

A case of **Headache with Repeated Vomiting**

Presented by
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Prof & Head,
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Ad-din Women's Medical College Hospital

Salient feature-

- A 24-yrs-old male patient (student of civil engineering),
 - Normotensive , non diabetic, hailing from Uttara
 - Presented with headache and vomiting for several times for 04 days.
 - He does not have convulsion or loss of consciousness but slight sleep disturbance.
 - Then he was admitted into nearest medical College Hospital and advised for following investigations-
- *** At that time his BP- **110/80 mm of Hg** , Pulse -**88/min**

Reports are

1. CBC : next page
2. Urine R/M/E : Normal
3. S. Creatinine : 1.04 mg/dl
4. Plasma glucose random- 4.88 mmol/L.
5. S. electrolytes : S. Sodium-143mmol/L,
S. Potassium- 4.2 mmol/ L, S. chloride- 103mmol/L
6. CXR PA view : Normal.
7. X ray skull both view: Normal.



IBN SINA DIAGNOSTIC & CONSULTATION CENTER, UTTARA

ISO 9001:2015 Certified

HAEMATOLOGY REPORT



ID No : U1316586

Name : SAIMUN HASAN ANIK

Ref. by : ASSO. PROF. DR. MD ISMA AZAM ZICO MBBS, MS

Specimen : Blood

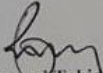
Bill on : 20/03/2026, 03:16 PM Print. on : 21/03/2026, 02:45 PM Deliv. on : 20/03/2026, 10:00 PM

Age : 22 Y 0 M 0 D Sex : M

Collected on : 20/03/2026, 03:22 PM Received on : 20/03/2026, 04:14 PM

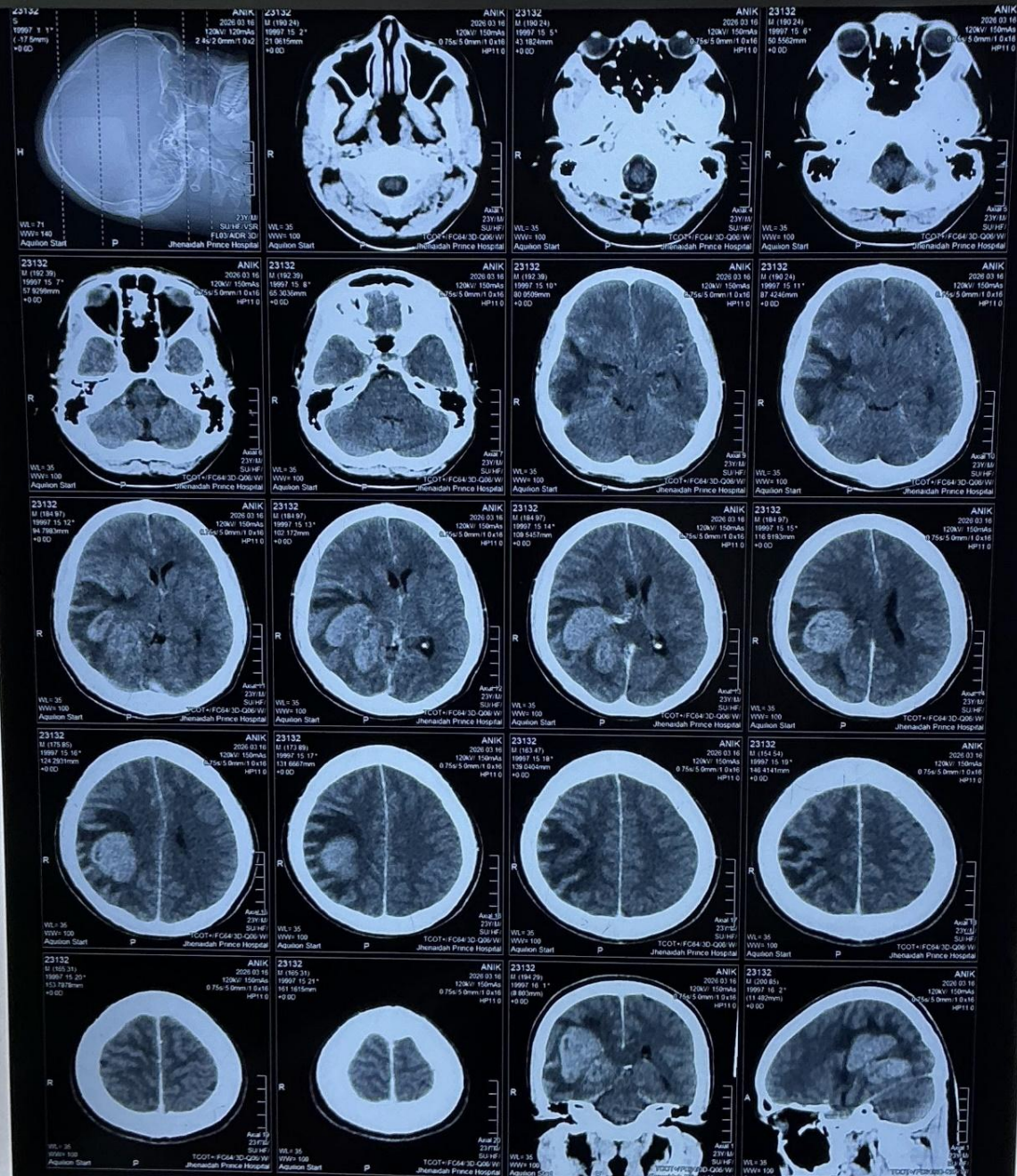
Estimations are carried out by CUBE 30 Touch

Parameter	Result	Reference Value
Red Blood Cells		
Haemoglobin	17.9 g/dl	Adult: Men: 15.0±2.0, Women: 13.5±1.5 At birth: 13.5-19.5, 3 Days: 14.5-22.5 1 Month: 11-17, 2-6 Months: 9.5-13.5 2-6 Years: 11-14, 6-12 Years: 11.5-15.5 Men: 5.0±0.5, Women: 4.3±0.5
Total RBC	5.81 million/Cmm.	Men: 0-10, Women: 0-20
ESR	1 mm (Auto Analyzer)	Men: 0.45 ± 0.05, Women: 0.41 ± 0.05
PCV/HCT	0.54 l/l	92±9
MCV	92 fl	29.5 ±2.5
MCH	31 pg	33.0±1.5
MCHC	33 g/dl	12.8±1.2
RDW-CV	12 %	
White Blood Cells		
Total WBC	7,000 /Cmm.	Child: 5,000-15,000 Adult: 4,000-11,000 Infant: 6000-18,000 At birth: 10,000-25,000 50-500
Circulating Eosinophils	70 /Cmm.	
Differential Count		
Neutrophils	70 %	Child: 20-50 Adult: 40-75
Lymphocytes	25 %	Child: 40-75 Adult: 20-40
Monocytes	04 %	2-10
Eosinophils	01 %	2-6
Basophils	00 %	0-1
Others	00 %	
Platelet Count:		
Total Platelet Count	1,50,000 /Cmm	1,50,000-4,50,000
MPV	11.5 fl	8.0-9.5


Muhammad Fahidul Islam
DMT(SMF), Lab. Medicine
Medical Technologist, Ibn Sina, Uttara


Asst. Prof. Dr. Nasrin Akhter
MBBS (SSMC), MD (Haematology), BMU
Consultant Haematology
Ibn Sina D.Lab, Uttara

