Surgical technique and outcomes in the treatment of spinal cord ependymomas, part 1: intramedullary ependymomas.

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Abstract
BACKGROUND: Intramedullary spinal ependymomas are rare tumors.

OBJECTIVE: To provide a large retrospective review in the modern neuroimaging era from a tertiary center where aggressive surgical resection is favored.

METHODS: Charts of intramedullary spinal ependymomas treated between 1983 and 2006 were reviewed.

RESULTS: Sixty-seven cases were reviewed. The mean age was 45.6 years (range, 11-78 years) with a male-to-female ratio of 2:1. The most common location was the cervical spine, followed by the thoracic and lumbar spine. The average duration of symptoms was 33 months, with the most common symptom being pain and/or dysesthesias, followed by weakness, numbness, and urinary or sexual symptoms. Gross total resection was achieved in 55 patients and a subtotal resection was performed in 12 patients; 9 patients were treated with adjuvant radiation therapy. Mean follow-up was 32 months. The mean McCormick neurological grade at last follow-up was 2.0. The preoperative outcome correlated significantly with postoperative outcome (P < .001). A significant number of patients who initially worsened improved at their 3-month follow-up examination. Outcomes were significantly worse in patients undergoing subtotal resection with or without radiation therapy (P < .05). There were 3 recurrences. The overall complication rate was 34%. The primary complications were wound infections or cerebrospinal fluid leaks.

CONCLUSION: Spinal cord ependymomas are difficult lesions to treat. Aggressive surgical resection is associated with a high overall complication rate. However, when gross total resection can be achieved, overall outcomes are excellent and the recurrence rate is low.

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MeSH Terms

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