Regression of recurrent glioblastoma infiltrating the brainstem after convection-enhanced delivery of nimustine hydrochloride.

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Abstract

This 13-year-old boy with a history of cranial irradiation for the CNS recurrence of acute lymphocytic leukemia developed a glioblastoma in the right cerebellum. Resection and chemo- and radiotherapy induced remission of the disease. However, recurrence was noted in the brainstem region 8 months later. Because no effective treatment was available for this recurrent lesion, the authors decided to use convection-enhanced delivery (CED) to infuse nimustine hydrochloride. On stereotactic insertion of the infusion cannula into the brainstem lesion, CED of nimustine hydrochloride was performed with real-time MR imaging to monitor the co-infused chelated gadolinium. The patient's preinfusion symptom of diplopia disappeared after treatment. Follow-up MR imaging revealed the response of the tumor. The authors report on a case of recurrent glioblastoma infiltrating the brainstem that regressed after CED of nimustine hydrochloride.

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