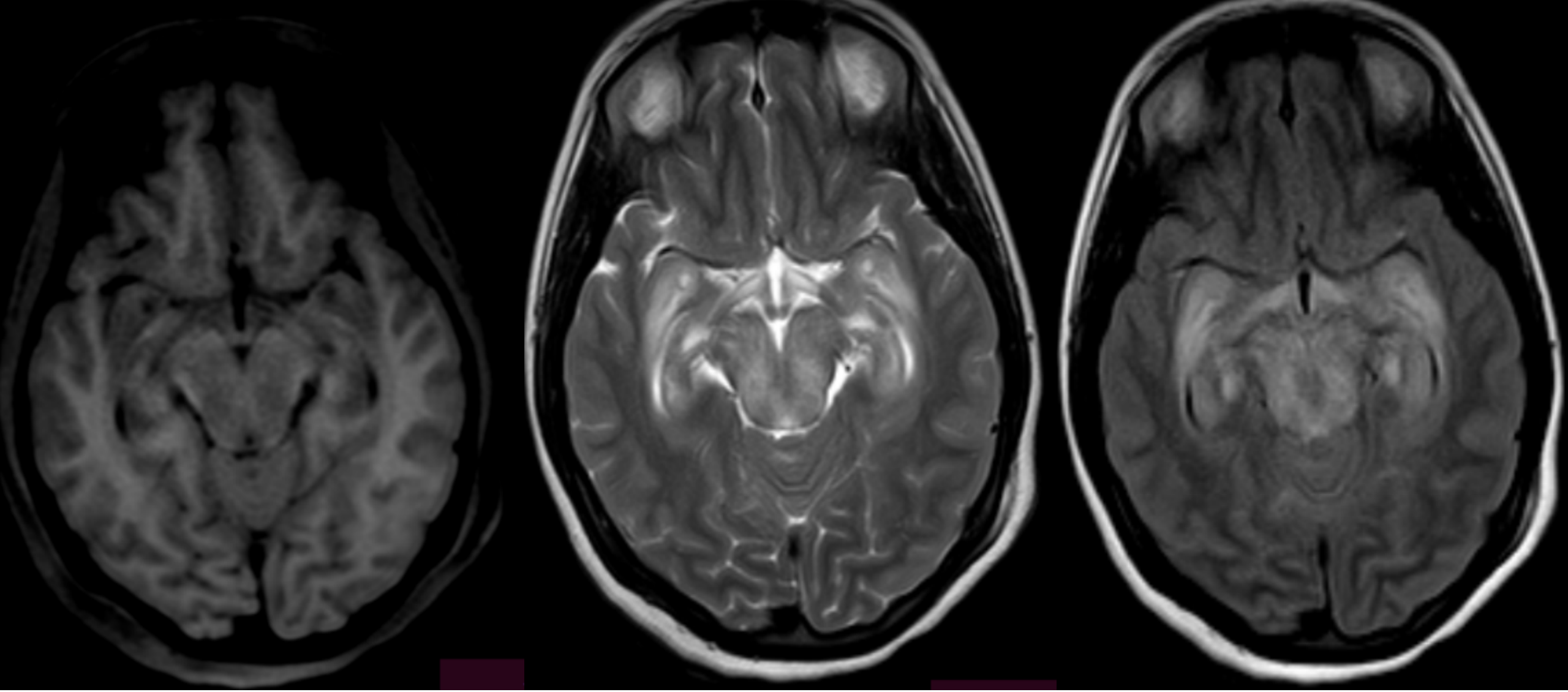
❑ Advised MRI brain to rule out meningoencephalitis



