

Surgical management of newly diagnosed glioblastoma in adults: role of cytoreductive surgery

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Guideline

Recommendations

Level I recommendation

There is insufficient evidence to support a Level I Recommendation.

Level II recommendation

Based on the prospective data available and a general consensus in the retrospective data it is recommended that for newly diagnosed supratentorial malignant glioma in adults that the “maximal safe resection” be undertaken (i.e. the maximal cytoreductive procedure provided that post-operative neurological deficit can be minimized).

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Level III recommendation

It is recommended that biopsy, partial resection or gross total resection may all be considered in the initial management of malignant glioma depending on the condition of the patient, the size and the location of the malignant glial tumor.

Rationale

Though over 125 years have passed since the historic report of Bennett and Godlee in 1888 describing their initial surgical approach to a patient with a primary brain tumor, the surgical aspects of malignant glioma remain an area of discussion and controversy [1].

Primary malignant brain tumors are among the most challenging human malignancies to treat. Even small malignant primary tumors often progress rapidly despite multi-modality therapy. The possibility of long-term survival is remote and much of the focus and treatment decisions are based on neuro-cognitive and quality of life issues. In many instances, the main bulk of the tumor is managed differently than the remaining rim of infiltrating malignant cells that are invariably present. A significant challenge remains in developing therapies targeted at this infiltrative component. This residual area is usually outside the zone of enhancement and is often less appreciated, but may represent the more challenging issue when considering the possibility of long term control.

The role of surgical intervention is evolving as new techniques become available and continued study has outlined the effectiveness and contribution of surgical procedures to survival and quality of life in patients with malignant glioma. Controversy remains partly due to the