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Treatment of recurrent glioblastoma with intra-arterial BCNU [1, 3-bis (2-chloroethyl)-1-nitrosourea].

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Abstract

Contemporary therapies for patients with glioblastomas remain marginally efficient, and recurrence following surgery, radiation therapy and adjuvant chemotherapy is practically universal. The major obstacles to the successful use of chemotherapy for CNS tumors are the drug delivery to the tumor site and the infusion of chemotherapeutic agents directly into the arterial supply of a tumor. The latter could provide a pharmacokinetic advantage by enhancing drug delivery to the tumor. Sixteen patients with recurrent unilateral glioblastomas treated with intra-arterial BCNU were evaluated retrospectively. During the infusion, eleven patients referred pain in the ipsilateral eye, five patients were nauseated, three reported headache, one patient presented mental confusion, while two presented focal signs. There were two deaths during the course of therapy. Four patients achieved temporary clinical improvement, seven showed disease stability, and three presented clinical deterioration. The median total survival time was 87.9 weeks. Unilateral vision loss and focal signs were observed as delayed complications of this treatment. This study has confirmed previous reports indicating that arterial chemotherapy is clearly not curative, and presents serious toxicity. Only through a randomized prospective study performed in a large series of patients can the questions concerning survival period increment be answered properly.

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