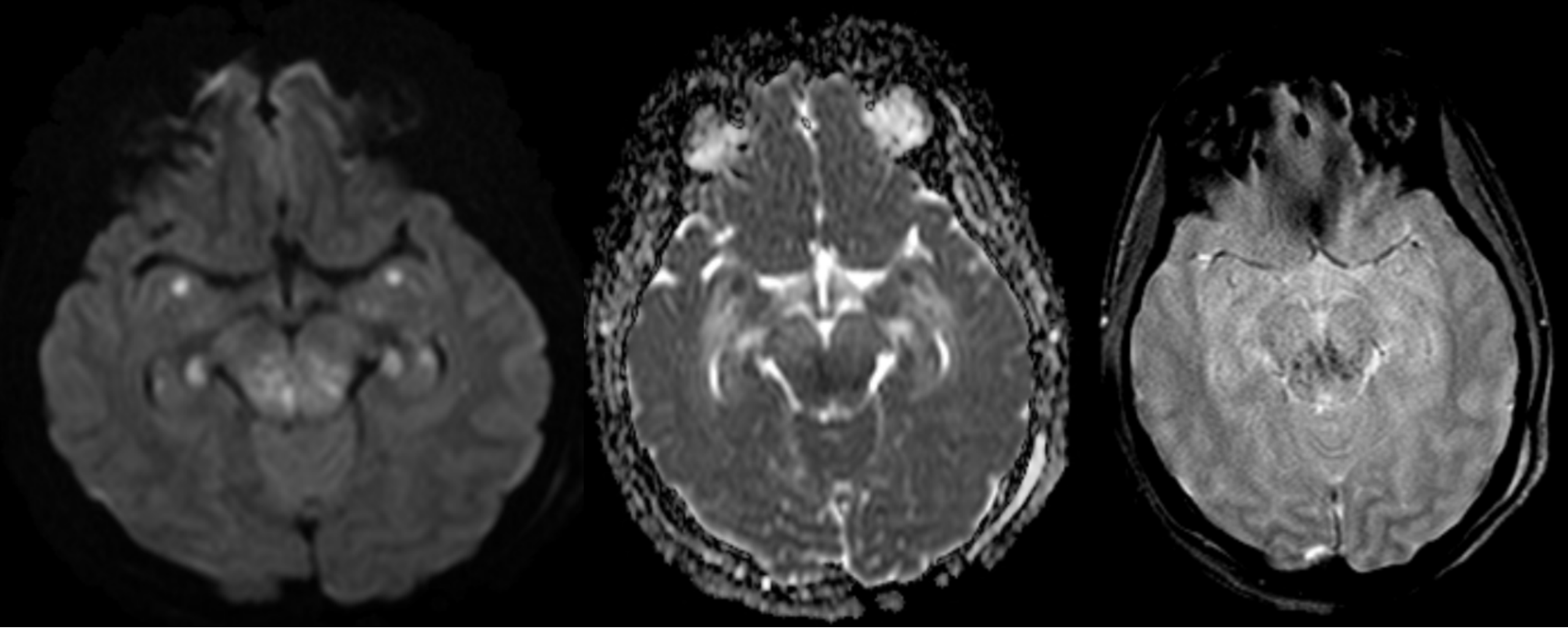
T2/Flair hyperintensity with corresponding T1 hypointensity noted in thalami, bilateral external capsule, posterior limb of internal capsule



