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A CASE REPORT: GLIOBLASTOMA MULTIFORME

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ABSTRACT

Glioblastoma multiforme (GBM) is one of the most frequent and aggressive primary brain tumours, characterised by the rapid proliferation of malignant astrocytic and glial cells. A 32-year-old male patient with chief complaints of seizures for the past 3 days, associated with intermittent headache and repeated episodes of vomiting. The patient also experienced episodes of loss of consciousness at Malla Reddy Hospital during November 2025. After physical examination and lab investigation, he was diagnosed with Glioblastoma multiforme. With surgical intervention of craniotomy.

KEYWORDS: Glioblastoma multiforme, brain tumour, malignant astrocytic and glial cells, intermittent headache.

INTRODUCTION

Glioblastoma multiforme (GBM), classified as WHO Grade IV diffuse astrocytoma, is the most aggressive and most common primary malignant brain tumour in adults. It arises from astrocytic glial cells and is characterised by rapid proliferation, extensive infiltration, necrosis, and microvascular proliferation.[1] GBM typically presents with symptoms resulting from increased intracranial pressure and focal neurological deficits, including headaches, vomiting, seizures, cognitive decline, and altered consciousness.[2]

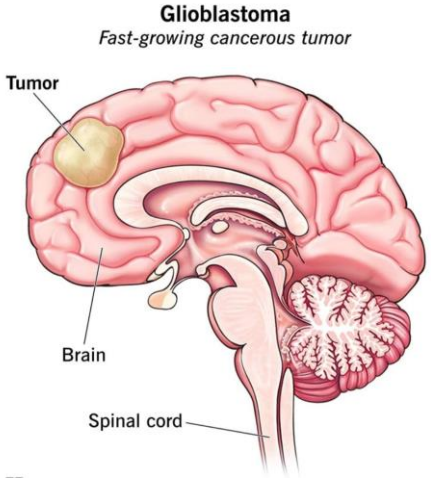

Fig.1.

GBM accounts for approximately half of malignant CNS tumours, with a 5-year survival rate of 7.2%. The incidence of GBM increases with age and is greater in men than in women.[3] Despite advancements in neuroimaging and multimodal therapy, GBM continues to have a poor prognosis, with a median survival of 12–15 months even with optimal treatment.[4] Glioblastoma has a multifactorial aetiology, involving a combination of genetic mutations, molecular pathways, environmental factors, and cellular origins. In most patients, the exact cause remains unknown, but several established factors contribute to its development. Standard management includes maximal safe surgical resection, followed by radiotherapy and temozolomide-based chemotherapy. Early diagnosis and prompt intervention are crucial for reducing the mass effect and enhancing functional outcomes.[5]

CASE PRESENTATION

A 32-year-old male patient with chief complaints of seizures for the past 3 days, associated with intermittent headache and repeated episodes of vomiting. The patient also experienced episodes of loss of consciousness at Malla Reddy Hospital during November 2025.

After physical examination and radiological investigations, the patient was diagnosed with Glioblastoma Multiforme (GBM). The patient was stable and oriented but exhibited intermittent episodes of

headache. GCS was 15/15, indicating full consciousness, no focal neurological deficits. A healed surgical scar was observed over the temporal region. There was no evidence of edema, icterus, pallor, cyanosis, or clubbing.

SYSTEMIC EXAMINATION

Laboratory investigations were found to be normal, except for mild leukocytosis, a slightly elevated ESR, a marginally increased serum lactate**,** and a mild increase in random blood glucose. **Other investigations,** such as **biopsy,** demonstrated features consistent with Glioblastoma (Astrocytoma), CNS WHO Grade IV." **CT scanning** showed a status post decompressive craniectomy (right frontal temporal) with excision of the right temporal lobe SOL (POD-1). Microscopically, a high-grade astrocytic tumour with a fibrillary background, foci of necrosis, and microvascular proliferation are noted. **MRI** brain suggested that a large right fronto-temporo-parietal craniectomy, mild extra-cranial herniation, irregular thick-walled lesion are seen.

