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abstract

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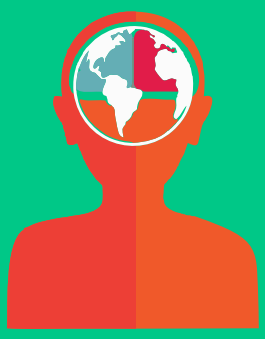

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abstract

Surgical Outcomes of Low-Grade Gliomas in Functional Brain Areas: A Tertiary Care Center Review

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Introduction: Low-grade gliomas in functional brain areas present significant challenges due to their infiltrative nature and the risk of postoperative neurological deficits. Advances in intraoperative mapping and neuronavigation have improved surgical safety and outcomes.

Methodology: A retrospective review was conducted of patients who underwent surgical resection for low-grade gliomas in functional brain areas at Aga Khan University Hospital from 2015 to 2025. Surgical strategies included awake craniotomy, neuronavigation, and intraoperative neurophysiological monitoring. Outcome measures included extent of resection, postoperative neurological function, and progression-free survival.

Results: A majority of patients preserved baseline neurological function following surgery. Transient neurological deficits were observed in a minority, with a smaller percentage experiencing permanent deficits. Gross total resection was achieved in the majority of cases, and survival outcomes improved with maximal safe resection.

Conclusion: Surgery for low-grade gliomas in functional brain areas is feasible and safe when guided by modern neurosurgical techniques, leading to favorable functional and survival outcomes.

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