INTRODUCTION

Tumors of the spinal column

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In August 2015, we were honored to serve as reviewers on a Neurosurgical Focus issue on spinal tumors. That issue, focusing on intradural spine tumors, was well received and was a labor of love for us.

For the August 2016 issue, we are honored to return as reviewers. This issue broadens the focus to include papers on other tumors of the spinal column. For this issue, we invited authors to submit original research or review articles regarding spinal tumors, their management, and neurosurgical decision making. Our aim was to present a robust issue of papers which highlights current clinical and surgical techniques and treatment. We invited evidence-based papers directed toward primary and metastatic tumors in both adult and pediatric populations. We stated that we were especially interested in articles regarding surgical and management strategies, which reported clinical outcomes and evaluated limitations and complications. We were pleasantly overwhelmed with more than 50 excellent submissions from all around the world. Unfortunately, space limitations precluded inclusion of all 50 papers. We therefore narrowed the list to the best 18 original articles on the current state of the art in surgery for tumors of the spinal column.

The issue begins with 4 thorough systematic review articles. Bakar et al. reviewed decompression surgery for spinal metastases. Ravindra et al. reviewed primary osseous tumors of the pediatric spine. Galgano et al. reviewed osteoblastomas of the spine. Karhade et al. reviewed the national surgical quality improvement program on 30-day readmissions and reoperation after surgery for spine tumors. These 4 articles encompass surgical outcomes, readmissions, and most common tumors affecting the pediatric and young-adult populations.

The next 4 articles highlight experiences with benign and malignant tumors of the spine. Maiti et al. reviewed the clinical and radiological factors predicting recurrence and functional outcomes in patients with meningiomas. Vasudeva et al. reviewed their hospital experience and performed a thorough literature review on aggressive vertebral hemangiomas. Samuel et al. reviewed their clinical and pathological outcomes following resection of intramedullary spinal cord tumors. Sciubba et al. reviewed the clinical, surgical, and molecular prognostic factors for survival after spinal sarcoma resection.

We began the metastatic disease section with an article that reviewed the 100 most influential articles in metastatic spine disease. The authors, Cohen et al., followed a similar methodology that has been used in the literature to define an article’s influence by the number of citations. Molina et al. investigated the role of posterior surgical procedures (posterior laminectomy with and without instrumentation, transpedicular corpectomy, and costotransversectomy) in the treatment of spinal metastases. Zakaria et al. reviewed morphometric analysis of patients with lung cancer metastasis to the spine, while Petteys et al. reported on factors associated with improved survival following surgery for renal cell carcinoma spinal metastases.

Zwagerman et al. assessed the histopathological consequences of radiosurgery in a subset of patients progressing to operative intervention. This interesting paper provides great insight into the biological effects of stereotactic radiosurgery and emphasizes the need to figure out ways to deliver a more homogenized field of radiation exposure that may allow for tumor obliteration with relative preservation of critical anatomical structures.

A multicenter study that reviewed image-guided navigation in spine tumor surgery leads off the next section on techniques. This clinical article, by Nasser et al., of 50 patients from 2 institutions encompassed both metastatic and primary tumors and offered useful pearls regarding positioning and technique. Another technique employed in thoracic tumors, the mini-open thoracoscopic-assisted approach in the management of vertebral column tumors, was contributed by Ravindra et al. The final article in this section, by Garg et al., reviewed their department’s experience with a hybrid biopsy technique to improve yield when performing computed tomography–guided percutaneous biopsies for vertebral neoplasms.
The issue finishes with 2 articles reviewing intraoperative neurophysiological mapping and monitoring. The first paper, by Scibilia et al., performed a literature review and asked the question: is monitoring a siren or an indispensable tool? The second article on monitoring, by Salame et al., reviews monitoring during preoperative angiography in patients undergoing total en bloc spondylectomy and posits that it guides decisions regarding permanent occlusion of major radicular arteries.

Sharing our findings in scholarly articles, like those being published this month, helps us all as we strive to extend patient life expectancy, improve quality of life, and provide the best possible clinical and surgical treatment for our patients. It is with great excitement that we present this month’s issue of Neurosurgical Focus, which includes varied review articles, reports about benign and malignant spinal tumors, metastatic disease, radiosurgery, new surgical techniques, and intraoperative mapping/monitoring.

We wish to thank all authors who submitted such excellent papers and to thank the editorial staff at the JNS Publishing Group for their hard work in preparing this issue focusing on tumors of the spinal column.

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Disclosures

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