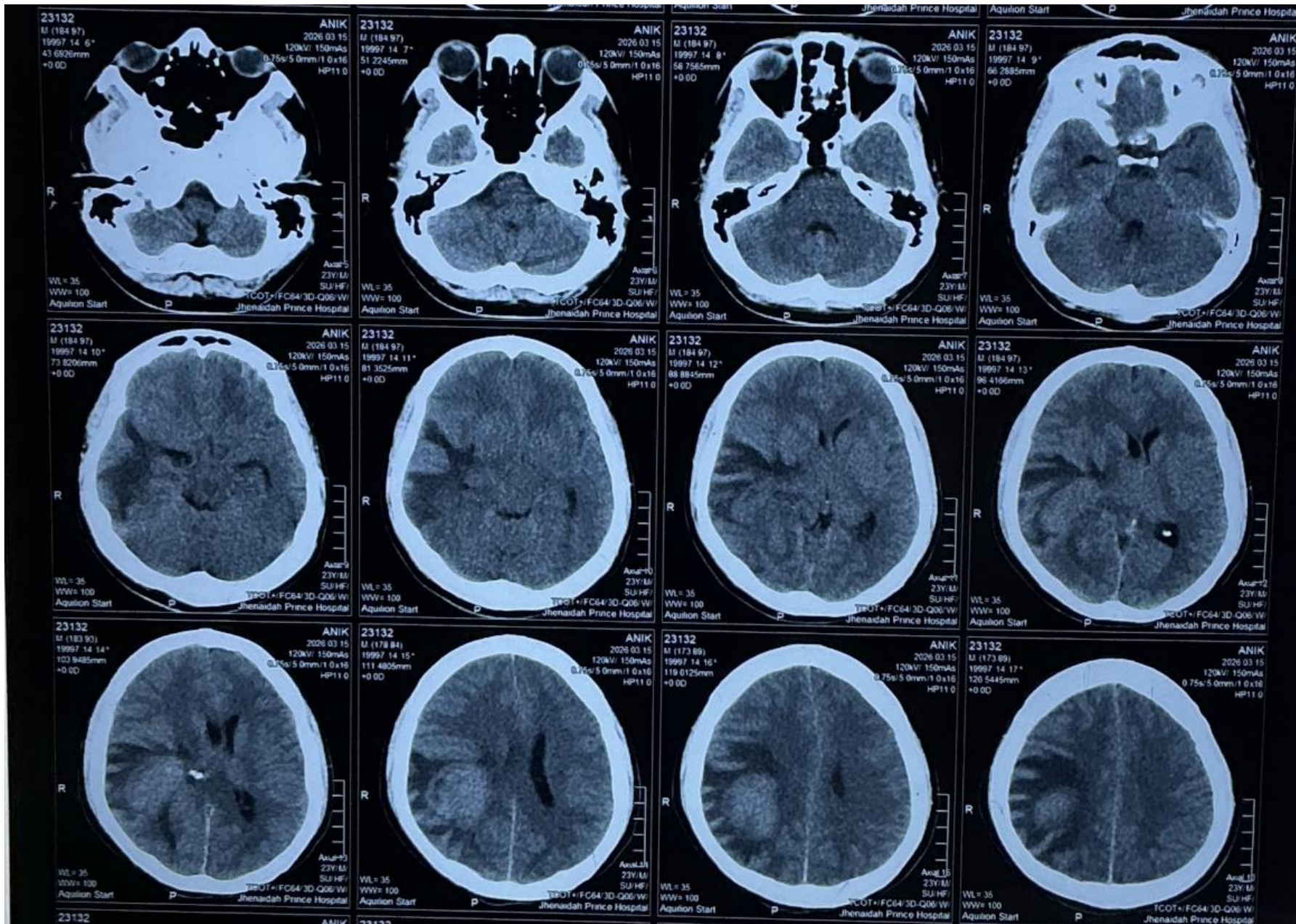
- He was treated conservatively and after feeling better discharged with DOR . After going home, he started vomiting again associated with headache and eyeache.
- Then he came to another hospital and advised for CT scan of brain.

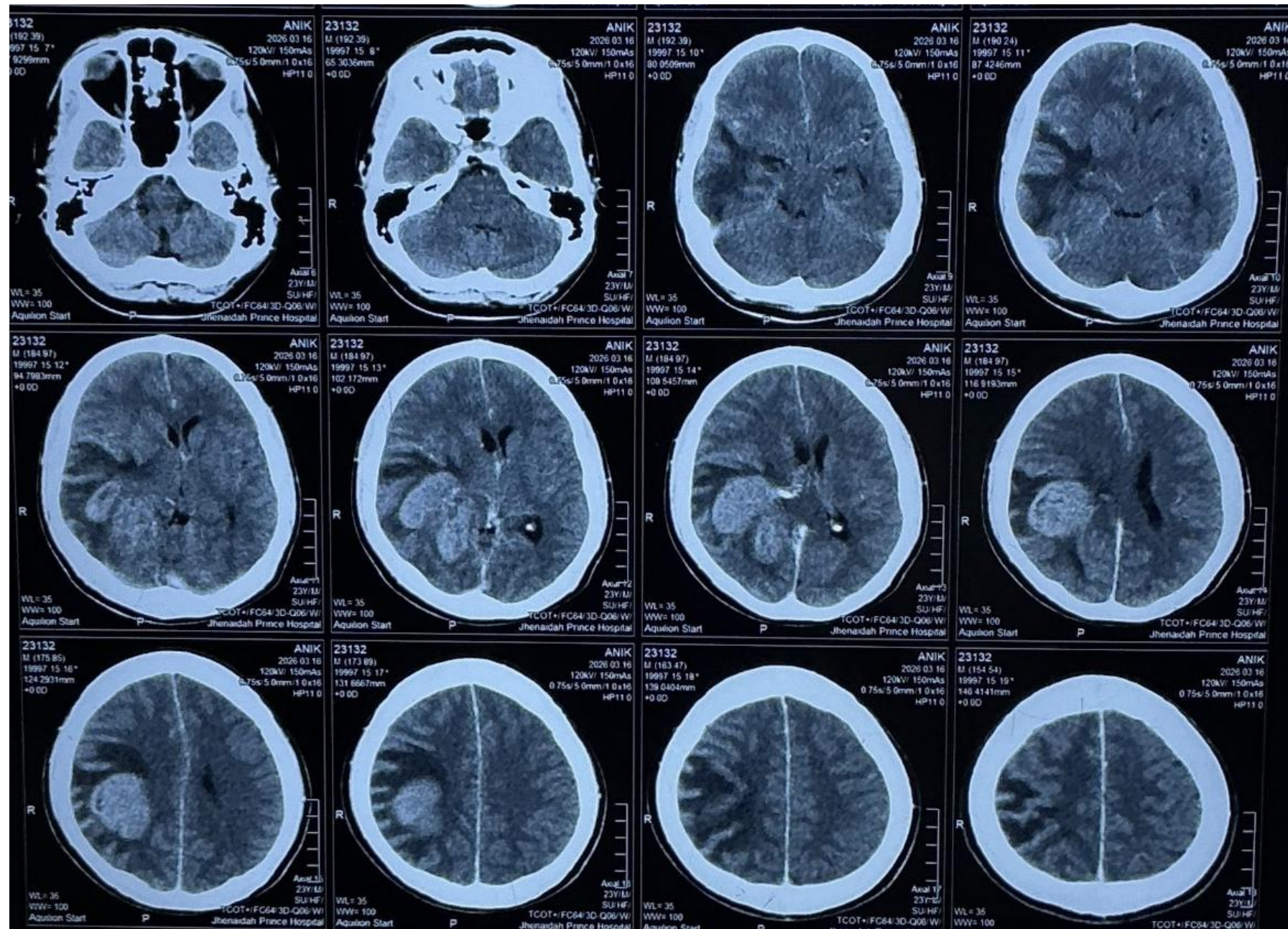


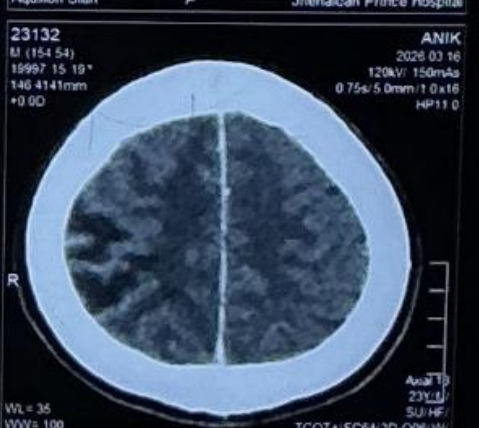
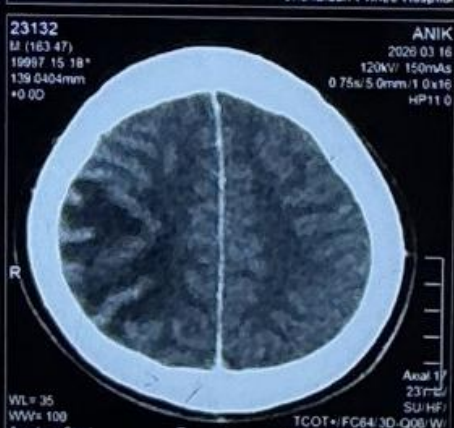
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CT findings