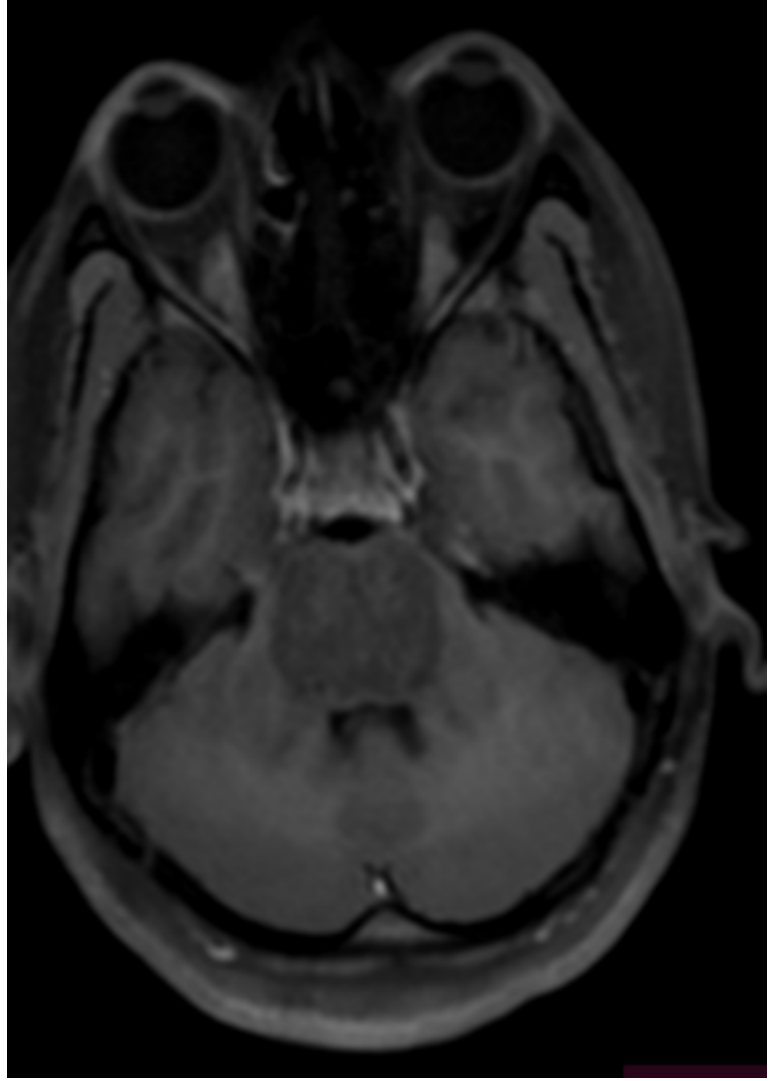
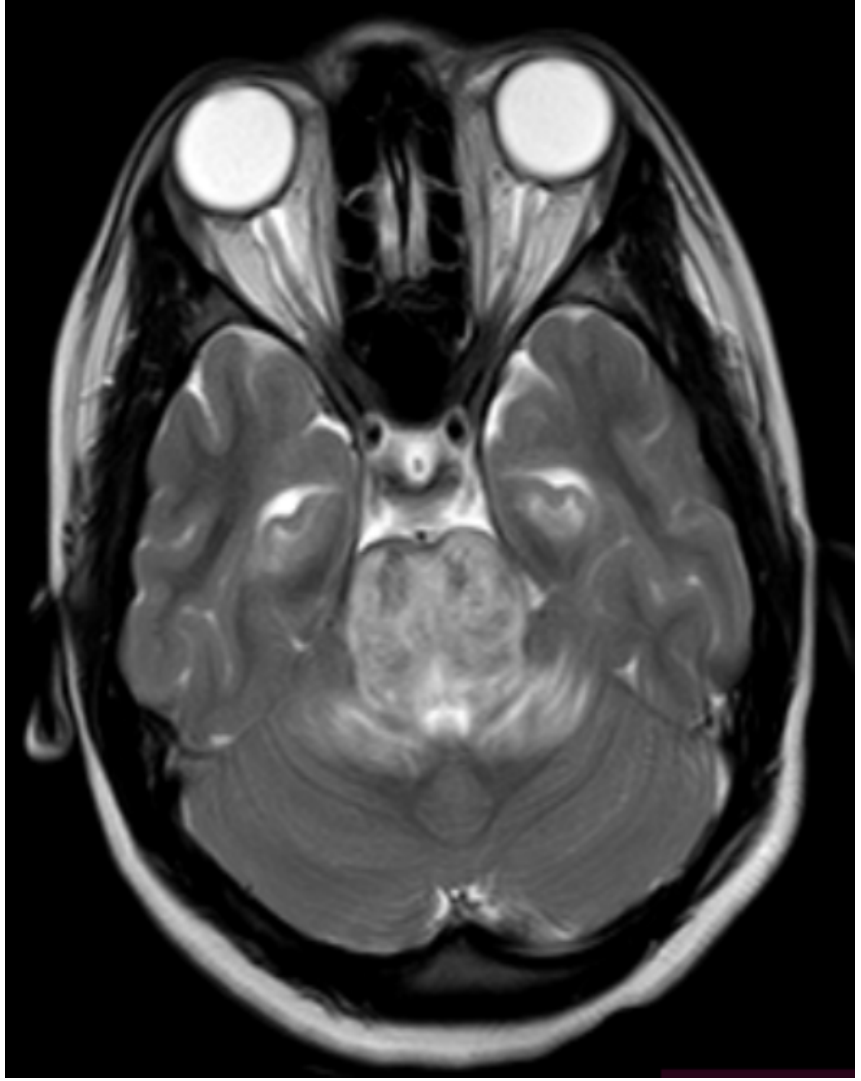
True diffusion restriction noted in bilateral thalami with blooming on GRE and lacunar infarct in splenium of corpus callosum



