

# **The impact of high-grade glioma extent of resection on the early post-operative period**

A thesis submitted in partial fulfillment of the  
requirements for the Msc degree in Neurosurgery.

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### Summary

Patients with high grade glioma often present with a variety of symptoms, such as headaches, vomiting and memory dysfunction. These symptoms may or may not be helpful in localizing the mass. The family and patient often recall personality changes and memory loss when discussing the history.

Headaches and vomiting are usually related to increased intracranial pressure; the headache location is nonspecific. Seizures may be a presenting symptom or may occur after diagnosis or during treatment. Neurological deficits occur in congruence with tumor location and related vasogenic edema.

MRI scans are essential for preoperative planning and offer valuable information about tumor location, vascularity, mass effect, peritumoral edema, and proximity to areas of potential functional significance. Additionally, diffusion tensor imaging (DTI) or task-based fMRI are used to better understand the relationship of a glioma to functional tissue.

The aims of surgery in high-grade gliomas are maximal growth total resection, to relieve mass effect, and to obtain adequate tissue for histological specimen. Cytoreductive surgery followed by radiotherapy and chemotherapy has become the standard against which other treatments are compared.

Microsurgical resection remains a valid therapeutic modality for all gliomas.

Radical resections of contrast-enhancing tumor can be difficult to achieve due to proximity to eloquent structures and uncertainty about tumor margins. Much focus has been aimed at surgical techniques to improve extent of resection while minimizing morbidity.

The study was conducted upon 25 patients at department of neurosurgery in Cairo university hospitals and fayoum university hospitals illustrating the immediate clinical outcome post operative on patients suffering from HGG in relation to extent of resection.

We recommend gross total resection for all cases of HGGs as much as possible as our study proved that clinical outcome and symptoms improvement rely on radicality of tumor excision.