Complications of spine surgery

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Over the past 2 decades, we have seen an exponential increase in the number of spine surgeries3–5 as a result of an expanding elderly population and explosion of technical innovations. During the period from 1990 to 2001, there was a greater than 220% increase in the number of spine fusions performed for degenerative spine diseases.3 In fact, the rate of spine fusion rose more rapidly in patients older than 60 years than in any other age group,3,4 with a 15-fold increase in the number of complex spine surgeries for elderly patients with spinal stenosis.4 Several clinical studies have shown that complications are greater with the increasing complexity of surgery.1,2,4,6 Studies also revealed that patients over the age of 60 undergoing complex spine surgery are at higher risk for surgical complications.1,2,6

Thoughtful consideration of the complications related to spine surgery is essential. Complications lead to longer hospital stay, higher mortality rate, higher readmission rate, and higher overall cost of treatment,4 all of which lead to diminished efficacy and cost-effectiveness of surgical treatment of degenerative spinal diseases. Although numerous studies have been published on the topic of spine surgery complications in the past, there remains a significant knowledge gap regarding complications related to novel technologies or advanced surgical treatments in the spine that have been developed and gained popularity over the past 2 decades. Critical analysis of past complications can hopefully lead to strategies to avoid future complications and to improve patient outcome.

Despite the inherent difficulty involved in getting surgeons to report or discuss the complications encountered, we received an overwhelming response with more than 50 submissions from contributors throughout the world on this topic. A collection of 20 articles that includes reviews of surgical nuances, original articles, and case reports were selected for the current topic. The articles address issues related to diagnostic considerations, complications related to standard surgical techniques such as pedicle screw instrumentation and anterior lumbar interbody fusion, and complications related to more novel treatments such as minimally invasive spine surgery. We hope that you will find the articles from the current issue to be enlightening as you strive to provide the most optimal treatment outcome for all of your patients.

(DOI: 10.3171/2011.8.FOCUS11204)

Disclosure

Dr. Hsieh serves as a consultant to Medtronic and DePuy Spine, and has received research support from DePuy Spine. Dr. Gokaslan has direct stock ownership in Spinal Kinetics and US Spine, has received research support from AO North America, Medtronic, and DePuy Spine, and is a paid speaker for the AANS.

References