

CLINICAL STUDY SUMMARY

Expandable Titanium Interbody Spacer via Lateral Approach Improves Radiographic and Clinical Outcomes: A 2-Year Follow-up Study

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OBJECTIVE: The aim of this study was to evaluate the radiographic and clinical outcomes over a 2-year follow-up period in patients who underwent MIS LLIF using RISE[®]-L expandable lateral interbody spacers.

METHOD: A single-surgeon, retrospective institutional review board-exempt chart review on 22 consecutive patients who underwent MIS LLIF at one to two contiguous level(s) using RISE[®]-L expandable lateral interbody spacers. 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<0.05.



Two-level MIS-LLIF radiographs at L3-L4 and L4-L5







Anteroposterior preoperative (A) and postoperative (C)



Lateral - preoperative (B) and postoperative (D)



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RESULTS:

- Visual Analog Scale (VAS) back and leg pain scores decreased significantly by an average of 7.1 ± 1.2 points at 24 months (p<0.001).
- Oswestry Disability Index (ODI) scores significantly decreased by a mean of 67.1 ± 10.0 points at 24 months (p<0.001).
- Lumbar lordosis improved by a mean of $1.8 \pm 8.0^{\circ}$ at 24 months.
- Anterior, middle, and posterior disc height significantly increased at 24 months by averages of 4.7 ± 3.6 , 4.0 ± 3.9 , and 1.9 ± 2.4 mm, respectively (p<0.001).
- Neuroforaminal height significantly increased at 24 months by a mean of 2.6 ± 3.7mm (p<0.001). Segmental lordosis significantly improved by 2.5 ± 2.0° at 24 months (p<0.001).
- There was 100% fusion at all levels, with no cases of radiolucency.
- There were no reported implant-related complications, with 0% pseudoarthrosis and no secondary procedures.



RADIOGRAPHIC OUTCOMES

Mean radiographic measurements are shown. The results showed a significant increase from baseline for each parameter and sustained at 3, 6, 12, and 24 months (ADH= anterior disc height; MDH= middle disc height; PDH= posterior disc height; NFH= neuroforaminal height).

CONCLUSION: In this study, MIS LLIF with RISE[®]-L expandable lateral interbody spacers achieved sagittal correction and indirect decompression, which was maintained up to 24 months from baseline, based on increased disc height, neuroforaminal height, and segmental lordosis.



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