INTRODUCTION

Pediatric spinal deformity

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PEDIATRIC spinal deformity is a rapidly evolving field with increased interest and participation from the neurosurgical community. In recent years we have seen several improvements, including an enhanced understanding of the importance of imparting thoracic kyphosis in patients with adolescent idiopathic scoliosis (AIS), advances in neuromonitoring and responding to changes, the introduction of magnetically controlled growing rods, and important progress in identifying and preventing complications, to name a few.

This issue of *Neurosurgical Focus* begins with a thorough review of AIS by Jada et al., which provides the framework for the next several articles. Although complications are less frequently seen in patients with AIS, we must understand factors contributing to their occurrence, and Menger et al. provide a discussion of potential risk factors for complications seen in this population. In recent years we have gained a vastly improved understanding of the importance of imparting thoracic kyphosis in patients with AIS, particularly with respect to compensatory changes seen in both the lumbar and the cervical spine, and Ohrt-Nissen et al. present their technique for optimizing thoracic kyphosis.

Intraoperative neuromonitoring (IONM), with somatosensory evoked potentials and transcranial motor evoked

potentials, is now routinely utilized in the correction of pediatric spinal deformity, and Zucarro et al. provide a summary of the experience at a single center. Appropriate response to IONM changes can prevent the vast majority of permanent postoperative neurologic sequelae.

Unlike AIS, neuromuscular scoliosis carries a significant complication rate, and Cognetti et al. report on the Scoliosis Research Society database and the decrease in complication rates over the past decade. This decrease may be attributed to both the consistent usage of intra-wound antibiotics and improved instrumentation.

Although pediatric spinal deformity has seen several improvements over the past few years, there are still many more areas that need improvement. Neurosurgeons working together with their orthopedic colleagues can help advance the field, ultimately providing better care for our patients.

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Disclosures

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