

## Letter to the editor concerning “Does minimally invasive lumbar disc surgery result in less muscle injury than conventional surgery? A randomized controlled trial” by Arts M, Brand R et al. (2011) *Eur Spine J* 20(1):51–57

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Less invasive techniques in many orthopedic procedures have come under recent criticism. This article [1] was reviewed with great anticipation by many of the non-spine surgeons in my group as yet another example of technology over reason. As the representative spine surgeon within our group, I was tasked to review this article and comment on its findings regarding the lack of benefit associated with tubular retractors for excision of lumbar herniated discs. First and foremost, I would commend the authors for conducting this study. While there are a few minor concerns regarding methodology, this reader was most concerned with the appearance of an underlying bias made evident through authors' discussion.

As noted by the authors, modified microdiscectomy (MMD) is considered the gold standard for lumbar disc excision. The advent of less invasive approaches during the 1990s and early 2000s was not adopted without consideration of the excellent results associated with traditional MMD. In fact, a frequent argument against adoption of newer less invasive techniques were relatively less traumatic MMD approaches associated with same day surgical discharge and early return to full activity. Findings reported by Arts and Brand confirm historical experience that small incisions and use of speculum-type retractors (split-tube configuration) provide little, if any, deleterious effect to patients when compared to solid tubular retractors.

Less invasive spine surgery techniques continue to evolve despite the apprehension and oftentimes outright condemnation of more experienced surgeons. Our present situation can be compared to a similar controversy hotly debated in the 1980s and early 1990s, pedicle screws. Many of us clearly remember the disdain associated with podium presentation touting the use of this new pedicle screw technology. Similarly, many of us would now consider pedicle screws critical to improved patient outcomes. Tubular discectomy, in this surgeon's opinion, was never meant to replace mini-open MMD on the basis of dramatic improvements in outcome. However, lost in the discussion of Art and Brand is the use of tubular discectomy as a tool to advance a surgeon's skill set allowing truly less invasive applications for multilevel spinal decompression, fusion and instrumentation. Less invasive spinal procedures utilizing tubular retractors of various configurations are being adopted worldwide. Like pedicle screws, the path to global acceptance is a mix of cautious skepticism married to critical examination.

### Reference

1. Arts M, Brand R et al (2011) Does minimally invasive lumbar disc surgery result in less muscle injury than conventional surgery? A randomized controlled trial. *Eur Spine J* 20(1):51–57

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