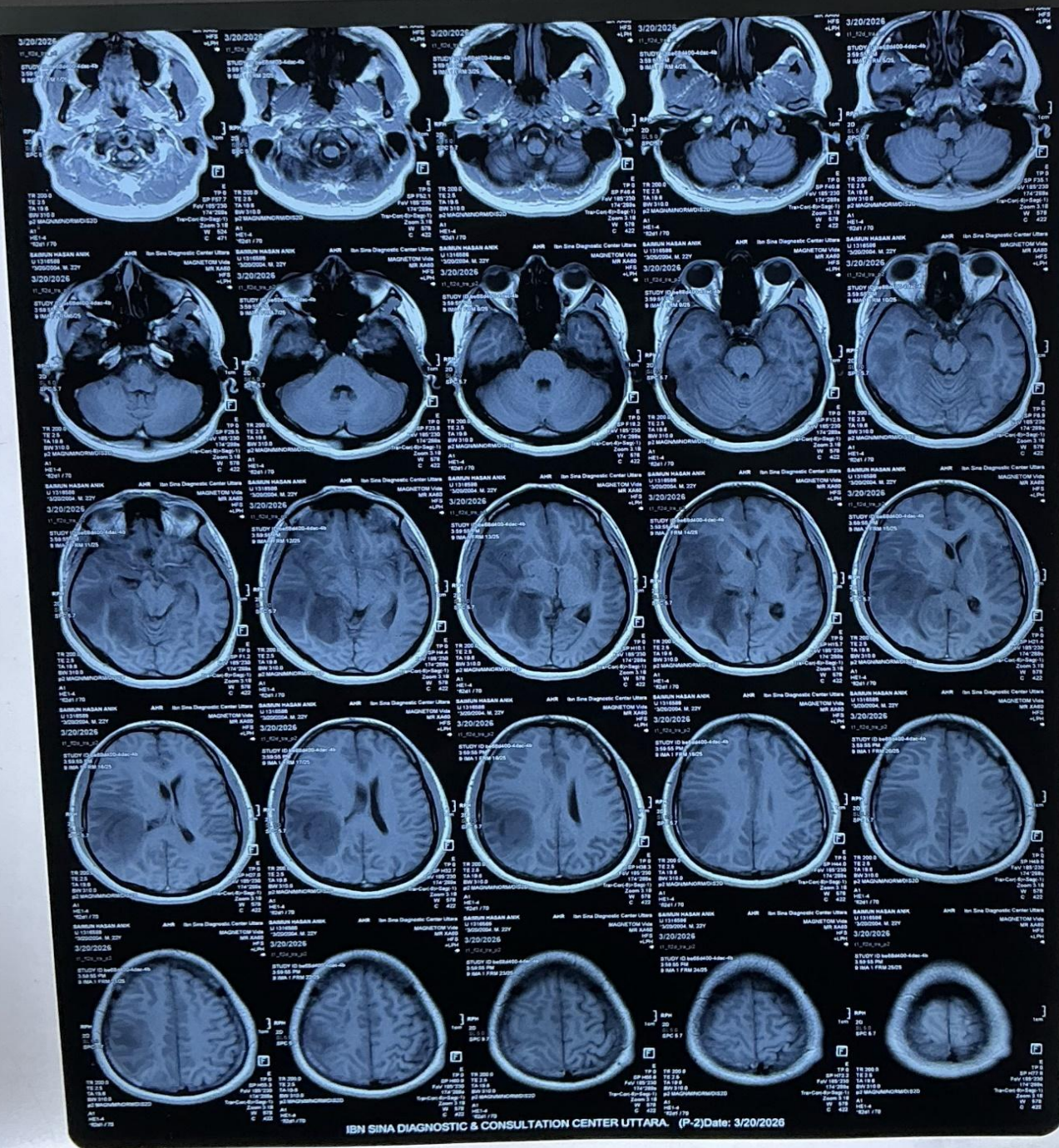
- A Large mixed density mass lesion measuring about 4.5x5.1 cm is seen in rt temporo parieto occipital region with moderate perilesional oedema.
- No calcification is seen.
- Mass effect is evidenced by compression in rt lateral ventricle with about 1.5 cm midline shift. Rest lateral ventricle is mildly dilated.

CT findings (Cont.)

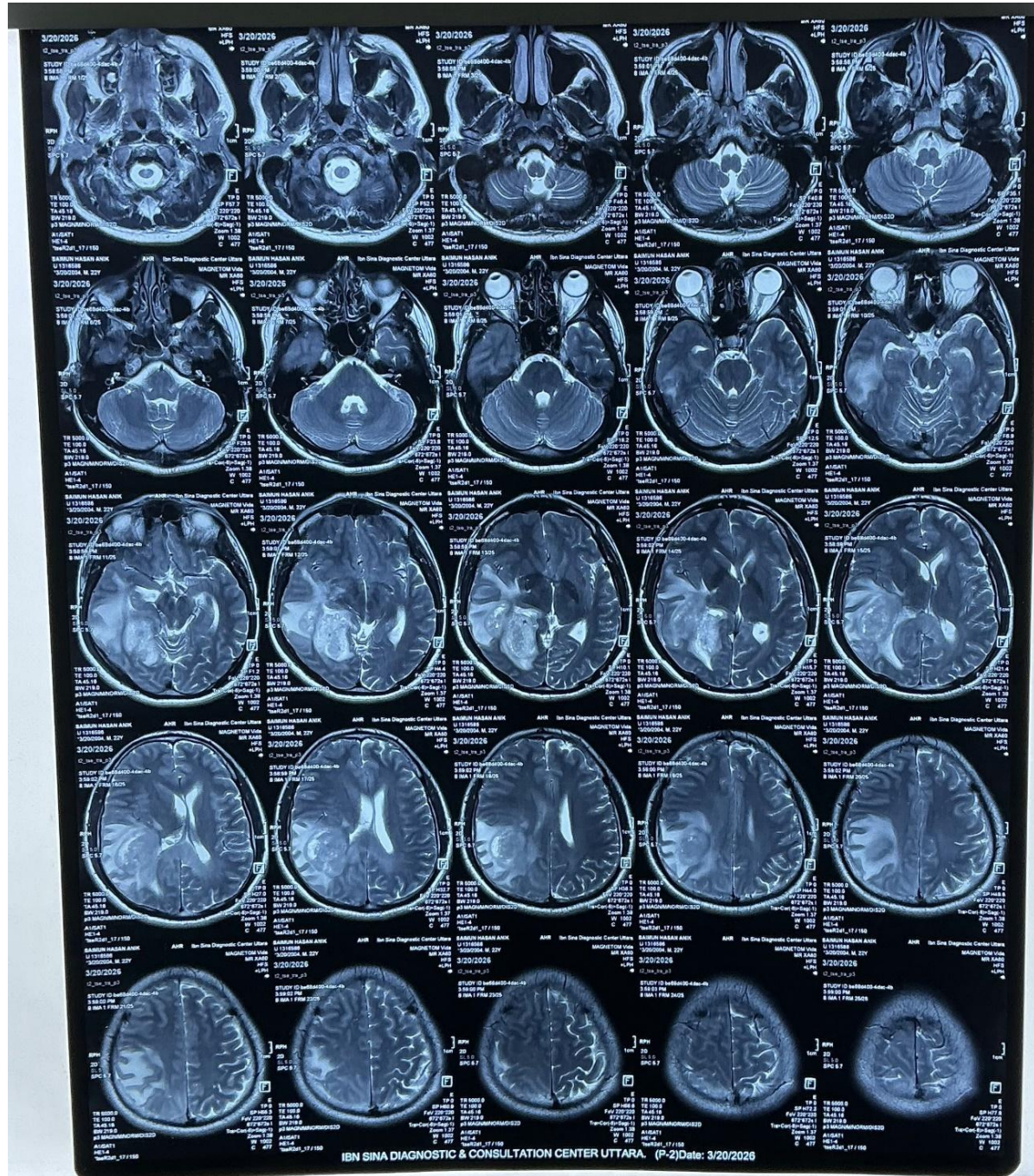
- **After contrast moderate heterogeneous contrast enhancement is seen.**
- **The mass having non enhancing hypodense component suggesting necrosis.(which is the hall mark of GBM).**
- **Brain stem and cerebellum are normal.**
- **CP angles are also normal.**