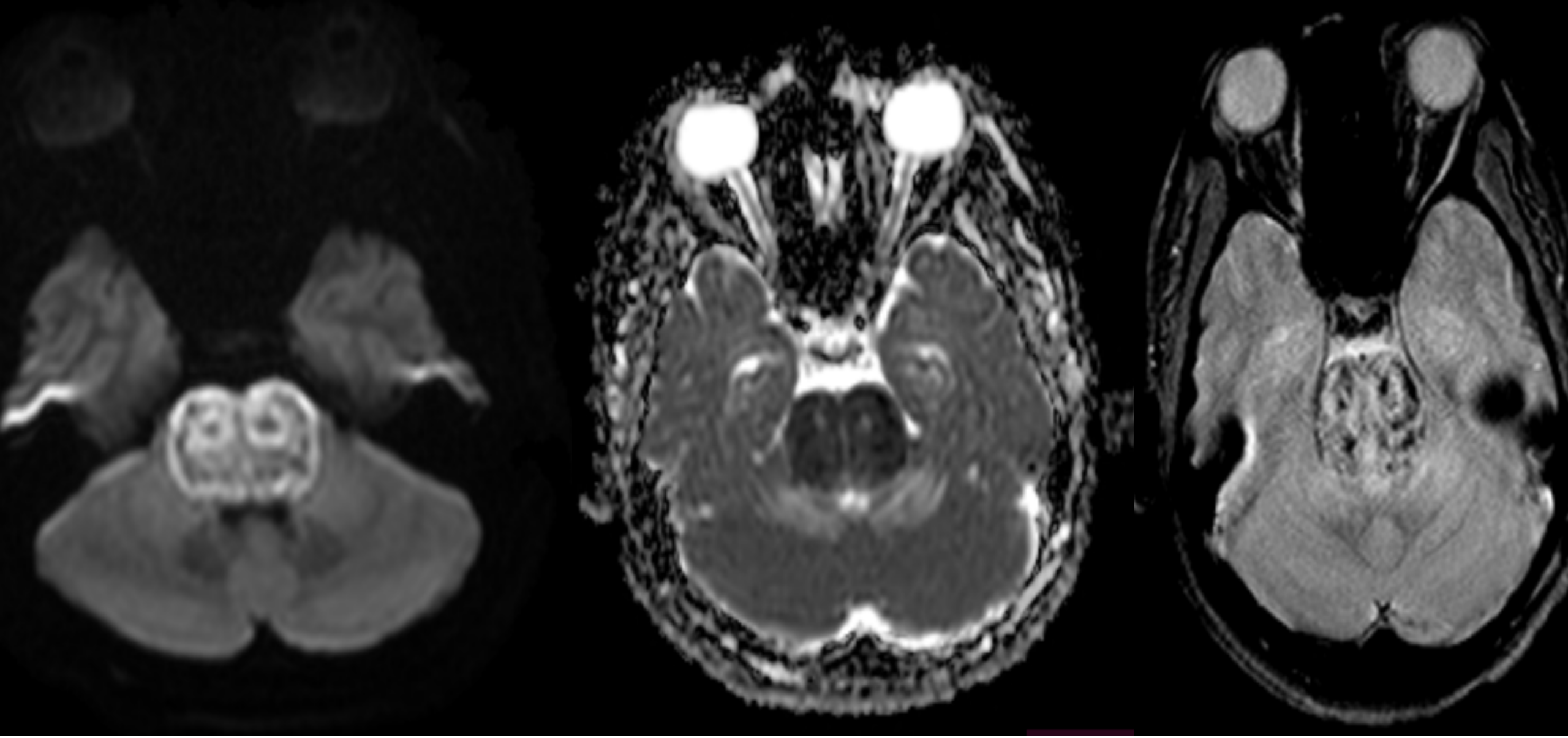
T2/Flair hyperintensity with corresponding T1 hypointensity noted in midbrain , bilateral hippocami.



