SO-06. SURGICAL STRATEGIES AND OUTCOMES OF SPINAL EPENDYMOMAS OF DIFFERENT LENGTHS: ANALYSIS OF 210 PATIENTS

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OBJECTIVE: The aim of this study was to investigate the surgical strategies and outcomes for spinal ependymomas of different lengths. METHODS: The authors used data from 210 patients with spinal ependymomas (WHO Grades II and III) in this 10-year retrospective study (January 1999 to December 2008), dividing them into 3 different groups according to length (spinal ependymomas < 5 cm, 5–10 cm, and > 10 cm). All patients underwent tumor resection. The basic characteristics of the patients were reviewed and the functional status was assessed using the McCormick classification.

RESULTS: There were 89, 81, and 40 patients, respectively, in the 3 groups (< 5 cm, 5–10 cm, and > 10 cm). Glosstotal resections (GTRs) were performed in 172 patients (81.9% overall, or 86.5%, 79.0%, and 77.5% in the 3 groups, respectively). Subtotal and partial resections were achieved in 38 patients (18.1%). Eight patients with medulla oblongata or upper cervical cord tumors received a tracheotomy postoperatively. The follow-up period ranged from 56 to 176 months. One hundred thirty-five patients (76.7%) experienced improvement, (88.2%, 83.8%, and 34.4% in the < 5 cm, 5–10 cm, and > 10 cm groups, respectively). Thirty-three patients (18.8%) maintained their pretreatment status, and 8 patients (4.5%) showed deterioration following tumor resection at 6 months. CONCLUSIONS: Radical resection of spinal ependymomas could be performed in most patients, and the rate of GTR was significantly different in the different-length groups. Patients with longer tumors had worse surgical results compared with those with small tumors and more postoperative neuropathic pain and proprioceptive deficits could usually be observed in patients harboring larger tumors. Early diagnosis and timely operation are critical to achieving better neurological outcomes. For tumors with dense adhesions, complete removal should be performed cautiously because of the significant incidence of neurological deterioration.