Temporal lobe high-grade glioma

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- m6A-lncRNA landscape highlights reduced levels of m6A modification in glioblastoma as compared to low-grade glioma
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Clinical features

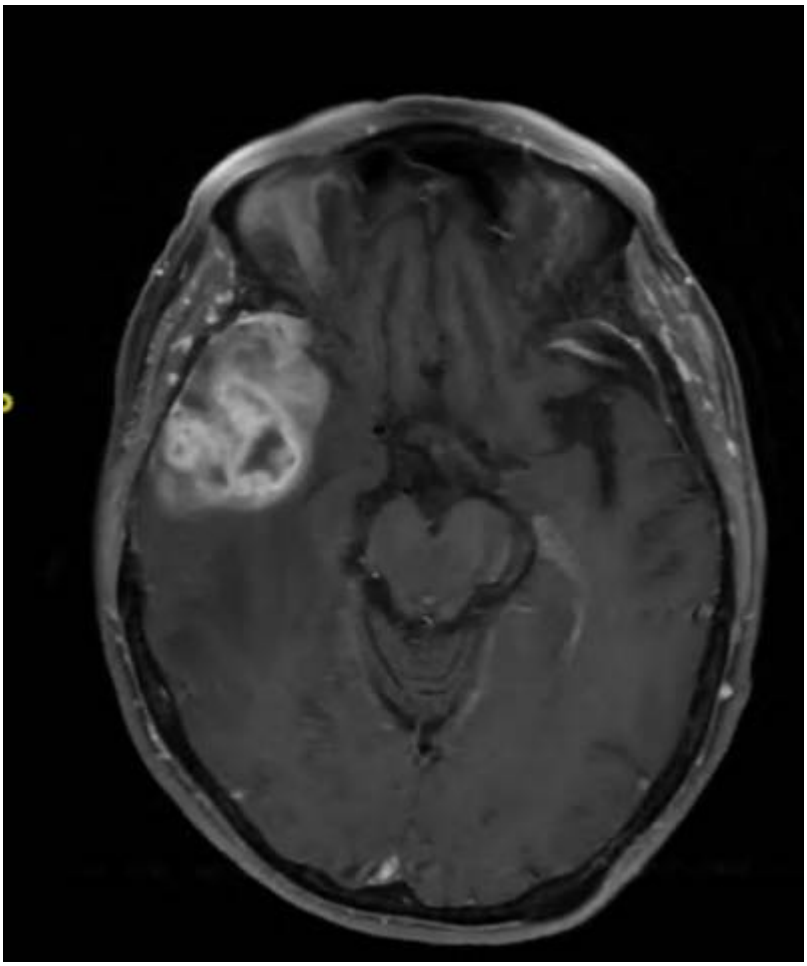
A high-grade glioma in the temporal lobe can lead to a variety of symptoms depending on the specific location and size of the tumor. Common symptoms may include seizures, headaches, cognitive deficits, personality changes, and sensory disturbances.

see also Temporal lobe tumor clinical features.

Example

A 72-year-old woman who has been experiencing episodes of disorientation and confusion with difficulty in language expression, self-limited and accompanied by right hemicranial headache. She has had 3 falls to the ground. Her daughter reports mild behavioral disorder for the past 6-9 months.

Diagnosis



Diagnosis typically involves a combination of imaging studies, such as magnetic resonance imaging (MRI) or computed tomography (CT) scans, and a biopsy to examine the tumor tissue.

Treatment

Once diagnosed, treatment options may include surgery, radiation therapy, and chemotherapy. However, high-grade gliomas are challenging to treat, and the prognosis can vary depending on factors such as the age and overall health of the patient, the specific characteristics of the tumor, and the success of the treatment.

Clinical trials and research are ongoing to find more effective treatments for high-grade gliomas, and treatment plans are often tailored to the individual patient's situation. The management of these tumors requires a multidisciplinary approach involving neurosurgeons, oncologists, and other healthcare professionals. Patients with high-grade gliomas often require long-term follow-up care to monitor for any signs of recurrence and to manage any ongoing symptoms or side effects of treatment.

Newly diagnosed patients with glioma in the left (n = 73; 49% glioblastoma) or right (n = 30; 57% glioblastoma) temporal lobe completed comprehensive neuropsychological testing. Clinicians rated patient functional independence using the Functional Independence Measure (FIM) and Karnofsky Performance Status (KPS) scale. Correlational and regression analysis were conducted to determine

relationships between neurocognitive functioning and functional independence.

Tests of verbal learning, executive function, and language comprehension were moderately to strongly associated with clinician-rated functional independence, particularly for items pertaining to need for assistance with memory, problem-solving, and language functions. Stepwise linear regression showed that tests of verbal learning, executive functioning, and language comprehension predicted FIM ratings, together accounting for 40% of variance ($P < .001$). A test of executive functioning also predicted KPS scores and accounted for 19% of variance ($P < .001$).

In patients with newly diagnosed temporal lobe glioma, neurocognitive functioning is associated with functional independence. Verbal learning, executive functioning, and language comprehension demonstrated the strongest associations across both measures of functional independence. These findings provide support for the ecological validity of neuropsychological assessment by demonstrating the real-world clinical significance of objectively assessed neurocognitive functioning in glioma patients [1].

Surgery

see Temporal lobe tumor surgery

1)
Noll KR, Bradshaw ME, Weinberg JS, Wefel JS. Neurocognitive functioning is associated with functional independence in newly diagnosed patients with temporal lobe glioma. Neurooncol Pract. 2018 Aug;5(3):184-193. doi: 10.1093/nop/npx028. Epub 2017 Nov 19. PubMed PMID: 30094046; PubMed Central PMCID: PMC6075221.