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CLINICAL STUDY SUMMARY

Expandable Technology Improves Clinical and Radiographic Outcomes of Minimally Invasive Lateral Lumbar Interbody Fusion for Degenerative Disc Disease

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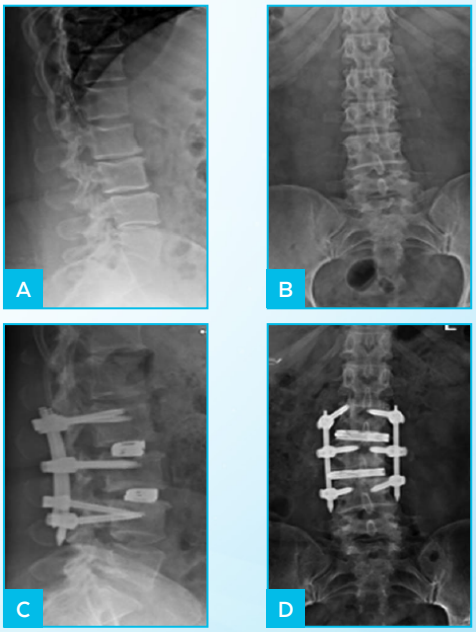
OBJECTIVE: The aim of this study was to evaluate the radiographic and clinical outcomes in patients treated using RISE®-L expandable lateral interbody spacers with adjustable lordosis using minimally invasive lateral lumbar interbody fusion (MIS LLIF).

METHOD: A single-surgeon, retrospective, institutional review board-exempt chart review of 24 consecutive patients who underwent MIS LLIF at one to two contiguous levels using RISE®-L expandable lateral interbody spacers with adjustable lordosis. Radiographic and clinical functional outcomes were collected and compared at preoperative and postoperative time points up to 24 months. Statistical results were significant if P < .05.

RISE®-L Expandable Lateral Interbody Spacer

Two-level MIS-LLIF radiographs at L2-L3 and L3-L4



Lateral view - preoperative (A) and postoperative (C)

Anteroposterior view - preoperative (B) and postoperative (D)

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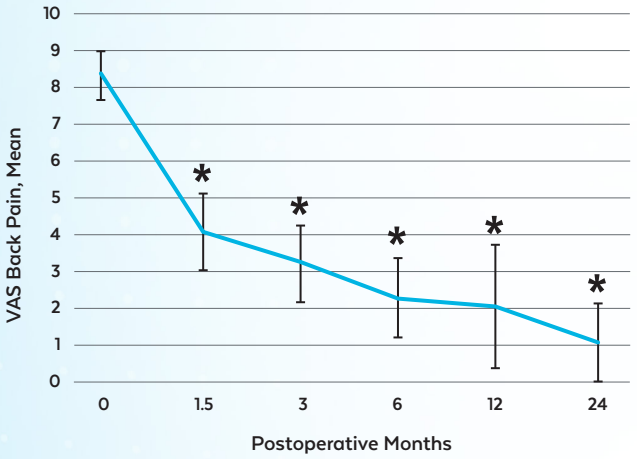
RESULTS:

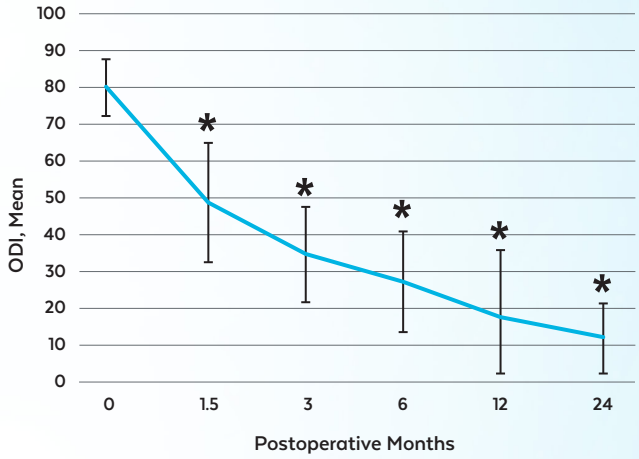
- Visual Analog Scale (VAS) for back pain improved by 7.3 ± 1.0 points.
- Oswestry Disability Index (ODI) scores improved by a mean of 67.5 ± 11.3 points at 24 months (P < .001).
- Lumbar lordosis improved by a mean of 6.3 ± 10.1° at 24 months (P < .001).
- Anterior, middle, and posterior disc height significantly increased at 24 months by means of 4.5 ± 2.9, 4.0 ± 2.8, and 2.6 ± 1.9mm, respectively (P < .001).
- Neuroforaminal height significantly improved by 3.3 ± 3.9mm at 24 months (P < .001).
- Segmental lordosis improved by 3.6 ± 3.0° at 24 months.

VAS BACK PAIN



Mean VAS back pain is shown. The results show a significant decrease in VAS back pain scores from baseline and sustained at 1.5, 3, 6, 12, and 24 months. *P < .05 compared with baseline.

OSWESTRY DISABILITY INDEX



Mean ODI is shown. The results show a significant decrease in ODI scores from baseline and sustained at 1.5, 3, 6, 12, and 24 months. *P < .05 compared with baseline.

CONCLUSION: In this study, MIS LLIF with RISE®-L expandable lateral interbody spacers with adjustable lordosis was shown to improve radiographic and clinical outcomes. Anterior and posterior disc height and neuroforaminal height were significantly restored, providing evidence for indirect decompression. Segmental and lumbar lordosis were significantly restored, correcting sagittal alignment. There were no cases of subsidence up to 24 months postoperatively.

Scan the QR code for a copy of the RISE®-L Int J Spine Surg study.

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