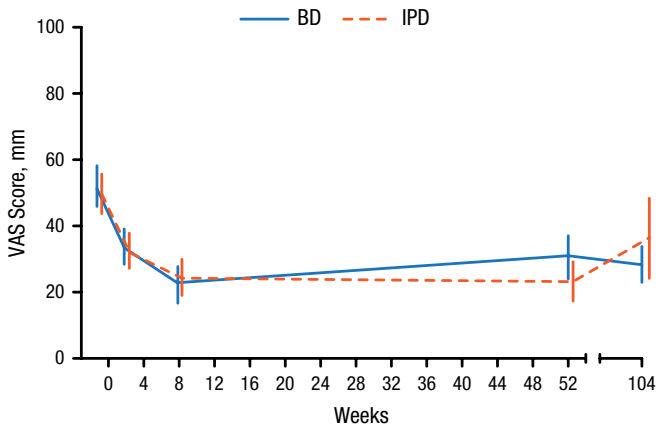
Figure 2. VAS Back Pain Results



BD, bony decompression; IPD, interspinous process distraction; VAS, visual analog scale.
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reported). The rate of successful recovery after re-operation was lower than after the first operation.

In summary, this study found that clinical outcomes were similar with surgical interspinous implants and conventional bony decompression at 2 years. Back pain, as measured by the VAS score, was not reduced with surgical interspinous implants. Further, it was associated with the need for additional surgery.

Prof Moojen stated that similar results were obtained in other clinical trials of implants in this setting [Davis RJ. *Spine*. 2013; Strömqvist BH. *Spine (Phila Pa 1976)*. 2013; Richter A. *Eur Spine J*. 2010]. Taken together with the data from the present study, Prof Moojen concluded that surgical interspinous implant confers no advantage over conventional bony decompression in patients with lumbar spinal stenosis. Conventional decompression should remain the standard for treatment.

Position of Pedicle Screws During Lumbar Fusion Surgery Significant in Reducing Complications

Written by Mary Beth Nierengarten

Hao Dingjun, MD, Xi'an Jiaotong University, Xi'an, China, presented the results of a prospective comparative study—Effect of Superior Adjacent Segment Degeneration after Lumbar Posterolateral Fusion Using Two Different Pedicle Screw Insertion Positions With Nine-Year Minimum Follow-Up [Yan L et al. *Spine*. 2014]—of patients with low-grade isthmic spondylolisthesis (IS), which assessed the effect of different pedicle screw insertion positions on adjacent segment degeneration (ASD).

From January 1999 to December 2003, 210 patients who underwent posterolateral fusion for low-grade IS were randomized to 2 groups according to different pedicle screw insertion positions. In group A (n = 102), the method by Du and Zhao [*Chin J Spine Spinal Cord*. 2001] was used to place the pedicle screw insertion. In group B (n = 108), the method by Magerl and colleagues [*Clin Orthop Relat Res*. 1984] was used, which needs more lateral and steeper angles for insertion.

Inclusion criteria included patients who were aged 18 to 55 years and had single-level IS (grade 1 or 2), persistent low back pain for > 6 months, and loss of quality of life with neurologic claudication. The follow-up period was at least 108 months. Patients were excluded from the study if they had undergone revision surgery, had ≥ grade 3 spondylolisthesis or concomitant scoliosis of > 15°, or had an implant removed during the follow-up period.

Of the 210 patients, 178 (84.7%) were available for at least a 9-year clinical and radiologic follow-up. Of these, 87 (85.3%) were patients in group A, and 91 (84.3%) were in group B.

Patient characteristics between the 2 groups were comparable. The majority of the patients were women in both groups (about 53%), with an average age of 46 years, a mean body mass index of about 24.3 kg/m^2, and a fusion level at L5-S1 (about 78%).

The study found significant differences (all $P < .001$) between the pre- and postoperative measures for all patients, using the Oswestry Disability Index (ODI) and the visual analog scale (VAS) for back and leg pain. In terms of postoperative ODI and VAS scores, no differences were found between the ASD and non-ASD groups nor between group A and group B. However, when the ODI scores were compared in terms of ASD, significantly more patients in group A had ASD compared with group B (28.6% vs 15.7%; $P < .001$).

According to Dr Dingjun, these findings show that the position of the pedicle screws during lumbar fusion surgery is closely related to superior ASD and that reducing the superior ASD can be done by inserting the pedicle screw in a position farther from the facet joint surface.