Diagnosis

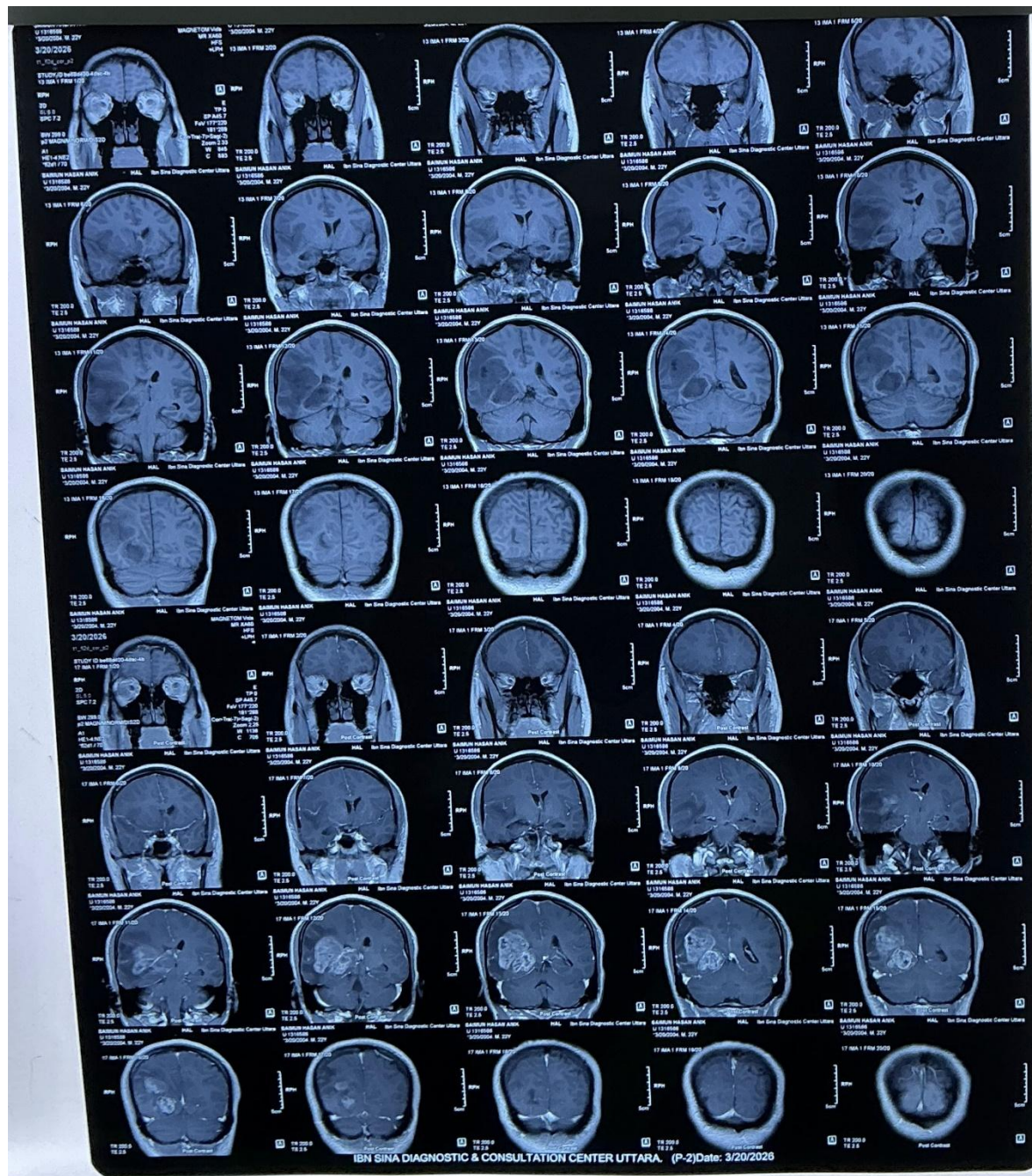
- SOL in the Rt cerebral hemisphere with mass effect-
- Possibly High-grade Glioma / GBM.



T1 weighted image
Non contrast

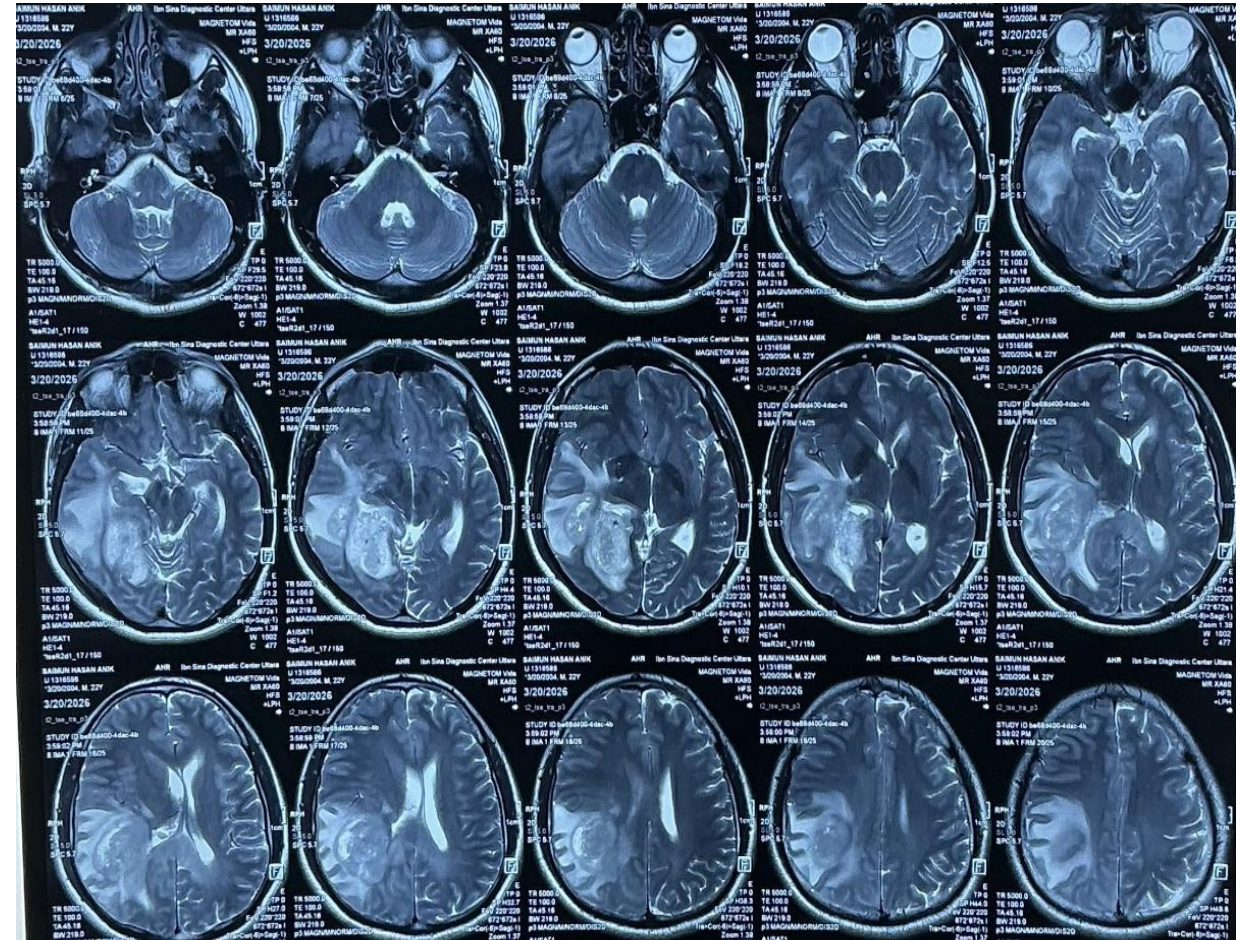
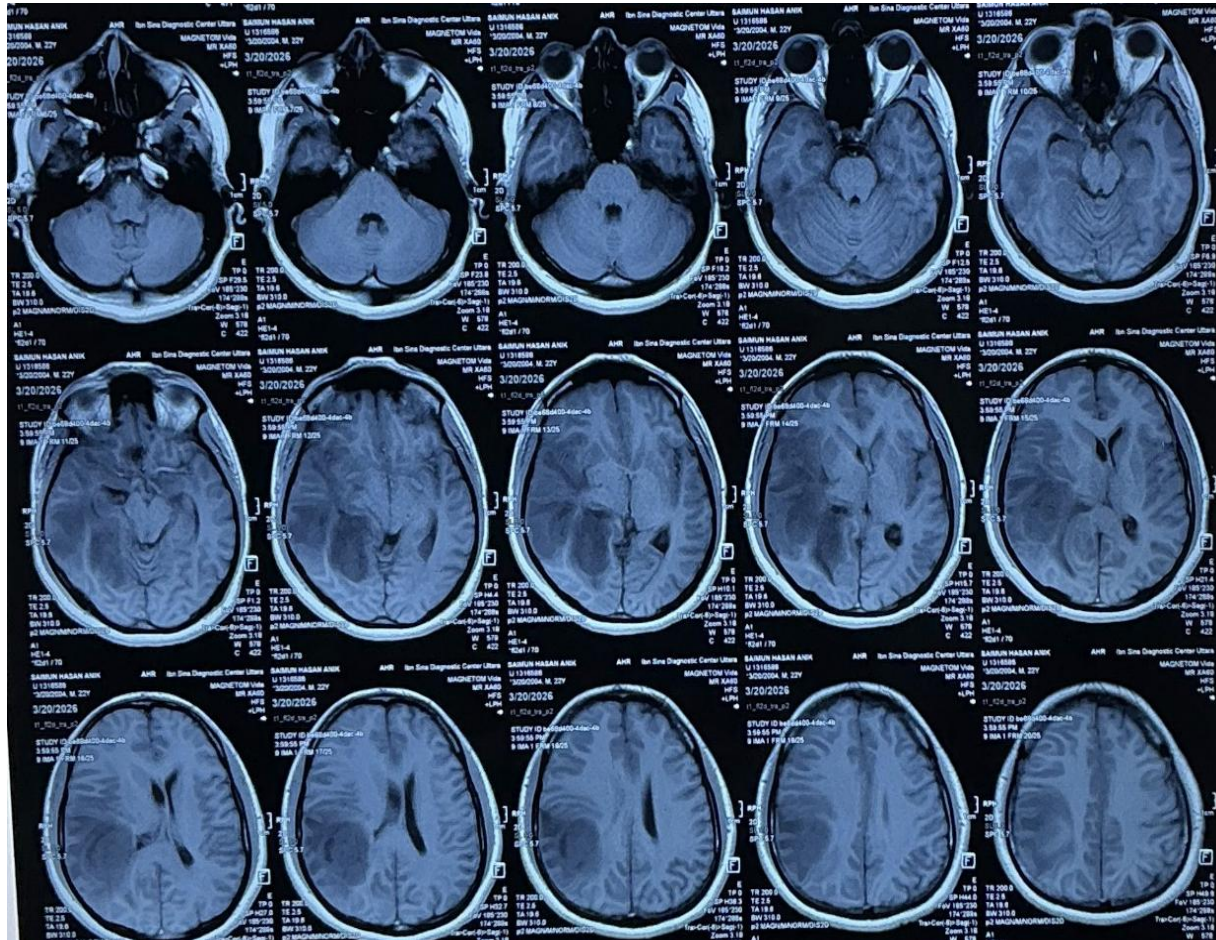


