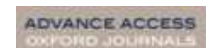


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Low-dose fractionated radiotherapy and concomitant chemotherapy in glioblastoma multiforme with poor prognosis: a feasibility study.

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Abstract

We explored the feasibility of concurrent palliative chemotherapy and low-dose fractionated radiotherapy (LD-FRT) in glioblastoma multiforme (GBM). Patients with recurrent/progressive GBM at least 3 months after the end of primary radiotherapy received 0.3 Gy twice daily with cisplatin and fotemustine if progressing on temozolomide, or 0.4 Gy twice daily with temozolomide if recurrent 4-6 months later (retreatment group). Newly diagnosed GBM with gross residual mass received 30 Gy with concomitant and adjuvant temozolomide and 0.4 Gy twice daily from the second adjuvant cycle (naive group) for 2-4 cycles. Twenty-six patients were enrolled. In the retreatment group (n = 17; median LD-FRT total dose 7.2 Gy [range 2.4-11.6]), grade 3 or 4 hematological toxicity was observed in 5.9% of patients. Median follow-up time was 20 months (range 4-35). Median progression-free survival (PFS) and overall survival (OS) from the time of recurrence or progression were 4 and 8 months, respectively (OS at 6 months, 69%; at 12 months, 16.7%). In the naive group (n = 9; median LD-FRT total dose 8 Gy [range 3.2-16]), grade 3 or 4 hematological toxicity was observed in 11.1% of patients. Median follow-up time was 17 months (range 8-20)-median PFS was 9 months, with PFS at 6 months and at 1 year of 66.7% and 26.7%, respectively; and median OS was 12 months, with OS at 6 months and at 1 year of 77.8% and 34.6%, respectively. LD-FRT with concurrent chemotherapy was well tolerated.

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