Multiple Microsurgical Resections for Repeated Recurrence of Glioblastoma Multiforme.

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Abstract

OBJECTIVES: There has been little evidence so far supporting further surgical intervention in case of repeated recurrence of glioblastoma multiforme (GBM). Thus, the efficacy and utility of repeated resection remains unclear but worthy of consideration. The aim of this study was to review the efficacy of multiple repeated resections in patients with recurrent GBM.

METHODS: Forty-two patients underwent repeated surgical resections for recurrent GBM. All patients who underwent >2 surgical interventions were clustered in group A. Group B were patients treated nonsurgically after resection of the first recurrence. Patients' treatment history, including surgical interventions, radiotherapy, chemotherapy regimens, postoperative complications, Karnofsky Performance Score, and survival rate were reviewed.

RESULTS: Group A consisted of 10 patients (median age, 60.5 y) and group B of 32 patients (median age, 56.5 y). Histopathologic findings revealed typical GBM in 8 patients of group A and in 23 patients of group B. An oligodendroglial component was detected in 2 patients of group A and in 7 patients of group B. The median Karnofsky Performance Score after the first surgery for tumor recurrence was 80 in both groups (P=0.084). The median overall survival time was 26 months in patients of group A and 16 months in patients of group B (P=0.052). The 2-year survival rate of group A was 58.3% and significantly higher than in group B (29.0%; P=0.036). The 3-year survival rate of group A was 31.1% and 12.4% of group B (P=0.038).

CONCLUSIONS: Microsurgical resection of repeatedly recurring GBM is likely to prolong survival. Repeated surgical resection may be considered as an effective treatment option in addition to radiochemotherapy in repeated GBM recurrence.

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