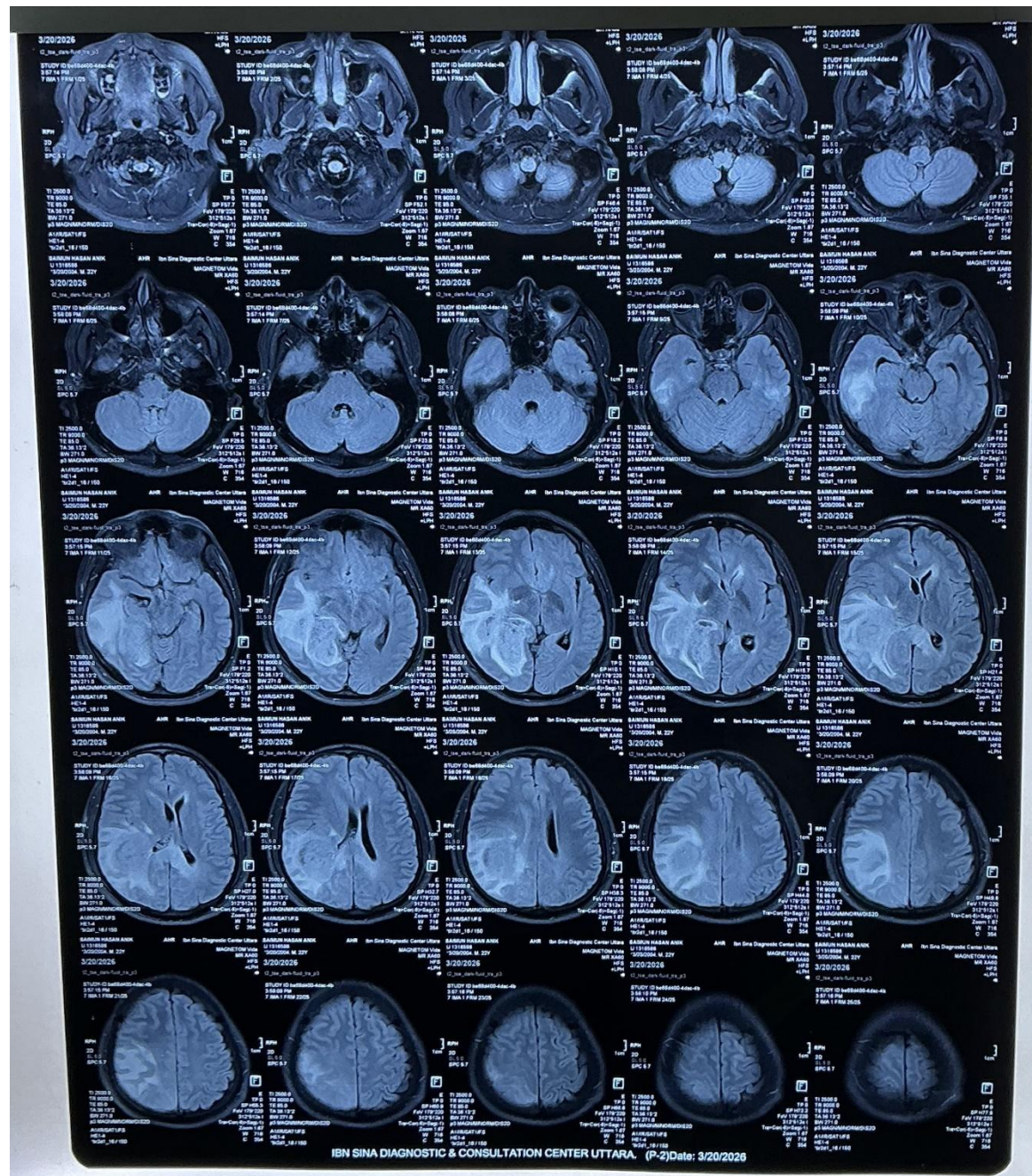
T2 weighted image



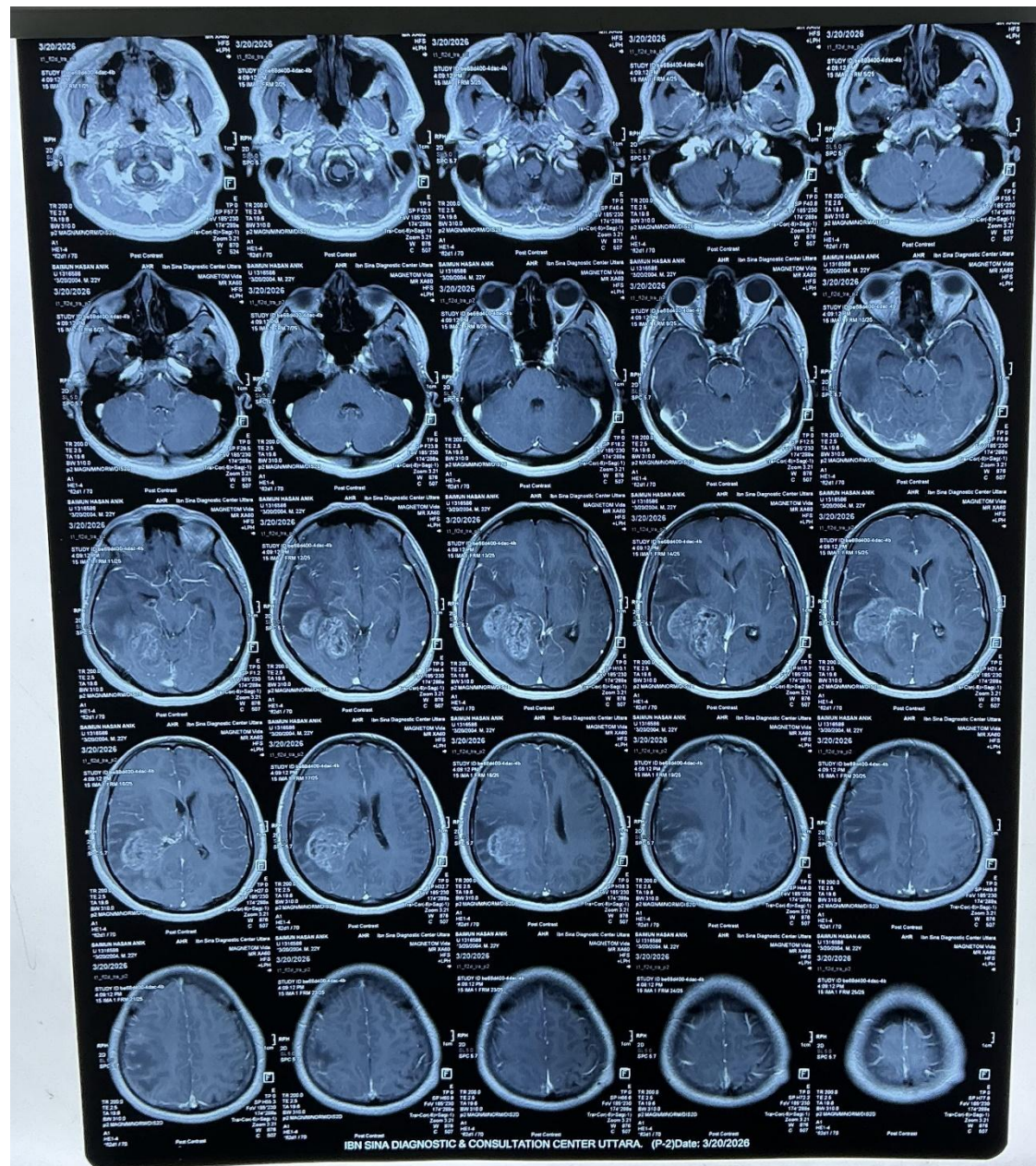
T1 weighted coronal image
