ABSTRACT

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Survival after reoperation for recurrent glioblastoma multiforme: A prospective study.

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PURPOSE: Glioblastoma multiforme (GBM) is the most common malignant brain tumor. Moreover, GBM recurs in nearly all patients. Although a standard STUPP protocol has been widely used for newly diagnosed GBM, no standard regimen has been established for recurrent patients. Here we evaluated the clinical value of recurrent GBM reoperation by comparing overall survival and quality of life (QoL) in patients with recurrent GBM undergoing repeat surgery or conservative treatment.

METHODS: This was a prospective study of 165 patients with GBM receiving first operations for their disease between 2011 and 2013 at two tertiary neurosurgery centers in Poland. Thirty-five eligible patients were re-operated for recurrence (the study group), and 35 patients were selected as the control group using propensity score matching. A model was created to determine advantageous prognostic factors for longer survival of patients qualifying for reoperation using stepwise linear regression.

RESULTS: The mean overall survival of patients undergoing repeat surgery was 528 days compared to 297 days in patients who did not undergo repeat surgery. Reoperation did not result in a significant deterioration in performance status

as measured by the Karnofsky Performance Scale. Older age, the presence of symptoms of increased intracranial pressure, and a shorter period between initial operation and reoperation were independent predictors of a worse outcome.

CONCLUSION: In selected patients, reoperation for recurrent GBM prolongs survival with no significant deteriorations in performance status.

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