Neoplasm

Repeated surgery for glioblastoma multiforme: only in combination with other salvage therapy

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Abstract

The purpose of the study was to evaluate the effects, frequency, and complications of repeated surgical resection for GBM relapse.

Methods

A group of 32 patients with tumor recurrence, derived from a total of 126 consecutive patients with prior GBM, treated between 1999 and 2005 in the VU University Medical Center, Amsterdam, Netherlands, were retrospectively studied. Survival, functional status, morbidity, and mortality after starting salvage therapy for recurrent GBM were studied. Survival was analyzed using Kaplan-Meier survival curves, and log-rank statistics were used for group comparison.

Results

Of the 32 patients with recurrent primary GBM, 20 received repeated surgery as salvage therapy. In 11 (55%) cases, repeated surgery was followed by CT or SRS. Nine (45%) patients receiving only repeated surgery showed significantly lower survival rates compared with the aforementioned 11 cases. The remaining 12 patients received only salvage CT or SRS and showed a significantly prolonged survival compared with the 9 cases receiving repeated surgery only. Surgical morbidity
was 15%, and surgical mortality, 5%.

Conclusion

Despite inherent selection bias, this retrospective analysis suggests that repeated surgery for GBM relapse should only be considered in patients with severe symptoms and if additional salvage treatment can be administered postoperatively.

Keywords: Combined modality therapy; Glioma; Karnofsky performance status

Abbreviations: ANOVA, analysis of variance; CT, chemotherapy; GBM, glioblastoma multiforme; KPS, Karnofsky performance status; PCV, procarbazine, lomustine, and vincristine; SRS, stereotactic radiosurgery; TMZ, temozolomide

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