TREATMENT CHART

S.no	TRADDE NAME	GENERIC NAME	DOSE	ROA	FRQ	INDICATIONS
1	Cap.TEMONAT	Temozolomide	100mg	PO	OD	Used as primary chemotherapy to slow tumour growth and improve survival in GBM
2	T. DEXA	Dexamethasone	2mg	PO	BD	To reduce brain swelling and relieve headache
3	T. LEVERA	Levetiracetam	500mg	PO	BD	Used to prevent the control of brain tumour-related seizures
4	T. MEAXON PLUS	Methylcobalamine, Benfotiamine, folic acid, pyridoxine HCL	1tab	PO	BD	Support nerve health and reduce chemotherapy-related neuropathy
5	T. SEPTRAN-DS	Co-trimoxazole	1tab	PO	OD	Prevent Pneumocystis jirovecii pneumonia in immunosuppressed GBM
5	T. ONDEM	Ondansetron	8mg	PO	SOS	Prevent nausea and vomiting caused by steroids
6	T.PAN	Pantoprazole	40mg	PO	OD	Used for stomach protection when receiving steroids
7	T. ULTRACET	Tramadol Hydrochloride and Acetaminophen	1 tab	PO	SOS	To relieve moderate to severe tumour-related pain

DISCUSSION

The patient was diagnosed with Glioblastoma (WHO Grade IV) based on imaging and biopsy findings. Temozolomide was started as the primary chemotherapy to control tumour growth, and dexamethasone was given to reduce brain swelling and relieve symptoms. Levetiracetam was prescribed for seizure prophylaxis, which is common in high-grade brain tumours. Supportive medication was provided to manage treatment-related adverse effects, including Ondem for chemotherapy-related vomiting and Pantoprazole for gastric protection during steroid therapy. Ultracet was provided for pain relief. To prevent opportunistic infections due to immunosuppression, Septran was initiated. Meaxon Plus was added to support nerve health and reduce chemotherapy-induced neuropathy. Overall, the patient's treatment plan aligns with the standard of care for GBM, which includes maximal safe resection, followed by chemoradiation and supportive therapy. Long-term management involves continued temozolomide therapy, regular follow-up, monitoring for recurrence, and educating the patient for improved outcomes.

CONCLUSION

A 32-year-old male patient with seizures for the past 3 days, associated with intermittent headache and repeated episodes of vomiting, was diagnosed with glioblastoma multiforme. The exact cause of GBM is unknown, but it is thought to occur due to genetic mutation, older age, genetic syndrome, IDH-wild type status, and environmental factors. The medication prescribed includes Temozolomide, Dexamethasone, Levera, Septran, Meaxon plus, Ondem, Pan, and Ultracet. The medication treats the condition and promotes overall health.

REFERENCE

1. Grochans, S.; Cybulska, A.M.; Simińska, D.; Korbecki, J.; Kojder, K.; Chlubek, D.; Baranowska-Bosiacka, I. Epidemiology of Glioblastoma Multiforme–Literature Review. Cancers, 2022; 14: 2412. https://doi.org/10.3390/cancers14102412.
2. Hanif F, Muzaffar K, Perveen K, Malhi SM, Simjee ShU. Glioblastoma Multiforme: A Review of its Epidemiology and Pathogenesis through Clinical Presentation and Treatment. Asian Pac J Cancer Prev., Jan. 1, 2017; 18(1): 3-9. doi:

10.22034/APJCP.2017.18.1.3. PMID: 28239999; PMCID: PMC5563115.

3. Agata Czarnywojtek, Magdalena Borowska, Kamil Dyrka, Stefaan Van Gool, Nadia Sawicka-Gutaj, Jakub Moskal, Jeremi Kościński, Patryk Graczyk, Tomasz Hałas, Agnieszka Marta Lewandowska, Rafał Czepczyński, Marek Ruchała; Glioblastoma Multiforme: The Latest Diagnostics and Treatment Techniques. Pharmacology 21 September 2023; 108(5): 423–431. https://doi.org/10.1159/000531319.
4. Bijalwan, Gaurvi1; Shrivastav, Abhishek Kumar1; Mallik, Sarita1; Dubey, Manish Kumar2. Glioblastoma multiforme - a rare type of cancer: A narrative review. Cancer Research, Statistics and Treatment, Jul–Sep 2024; 7(3): 340-351. | DOI: 10.4103/crst.crst_250_23
5. Chandnani R, Anjankar A. Case of Glioblastoma Multiforme in the Left Temporoparietal Region of the Brain. Cureus, Aug. 31, 2022; 14(8): e28621. doi: 10.7759/cureus.28621. PMID: 36185858; PMCID: PMC9523979.