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Pediatr Blood Cancer. 2010 May 26. [Epub ahead of print]

Vincristine and carboplatin chemotherapy for unresectable and/or recurrent low-grade astrocytoma of the brainstem.

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Abstract

BACKGROUND: Radiotherapy remains a widely accepted postoperative treatment modality for unresectable or recurrent low-grade glioma (LGG). However, there is increasing evidence to suggest that chemotherapy can delay and may obviate the need for radiotherapy in progressive/recurrent LGG. The majority of the published experience is in children with hypothalamic/optic chiasmatic lesions and little information is available regarding its use in LGG of the brainstem. **PROCEDURE:** We describe clinical characteristics and course of children with LGG of the brainstem who received carboplatin-based chemotherapy in two institutions over 10 years (1996-2006). This was a retrospective review of consecutively treated children with LGG of the brainstem (midbrain, pons, medulla, and upper cervical cord). Vincristine and carboplatin were first-line chemotherapy regimen used in all patients. **RESULTS:** In this series, there were 16 children (9 males) with median age at diagnosis of 4.2 years (range 0.5-8). Eight children were treated at diagnosis while the remaining eight received chemotherapy after either radiological progression or clinical deterioration. After a median follow-up of 57 months (range 20-136) from initiation of chemotherapy all children are alive and 11 remain progression free (1 complete response, 8 with partial response + minor response, and 2 stable diseases). **CONCLUSIONS:** The efficacy of this chemotherapy regimen in this series supports its role in children with progressive unresectable LGG of brainstem. *Pediatr Blood Cancer.* (c) 2010 Wiley-Liss, Inc.

PMID: 20535831 [PubMed - as supplied by publisher]

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