Paraspinal nerve sheath tumor

The goal of a study was to analyze the results of surgical treatment of paraspinal nerve sheath tumors (NSTs) and review the surgical approaches to paraspinal NSTs.

A retrospective review of the cases of paraspinal NSTs treated surgically by two senior authors during the period between 1970 and 2006 was undertaken. Surgical approaches that allow minimal disruption of normal anatomy and are aimed at complete resection of paraspinal lesions and preservation of spinal stability are reviewed according to the spinal level.

Eighty-eight paraspinal NSTs were treated surgically during the period: 56 schwannomas, seven solitary neurofibromas, 21 neurofibromas associated with neurofibromatosis Type 1 (NF1), and four malignant peripheral NSTs. Schwannomas tended to occur in the cervical and thoracic areas. Neurofibromas were usually associated with NF1 and tended to occur in the cervical area. Pain (79 patients, 90%) and paresthesia (81 patients, 92%) were the predominant clinical presenting symptoms; others included weakness (28 patients) and myelopathy (12 patients). Total resection of the tumor was achieved in 50 patients (89.3%) with schwannomas and 22 patients (78.6%) with neurofibromas. There was a large reduction of pain in 70 (88.6%) of 79 patients who had preoperative pain, and weakness improved in 18 (64.3%) of 28. Postoperative transient weakness occurred in 12 (42.9%) of these patients, but in 85% of this group, the symptom improved over a 12-month period. Myelopathy was reduced in eight (66.7%) of 12 patients. The average follow-up period was 18 months.

Paraspinal NSTs present unique surgical challenges given their anatomical relationships to the spine, spinal cord, nerve roots, and major vasculature. The surgical technique should take into account the location of the lesion and its relationship to paraspinal anatomy, the extent of resection, sparing of normal anatomy, and spinal instability [1)].

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Cherqui A, Kim DH, Kim SH, Park HK, Kline DG. Surgical approaches to paraspinal nerve sheath tumors. Neurosurg Focus. 2007 Jun 15;22(6):E9. PubMed PMID: 17613226.