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Reirradiation for recurrent medulloblastoma.

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Abstract

BACKGROUND: Previously irradiated recurrent medulloblastoma (MB) is a highly lethal disease. Reirradiation is often not considered secondary to its potential toxicity and uncertain efficacy. Analysis of retreatment could help identify the feasibility and role of reirradiation for recurrent MB.

METHODS: Thirteen patients who underwent at least 1 course of reirradiation at the authors' institution as a component of management after recurrence were identified, and their medical records were analyzed.

RESULTS: At first diagnosis, all patients underwent surgical resection and radiation, with 69% of patients receiving chemotherapy. Median time to initial failure was 50 months (range, 14-103 months). Reirradiation subsite breakdown was as follows: posterior fossa, 46%; supratentorial/whole brain, 31%; spine, 23%; craniospinal, 8%. Median cumulative dose was 84 grays (range, 65-98.4 grays). Of 11 patients completing a full course of reirradiation, there were 6 failures, with 3 in the reirradiation field. Kaplan-Meier estimates of progression-free and overall survival since time of first recurrence were 48% and 65%, respectively at 5 years. Of patients without gross disease at reirradiation, 83% were without evidence of disease at last follow-up. With a median follow-up of 30 months, reirradiation was well tolerated, with only 1 case of asymptomatic, in-field radiation necrosis.

CONCLUSIONS: The results in this series are promising, but must be interpreted with caution given the limitations. Reirradiation provided most benefit to patients with no evidence of disease after surgical re-resection, and least to patients with gross disease. Important considerations for reirradiation toxicity development include duration between radiation courses and patient age. Further study of reirradiation as part of trimodality therapy is warranted. Cancer 2011;.
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