Both pre and post contrast

T1 and T2 weighted image



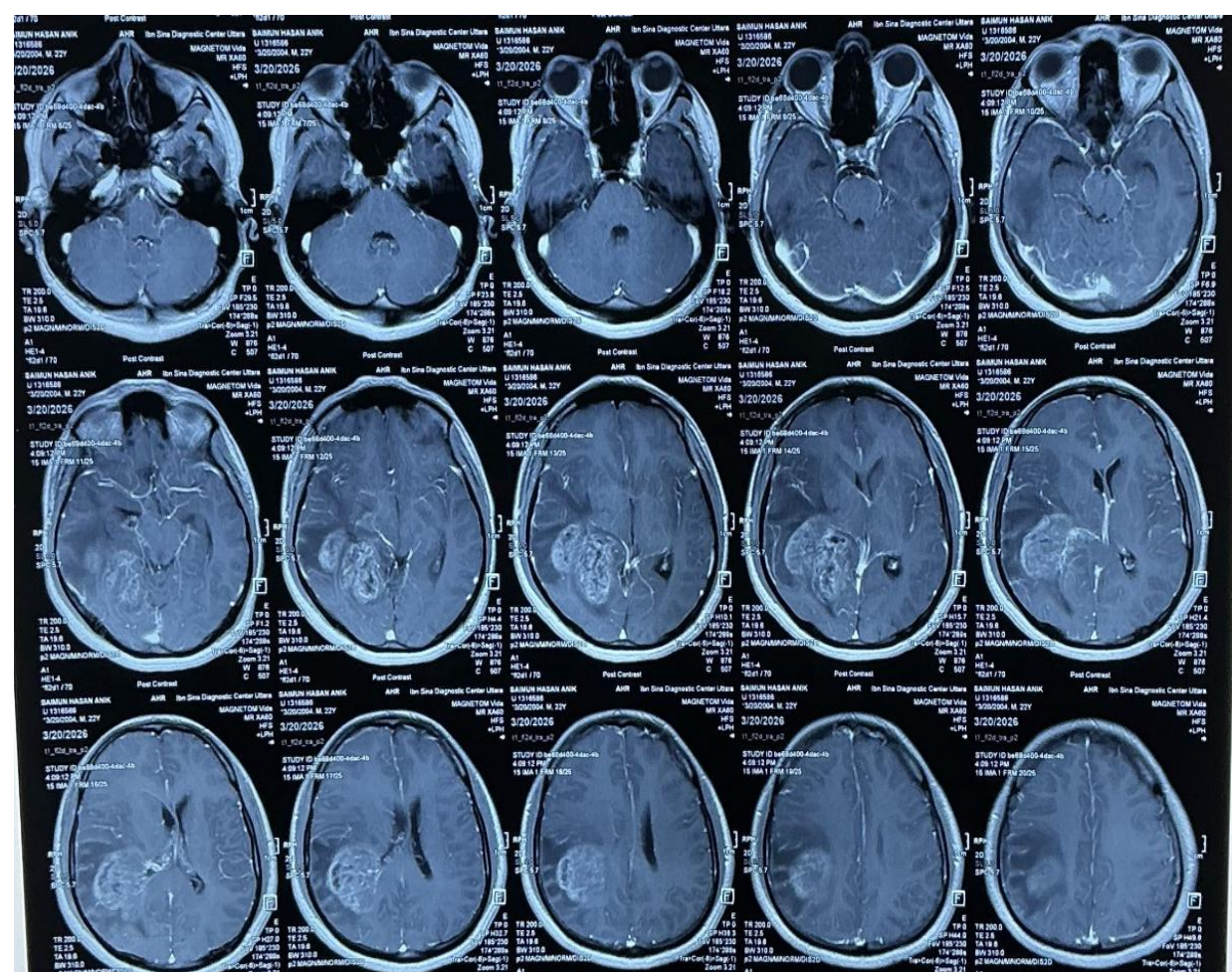
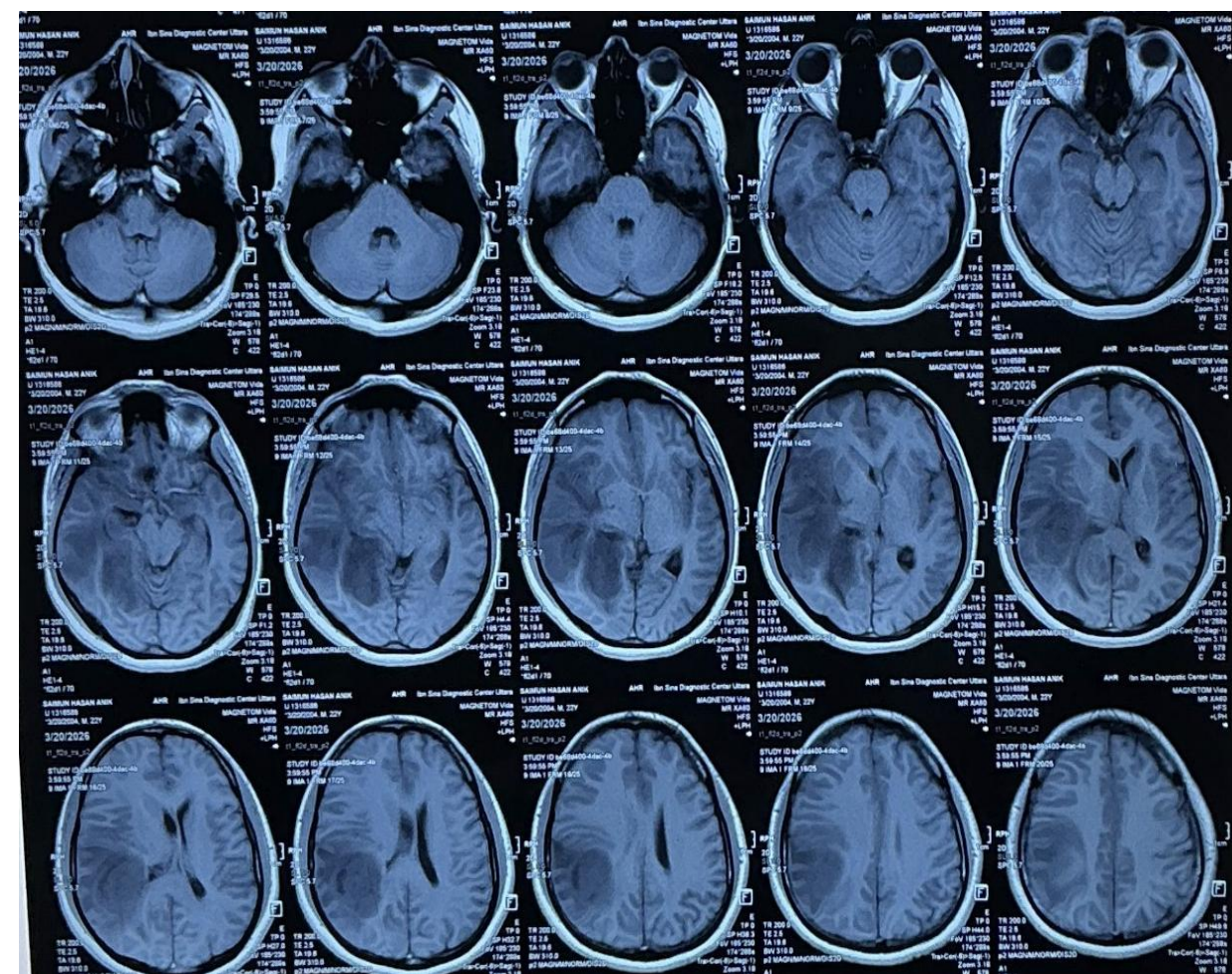


