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Editorial Perspective.

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Editorial Perspective

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Eastlack and coauthors from the International Spine Study Group deserve recognition for having explored an emerging question by comparing 2 major variants of spine deformity surgeries—conventional “open” surgery versus “less” or “minimally invasive” (MIS) surgery. The authors sought to identify if there were any selection criteria differences in radiographic parameters, demographics, or baseline health status for patients treated in either group. In other words, are patients treated with MIS for adult spinal deformity any different from those treated with conventional surgical means? To this purpose the authors accessed 2 separate multicenter databases—one for spinal deformities that collects conventional deformity procedures and another one that collects “MIS” procedures and retrospectively analyzed a total of 350 patients. Both are specialty society run registries with unclear inclusion and enrollment practices, which limits clinical insights, but allows for prevalence studies, such as was done here.

Basically the authors concluded from their analysis that there were few if any differences in the 2 patient cohorts, which could invite the reader to conclude that MIS deformity surgery is done for patients of similar complexity as patients who are treated with conventional “open” technique.

Our reviewers were critical of a number of methods and findings. Although Eastlack et al took efforts at defining “MIS” surgery and even created 2 subgroups—a “cMIS” (circumferential) and a “hybrid” group—there was no refinement of what constituted “open surgery.” For instance, there was no reference of anterior column management in the “open” group, in terms of anterior releases, lumbar interbody fusions, number of levels, and types of devices used. In short, our reviewers felt that there was a real crossover potential in terms of surgical techniques between the 2 cohorts and that in fact both “MIS” and “open” cohorts really seemed to use hybrid approaches.

The authors also reported that the MIS group was statistically older by 2.2 years and drew a number of inferences from this. While this number may be a statistical difference, the question bears answering if this was a real practical difference? Certainly the contention raised by the authors in the discussion that “MIS” approaches were favored by surgeons for older patients seems to be a bit of a stretch. Likewise the authors report that the health-related quality-of-life measures were worse in the MIS group (Oswestry Disability Index of 44.8 in open vs 49.8 in MIS), which again raises the question how this statistical numeric difference would actually enter surgical decision making.

In general, *Evidence-Based Spine-Care Journal* finds that this study deserves notice for 2 reasons: the authors used 2 different databases and performed a comparison analysis. This is a feat rarely attempted and can be quite challenging for a number of reasons. The authors evidently crossed all political and data code chasms and were able to perform their study with an interesting question.

Second, the authors did show that “MIS” techniques, however they are defined, are gaining further traction and are entering areas previously held as a domain of conventional open surgeries, such as adult deformity procedures. Beyond this it is premature to conjecture too much on the role that the still emerging MIS technology may play in the decision-making process of spinal deformity surgeons, as outcomes in terms of complications and quality of life are yet to be critically compared.

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