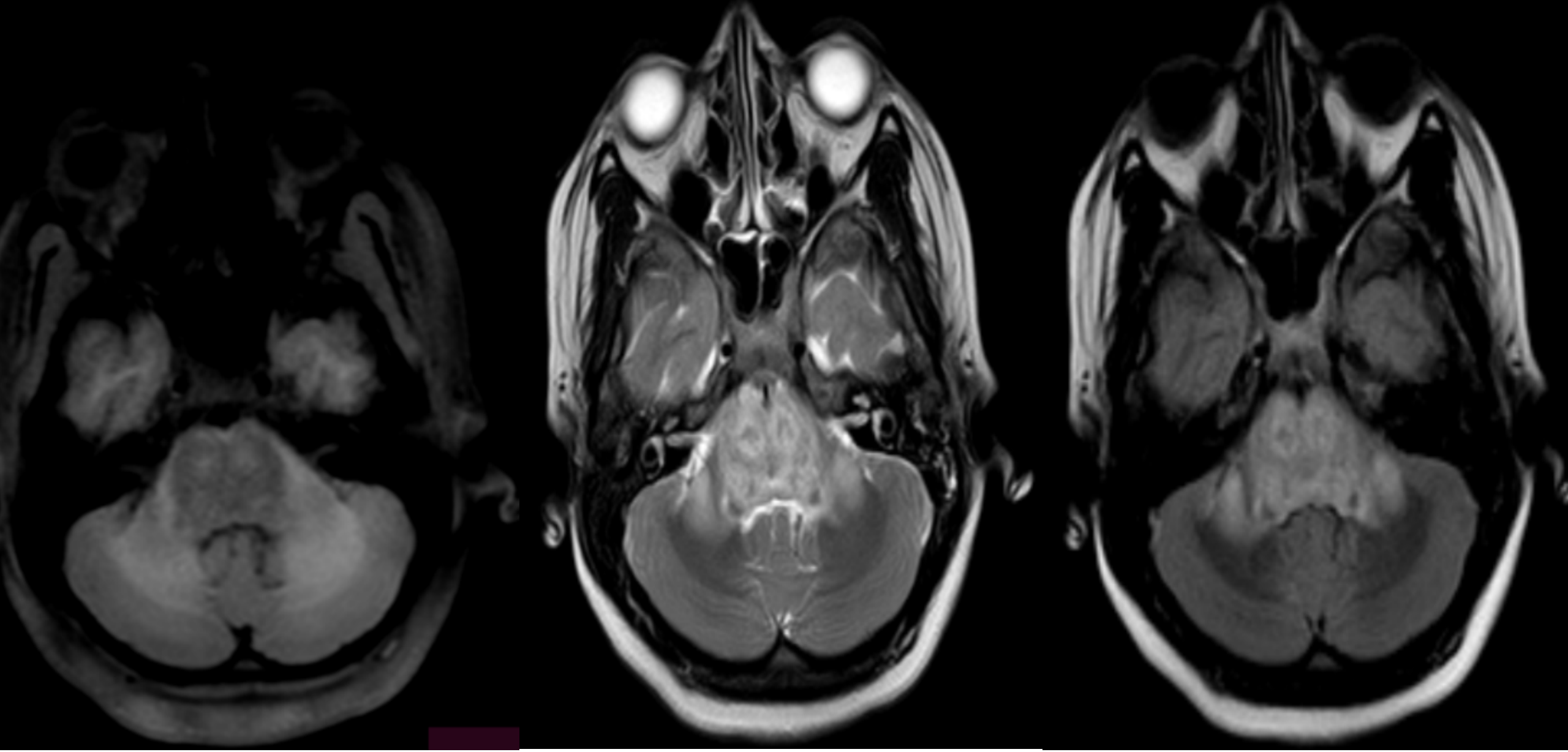
True diffusion restriction noted in midbrain and bilateral hippocami with blooming on GRE and lacunar infarcts noted in bilateral superior temporal gyrus