Flair image



T1 weighted image
Post contrast axial view

T1 weighted image pre and post contrast





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ISO 9001:2015 Certified

REPORT

I.D. No : U1316586 Received date : 20 Mar 2026 Printed date: 25 Mar 2026 06:54PM
Name of Pt. : SAIMUN HASAN ANIK Age : 22 y(s) Sex: Male
Ref. By : ASSO. PROF. DR.MD ISMA AZAM ZICO MBBS, MS

MRI OF BRAIN WITH CONTRAST

Thank you for the courtesy of this kind referral.

Technique: Multi-planar and multi-sequence contrast & non-contrast imaging were performed.

Findings:

- A large ill-defined T1W1 hypo, T2W1 & FLAIR hyperintense mass lesion (about 5.5 cm x 5.2 cm x 4.3 cm) with huge perifocal edema seen in the right temporo-parietal region. DWI shows hyperintensity and corresponding ADC shows hypointensity. The lesion having solid and internal necrotic change. The lesion also shows areas of GRE hypointensity- suggesting intra-lesional haemorrhage. The lesion causing huge mass effect evident by effacement of right lateral, 3rd ventricle and mid brain structures. Contra-lateral midline shift is seen. After IV contrast administration : Moderate heterogeneous enhancement of the lesion is seen.
- Rest of the ventricles appear normal.
- Cerebral sulci are normally developed and normal in morphology.
- Sella & Para-sellar regions appear normal.
- Orbits & soft tissue are unremarkable.
- Cerebellopontine angle appear normal on both sides.
- Visible cranial nerves appear normal.
- Posterior fossa structure appear normal.
- Para nasal sinuses are normal.

Impression:

- ❖ Overall MRI feature consistent with-
 - High grade glioma in right temporo-parietal region with huge mass effect and contra-lateral midline shift.(Possibilities are : GBM / anaplastic oligodendroglioma/CNS lymphoma)

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- **MRI OF BRAIN WITH CONTRAST**

Technique: Multi-planar and multi-sequence non contrast & contrast imaging were performed.

Findings:

- A large ill-defined T1W1 hypo, T2W1 & FLAIR hyperintense mass lesion (about 5.5 cm x 5.2 cm x 4.3 cm) with moderate perilesional oedema seen in the right temporo-parieto occipital region.
- DWI shows hyperintensity and corresponding ADC shows hypointensity.

MRI OF BRAIN WITH CONTRAST (Cont.)

- The lesion having solid and internal necrotic change. The lesion also shows areas of GRE hypointensity- suggesting intra-lesional haemorrhage.
- The lesion causing huge mass effect evident by effacement of right lateral, 3rd ventricle and mid brain structures. Contra-lateral midline shift is seen.
- After IV contrast administration: Moderate heterogeneous enhancement of the lesion is seen.

Diagnosis and D/D

- MRI features are consistent with ----High grade glioma in Right temporo parieto occipital region with huge mass effect and Contra lateral midline shift .

Possibilities are, GBM

CNS lymphoma.

Brain metastasis

Surgery has
done and
specimen sent
for
Histopathology

BD LAB
Every Diagnosis Matters

BD Surgical Pathology and Molecular Lab
Plaza Central by Ananta (Lift-8)
136, Old Elephant Road, Dhaka, Bangladesh
01871-617737
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HISTOPATHOLOGY REPORT

Patient name: Saimum Hasan Anik	Age: 23 Yrs.	Sex: Male
Lab no: 2601-0971	MRN: 2836	Hospital ID:
Received date: April 08, 2026	Reporting date: April 13, 2026	
Referred by: Assoc. Prof. Dr. K. M. Atiqul Islam; MBBS, MS (Neurosurgery); Ibn Sina Medical College Hospital, Dhaka		

Specimen: Tissue from right occipital SOL

Gross examination: Specimen received in formalin consists of four grey-white pieces of tissue. The largest one measures 0.6x0.3x0.2 cm and the smallest one measures 0.5x0.3x0.1 cm.

Representative blocks: Entirely submitted in one block; A1 x4.

Microscopic appearance: Sections show brain tissue. It shows a neoplasm, composed of round to oval cells; arranged nests and diffusely. The cells show hyperchromatic and pleomorphic nuclei with scanty cytoplasm. Mitoses are frequent. Microvascular proliferation and focal necrosis present.

Diagnosis: Tissue from right occipital SOL, craniotomy:
Astrocytoma, WHO grade 4.

Remarks: Clinico-radiological correlation and immunohistochemistry are recommended. Immunohistochemistry facilities are available at BD LAB, Dhaka. Please contact, if necessary.

