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1: [J Neurooncol.](#) 2009 Feb 11. [Epub ahead of print]



Cisplatinum and BCNU chemotherapy in primary glioblastoma patients.

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Background The prognosis of patients with glioblastoma is very poor with a mean survival of 10-12 months. Currently available treatment options are multimodal, which include surgery, radiotherapy, and chemotherapy. However, these have been shown to improve survival only marginally in glioblastoma multiforme (GBM) patients. Methylated methylguanine methyltransferase (MGMT) promoter is correlated with improved progression-free and overall survival in patients treated with alkylating agents. Strategies to overcome MGMT-mediated chemoresistance are being actively investigated. **Methods** A retrospective analysis on 160 adult patients (≥ 16 years) treated for histologically confirmed GBM between 2003 and 2005 at our Institution was performed. All patients were treated with conventional fractionated radiotherapy and a combined chemotherapy treatment with Cisplatin (CDDP) (100 mg/sqm on day 1) and carmustine (BCNU) (160 mg/sqm on day 2); the treatment was repeated every 6 weeks for five cycles. Toxicity, progression free survival and overall survival were assessed. **Results** The median number of chemotherapy cycles delivered to each patient was 5 (range 3-6), with no patients discontinuing treatment because of refusal or toxicity. Dose reduction was required in 16 patients (10%), and all patients completed radiotherapy, whereas 5 patients discontinued chemotherapy before completing all planned cycles for disease progression. The primary toxicities were: neutropenia (grade 3-4: 23%), thrombocytopenia (grade 3-4: 18.5%), and nausea and vomiting (13%). Median progression-free survival times and 1-year progression free survival were 7.6 months (95% CI 6.6-8.5) and 17.3%, respectively. OS was 15.6 months (95% CI 14.1-17.1). **Conclusions** Our results for PFS and overall survival are comparable with those obtained with temozolomide, but the toxicity occurring in our series was more frequent and persistent. The toxicity, and mainly the modalities of administration associated with cisplatin and BCNU combination, argues against future use in the treatment of patients with GBM.

PMID: 19212704 [PubMed - as supplied by publisher]
