

Global aphasia after glioma surgery

Transient aphasias are very common after [left hemisphere](#) resective surgery and that the precise nature of the aphasia depends on the specific location of the surgical site ¹⁾.

Unlike [stroke](#), [left hemisphere glioma surgery](#) acts upon a [reorganized language network](#) and involves brain areas rarely damaged by stroke. Zyryanov et al. addressed whether this causes the profiles of neurosurgery- and stroke-induced [language disorders](#) to be distinct. K-means clustering of language assessment data (neurosurgery cohort: N = 88, stroke cohort: N = 95) identified similar profiles in both cohorts. But critically, a cluster of individuals with specific phonological deficits was only evident in the stroke but not in the neurosurgery cohort. Thus, [phonological deficits](#) are less clearly distinguished from other language deficits after [glioma surgery](#) compared to stroke. Furthermore, the correlations between [language production](#) and comprehension scores at different linguistic levels were more extensive in the neurosurgery than in the stroke cohort. The findings suggest that neurosurgery-induced language disorders do not correspond to those caused by stroke, but rather manifest as a 'moderate [global aphasia](#)' - a generalized decline of [language processing](#) abilities ²⁾.

Patients with shorter distance from the tumor to the posterior superior longitudinal fasciculus/arcuate fasciculus, and isocitrate dehydrogenase mutations were risk factors for surgery-related language disorder. Regarding the presence or absence of permanent surgery-related language disorders, the cut-off distance between the tumor and posterior superior longitudinal fasciculus/arcuate fasciculus was 2.75 mm. ³⁾

Aphasic status epilepticus (ASE) is a subtype of focal nonconvulsive status epilepticus, in which language disturbance is the only objective clinical manifestation. We present two cases of patients who experienced delayed onset of temporal aphasia after the removal of glioma at the language-dominant hemisphere. In both cases, arterial spin labeling was useful for diagnosis and antiepileptic drug was effective. ASE should be considered a cause of persistent aphasia after glioma resection at or near the language area ⁴⁾

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⁴⁾

Shimoda Y, Kanamori M, Saito R, Osawa S, Mugikura S, Tominaga T. Aphasic status epilepticus after glioma resection: two case reports. Acta Neurochir (Wien). 2021 Nov;163(11):3109-3113. doi: 10.1007/s00701-021-04984-z. Epub 2021 Sep 3. PMID: 34477975.

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