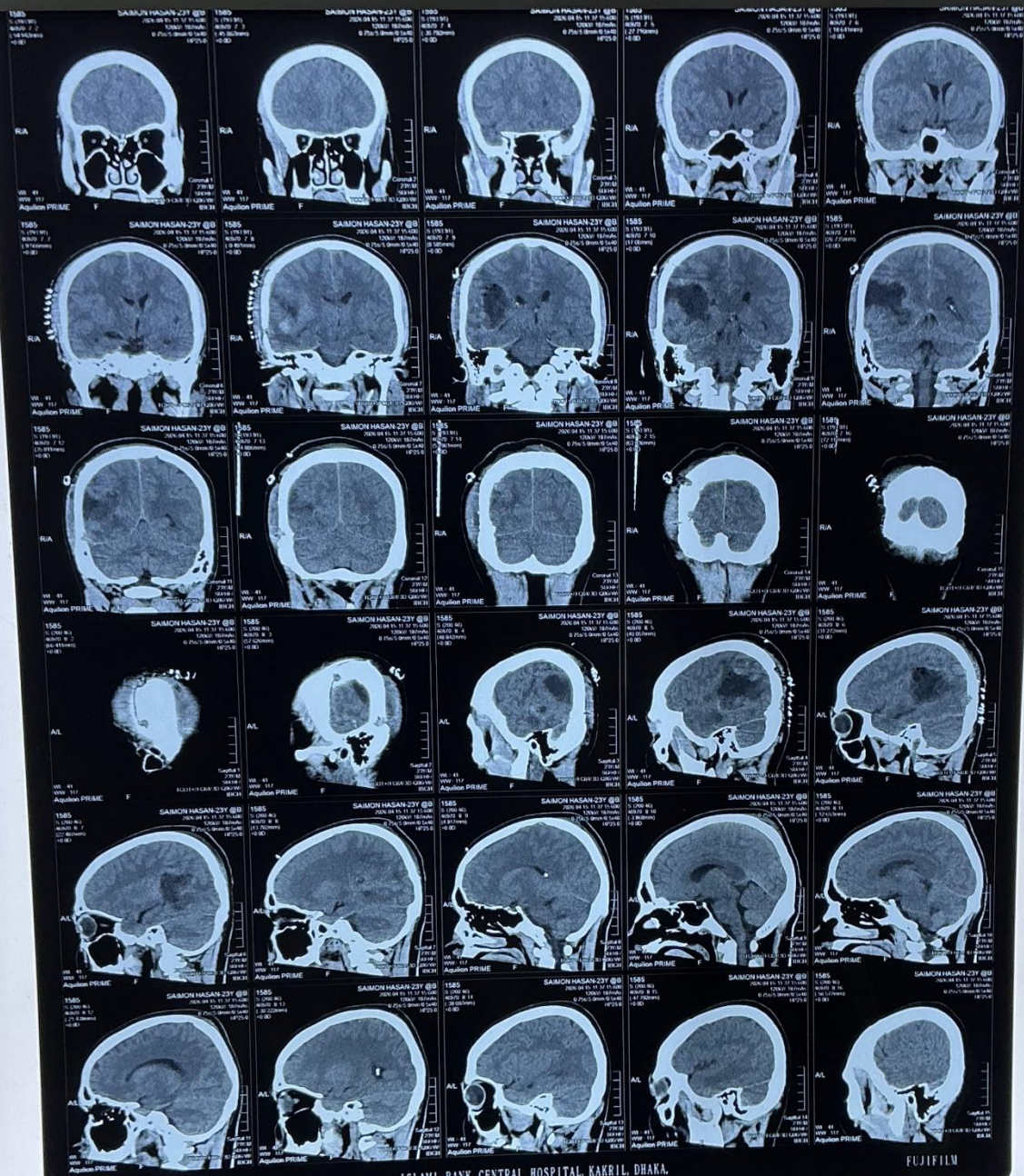
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Post operative follow up
CT scan of brain- non contrast



CT scan findings- post operative

- Evidence of craniotomy is seen in right side.
- Irregular Hypodense area measuring aboutmm is seen in Rightlobe .
- No obvious perilesional oedema is seen.
- No pressure effect upon ventricle or midline shift is noted.
- No obvious solid component is seen.

Comment

feature suggestive of post operative encephalomalacia

In right cerebral hemisphere with no residue or recurrence or mass effect.

GBM (Glioblastoma Multiforme)

- **Incidence**- most common primary brain tumor.
- 50% of astrocytomas are GBM.
- **Age**- Older patient, > 50 yrs rare in < 30 yrs
- **Location**- Cerebral hemispheric white matter, commonly frontal
and temporal lobe. Others- Basal ganglia, thalamus and pons.
- **Clinical presentation**- Seizure, focal neurologic deficit and stroke like syndromes.

Pathology

- Large irregular heterogenous mass composed of solid and cystic component.
- Necrosis is the hallmark.
- Thick irregular wall with increased vascularity.
- Intra tumoral hemorrhage and perilesional oedema common.
- Spread widely and rapidly along white matter tract.

Radiological feature

1. CT scan –

- ✓ **NECT-** Heterogeneous mass with central low density due to necrosis and cyst formation. Calcification is rare but hemorrhage and oedema are common.
- ✓ **CECT-** Enhancement following contrast is strong but very inhomogeneous contrast enhancement with thick irregular rim.

2. MRI-

- ✓ **T1w1-** Poorly defined mixed intensity mass with necrosis and Cyst formation and thick irregular wall
- ✓ **T2WI-** Heterogeneous mass with central necrosis and hemorrhage of varying age.

3. Angiography- A large mass with striking tumor blush, contrast stasis with pooling in bizarre vascular channel.

Differential diagnosis of GBM

Feature	Glioblastoma Multiforme	Metastatic Brain Tumor	CNS Lymphoma
Incidence	Most common primary malignant brain tumor in adults. 50% of astrocytomas are GBM.	Common in adult representing 1/4 to 1/3 of all brain tumor.	1–2% of primary CNS tumors
Age	> 50 yrs , rare in <30 yrs.	Usually >40 years	Most commonly 60s in immunocompetent and 30s in immunocompromised patients.

Feature	Glioblastoma multiforme	Metastatic Brain Tumor	CNS Lymphoma
Typical Location	Cerebral hemispheric white matter (frontal, temporal); basal ganglia, thalamus & pons, may cross corpus callosum.	Gray-white matter junction; cerebral hemispheres; often multiple. Site- from lung, breast, melanoma , GI/GU tumor.	Deep periventricular white matter, basal ganglia, corpus callosum, frequently about ependymal surface.
Clinical Presentation	Headache, seizures, focal neurological deficits, cognitive decline, raised intracranial pressure	Varies from asymptomatic to severe neurologic deficit. History of systemic malignancy	Seizure, headache and stupor to focal neurological deficits- Such as hemiparesis.

Feature	Glioblastoma Multiforme	Metastatic Brain Tumor	CNS Lymphoma
Pathology	WHO Grade 4 astrocytic neoplasm with necrosis and intratumoral haemorrhage.	Hematogenous spread from systemic cancer (lung, breast, melanoma, renal, colon)	Usually diffuse large B-cell lymphoma. Haemorrhage and necrosis is uncommon.
Peritumoral Edema	Moderate	Marked, often disproportionate	Moderate to marked

Feature	Glioblastoma Multiforme	Metastatic Brain Tumor	CNS Lymphoma
Hemorrhage	May occur	Common in melanoma, RCC, choriocarcinoma, thyroid carcinoma metastases	Rare
Non-contrast CT	NECT- Heterogeneous mass with central low density due to necrosis and cyst formation. Haemorrhage and oedema are common.	Iso to hyperdense round lesions with surrounding huge edema. Haemorrhage can occur.	Iso to Hyperdense lesion. Necrosis-Uncommon (except immunocompromised)

Radiological Feature	Glioblastoma multiforme	Metastatic Brain Tumor	CNS Lymphoma
Contrast CT	CECT- Enhancement following contrast is strong but very Inhomogeneous contrast enhancement with thick irregular rim.	Ring or nodular strong enhancement	Strong homogeneous enhancement. Ring enhancement uncommon unless patient is immunocompromised.
Necrosis	Common	Variable	Uncommon (except immunocompromised)
Calcification	Rare	Rare	Rare

Radiological Feature- MRI	Glioblastoma multiforme	Metastatic Brain Tumor	CNS Lymphoma
T1WI	Hypointense center with heterogeneous solid component	Most are Hypointense Except malignant melanoma- which is hyperintense.	Iso- to hypointense
T2WI	Heterogeneous hyperintense lesion with edema	Most are Hyperintense edema surrounding lesion	Relatively iso to mildly hyperintense
FLAIR	Extensive infiltrative abnormality extending beyond enhancement	Vasogenic edema only	Periventricular hyperintensity
Post-contrast T1	Thick irregular ring enhancement	Enhance strongly, Ring or nodular enhancement	Strong homogeneous enhancement.

Advanced MRI Findings

Radiological Feature	Glioblastoma multiforme	Metastatic Brain Tumor	CNS Lymphoma
DWI	Variable restriction in solid portions	Usually no marked restriction	Marked restriction due to hypercellularity
ADC	Moderately decreased	Variable	Markedly decreased



Thank You