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Carboplatin and oral cyclophosphamide combination after temozolomide failure in malignant gliomas

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ABSTRACT

Background. Temozolomide is a novel cytotoxic agent for malignant gliomas. However, treatment failure occurs approximately in half of patients, and the optimal regimen in this setting has yet to be defined. In the present study, we assessed retrospectively the efficacy and toxicity of the combination of carboplatin and oral cyclophosphamide in temozolomide-resistant patients.

Methods. We evaluated the medical records of 30 patients with malignant gliomas. After failure of temozolomide therapy, patients were treated with a combination of carboplatin and oral cyclophosphamide. Treatment consisted of intravenous carboplatin AUC 6 (based on the Calvert Formula) on day 1 and oral cyclophosphamide 75 mg/m^2 daily on days 1 to 14, followed by 14 days of rest, with the treatment repeated every 4 weeks.

Results. All patients were evaluated for response and toxicity. The objective response rate was 30%, including 9 partial responses. Median time to disease progression and median overall survival was 7 months and 8 months, respectively. Clinically responsive patients had statistically significant longer progression-free survival and overall survival than unresponsive patients. Hematological side effects were commonly observed toxicities, with neutropenia the most frequent.

Conclusions. Our data suggest that carboplatin and oral cyclophosphamide therapy is a convenient regimen after failure of temozolomide therapy in patients with malignant gliomas because of its activity, feasibility and tolerability. Further prospective studies are needed in this setting.

Key words: *carboplatin, cyclophosphamide, malignant gliomas, temozolomide refractory.*

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