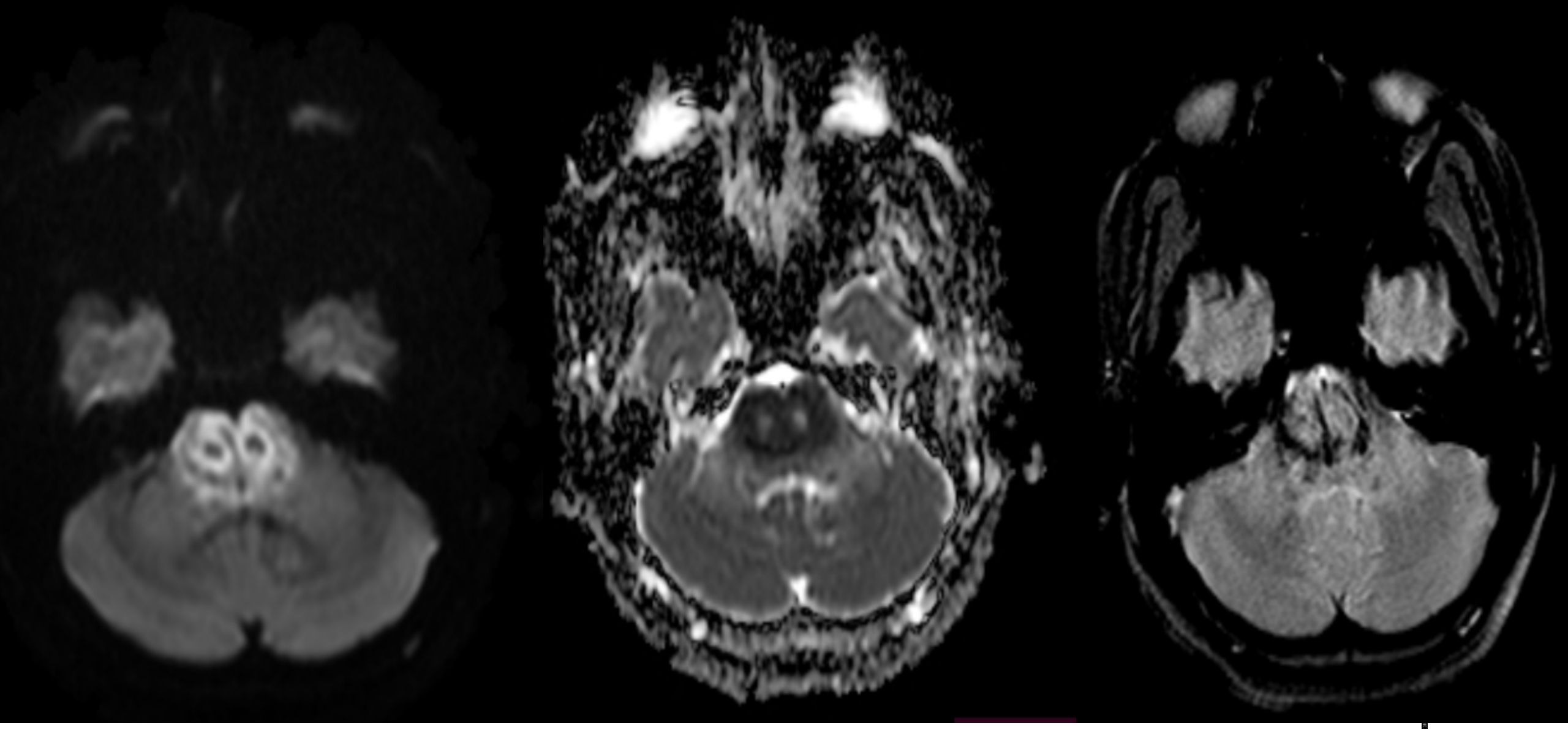

- T2/Flair hyperintensity with corresponding T1 hypointensity noted in pons and bilateral middle cerebellar peduncles



