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Stereotactic radiosurgical treatment of brain metastases to the choroid plexus.

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Abstract

PURPOSE: Choroid plexus metastases (CPM) are uncommon lesions. Consequently, optimal management of CPM is uncertain. We summarize our experience with stereotactic radiosurgery (SRS) of CPM.

METHODS AND MATERIALS: Sixteen consecutive patients with presumed CPM treated with SRS between 1997 and 2007 were examined. Twelve were men with a median age at diagnosis of CPM of 61.9 ± 9.9 years; 14 had metastases from renal cell carcinoma (RCC). All patients had controlled primary disease at the time of treatment for CPM. Four patients with RCC and 1 with non-small-cell lung cancer had undergone whole-brain radiotherapy (WBRT) previously and 2 had received SRS to other brain metastases. The disease-free interval from the primary diagnosis to CPM diagnosis averaged 39.3 ± 46.2 months (range, 1.0-156.3). Five patients were asymptomatic; of the remaining 11, none had symptoms related to CPM. All presented with a single CPM.

RESULTS: Average maximum diameter of the CPMs was 2.0 ± 1.0 cm (range, 0.9-4.1 cm); mean volume was 2.4 ± 2.6 cm³ (range, 0.2-9.3). Median SRS dose was 24 Gy to the 53% isodose line (range, 14-24 Gy). Survival after SRS to the CPM was 25.3 ± 23.4 months (range, 3.2-101.6). Patients in Recursive Partitioning Analysis (RPA) class I (n = 10) had improved survival compared to those in class II (n = 6), as did those with better GPA scores. There were no local failures. After SRS, 1 patient underwent WBRT, 3 patients had one, and another had two subsequent SRS treatments to other brain lesions. Of the 14 patients who have died, 11 succumbed to systemic disease progression, 2 to progressive, multifocal central nervous system disease, and 1 to systemic disease with concurrent, stable central nervous system disease. There were no complications related to SRS.

CONCLUSIONS: Most CPMs are associated with RCC. SRS represents a safe and viable treatment option as primary modality for these metastases, with excellent outcomes.

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