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Neurosurg Clin N Am 17 (2006) ix

NEUROSURGERY
CLINICS
OF NORTH AMERICA

Preface

Intramedullary Spinal Tumors: Recent Advances and Future Directions

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Guest Editors

As with any neurosurgical procedure, the first step in approaching a surgical patient with an intramedullary spinal cord tumor is to define the surgical objective and, subsequently, identify options. The clinical status of the patient as well as the radiographic characteristics and location of the tumor should be considered specifically in each case. The goal of treatment is long-term control or cure with preservation of function. Accordingly, determination of the spinal cord/tumor interface is the most important principle governing the extent of tumor resection. If no plane is apparent between the tumor and surrounding spinal cord, it is likely that an infiltrative tumor is present. A biopsy is obtained to establish a histologic diagnosis. If an infiltrating or malignant astrocytoma is identified and is consistent with the intraoperative findings, further tumor removal is not warranted. The surgeon must rely on judgment and experience in this regard. Obviously, if gross tumor is easily identified, continued removal is reasonable. Changes in motor sensory evoked potentials or uncertainty about the spinal cord/tumor interface should signal an end to tumor resection. Although neurophysiologic monitoring can predict the extent of postoperative deficit, it remains to be proven that conventional monitoring techniques can prevent postoperative deficits. This is an important point that warrants discussion with a prospective patient during the preoperative consultation.

In this issue, we have included articles that review some of the most pertinent issues surrounding patients with intramedullary spinal cord tumors as well as specific surgical and pathologic features attendant to some of the most common tumor types. It has been said that 90% of the morbidity associated with intramedullary spinal tumor surgery occurs during the resection of the last 10% of tumor. With advances in a wide array of disciplines, including neuromonitoring and molecular biology, we anticipate less morbidity with longer disease-free survival in the future.

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doi:10.1016/j.nec.2005.11.003