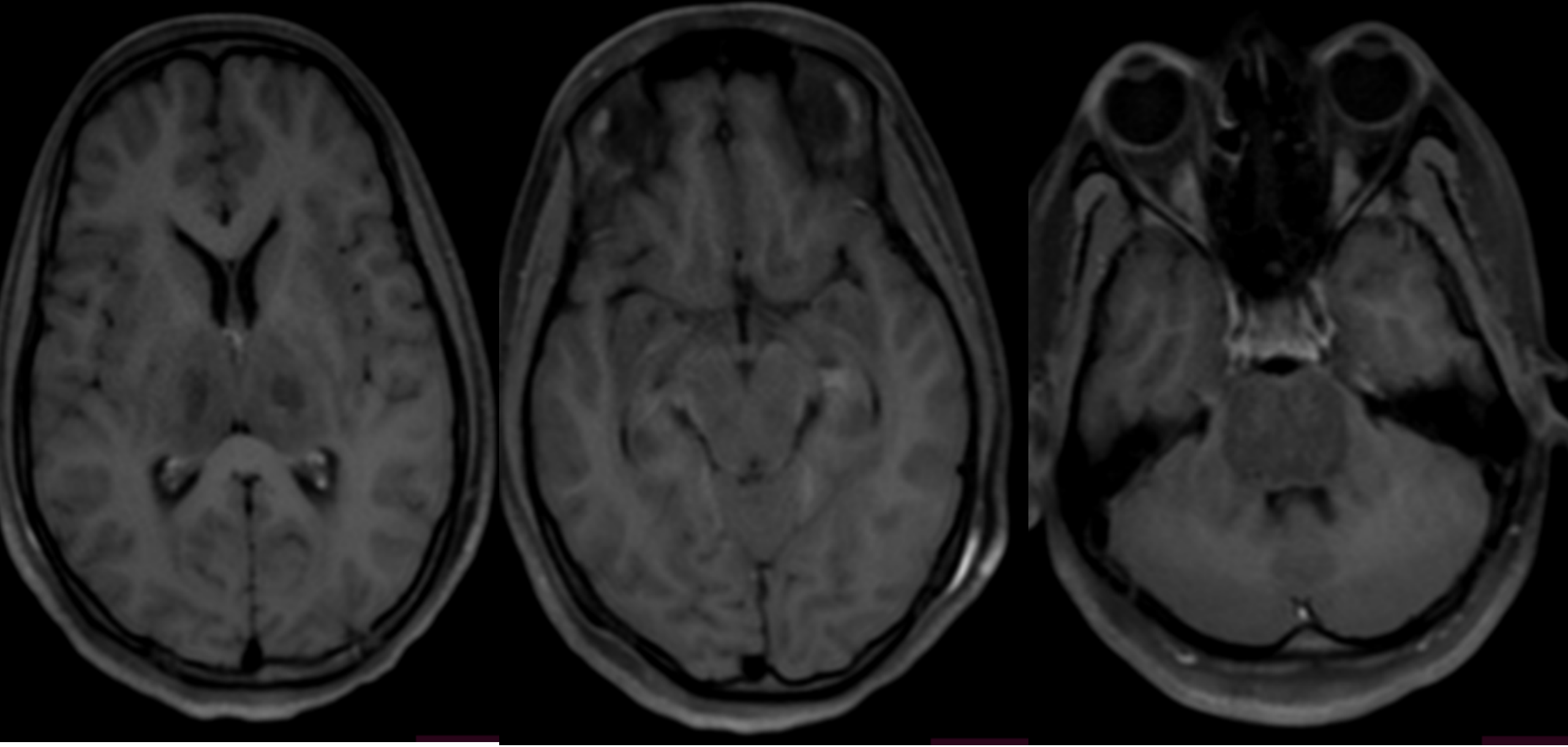
True diffusion restriction noted in pons with blooming on GRE



T2/Flair hyperintensity with corresponding T1 hypointensity noted in medulla and bilateral inferior cerebellar peduncles



True diffusion restriction noted in medulla with blooming on GRE



No significant enhancement on post contrast study

DIAGNOSIS

- **T2/Flair hyperintensity with corresponding T1 hypointensity and showing true diffusion restriction noted in thalami, bilateral external capsule, midbrain, bilateral hippocampi pons and medulla with corresponding areas of blooming on GRE sequence.**
- **Imaging features suggestive of viral haemorrhagic encephalitis**

  → **Differentials to be considered**

  1)Japanese encephalitis

  2)Dengue haemorrhagic encephalitis

Type	Clinical findings	Sites	MR findings	Course
HSV-1	Important cause of adult and childhood HSE. Seizure, altered sensorium, fever	Frontal and temporal lobes, rarely extratemporal	T2 hyperintensity, restricted diffusion, sometimes hemorrhages are seen	Highly lethal if not treated. Can lead to cystic encephalomalacia
HSV-2	Important cause of neonatal HSE. Seizure, altered sensorium, fever	Diffuse brain involvement	T2 hyperintensity, restricted diffusion. Sometimes hemorrhages are seen	Highly lethal if not treated. Can lead to parenchymal calcification, encephalomalacia
HIV	Neurocognitive impairment, dementia	Periventricular and deep white matter	Diffuse cerebral atrophy. T2 hyperintensities in periventricular and deep white matter	Depends of antiretroviral treatment. Can be lethal
Japanese encephalitis	Fever, headache, neurological deficit, altered sensorium	Thalami commonly involved. Basal ganglia, pons, midbrain, cerebellum are sometimes involved	T2 hyperintensity, restricted diffusion. Sometimes hemorrhages are seen	Only supportive treatment available. Highly lethal in children. Can lead to encephalomalacia
Dengue encephalitis	Fever, headache, altered sensorium	Bilateral thalami, pons, medulla	Hyperintensity on T2WI with areas of restricted diffusion. Sometimes petechial hemorrhages and diffuse cerebral edema may be seen	Only supportive treatment available. Can be lethal due to concomitant multiorgan involvement. Can lead to encephalomalacia

Thank you