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Stereotactic radiosurgery for recurrent malignant gliomas.

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Abstract

PURPOSE: To evaluate the role of stereotactic radiosurgery in the management of recurrent malignant gliomas.**PATIENTS AND METHODS:** We treated 35 patients with large (median treatment volume, 28 cm³) recurrent tumors that had failed to respond to conventional treatment. Twenty-six patients (74%) had glioblastomas multiforme (GBM) and nine (26%) had anaplastic astrocytomas (AA).**RESULTS:** The mean time from diagnosis to radiosurgery was 10 months (range, 1 to 36), from radiosurgery to death, 8.0 months (range, 1 to 23). Twenty-one GBM (81%) and six AA (67%) patients have died. The actuarial survival time for all patients was 21 months from diagnosis and 8 months from radiosurgery. Twenty-two of 26 patients (85%) died of local or marginal failure, three (12%) of noncontiguous failure, and one (4%) of CSF dissemination. Age ($P = .0405$) was associated with improved survival on multivariate analysis, and age ($P = .0110$) and Karnofsky performance status (KPS) ($P = .0285$) on univariate analysis. Histology, treatment volume, and treatment dose were not significant variables by univariate analysis. Seven patients required surgical resection for increasing mass effect a mean of 4.0 months after radiosurgery, for an actuarial reoperation rate of 31%. Surgery did not significantly influence survival. At surgery, four patients had recurrent tumor, two had radiation necrosis, and one had both tumor and necrosis. The actuarial necrosis rate was 14% and the pathologic findings could have been predicted by the integrated logistic formula for developing symptomatic brain injury.**CONCLUSION:** Stereotactic radiosurgery appears to prolong survival for recurrent malignant gliomas and has a lower reoperative rate for symptomatic necrosis than does brachytherapy. Patterns of failure are similar for both of these techniques.PMID: **7602353** [PubMed - indexed for MEDLINE][+ MeSH Terms](#)[+ LinkOut - more resources](#)