Reviewer's report

Title: Carmustine (BCNU) for recurrent glioblastoma multiforme: efficacy, toxicity and prognostic factors

Version: 2 Date: 6 May 2009

Reviewer: Alfredo Quinones-Hinojosa

Reviewer's report:

Re: ‘Carmustine (BCNU) for recurrent glioblastoma multiforme: efficacy, toxicity and prognostic factors’

This manuscript investigates the application of systemic BCNU treatment for patients with recurrent glioblastoma through retrospective analysis of 35 patients. Because all patients involved in this study were treated with BCNU, the paper primarily serves as a report of adverse effects seen in this complex group. In addition, an interesting prognostic factor examined is the effect of pretreatment with temozolomide, another DNA alkylating agent that may be subject to the same resistance mechanisms as BCNU.

Discretionary revisions:

1. Defining BCNU treatment more specifically in the abstract early on is important, whether systemic or local. Because local BCNU in the form of Gliadel for high grade gliomas has been extensively studied, both alone and with adjuvant temozolomide, the novelty of this study would be greater with systemic study.

Major Compulsory revisions:

2. The concept of “previous relapses” needs to be elaborated. In these patients, is each relapse equal to a resection? In these relapses, what was the incidence of BCNU, temozolomide use, or radiation therapy?

3. Defining ‘macroscopically total resection’ more specifically would be helpful. For example is it equivalent to gross total resection (versus near total resection)?

4. In evaluation of prognostic factors: table 2, was there any correlation with gross total resection prior to recurrence?

5. In evaluation of recurrent disease, it is often important to know the time since diagnosis of primary tumor. Though overall survival may change, a change in the time since initial diagnosis would help interpreting this info. It is unclear in table 1 if “time from initial diagnosis to start of BCNU” refers to diagnosis of recurrence or initial tumor.

6. Would it be possible to describe location of tumors as a variable?

7. When describing toxicities, were there any trends among those patients that showed adverse effects? Those that had more previous relapses for example?

8. No mention was made of follow up time in this patient group (mean, range,
standard deviation).

Minor Essential Revisions:
9. There is a Figure 3 referred to in the second paragraph of progression free and overall survival in the results, though no such figure exists.

Level of interest: article of some interest
Quality of written English: acceptable
Statistical review: simple statistics used, acceptable.

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

No competing interests.