

CLINICAL STUDY SUMMARY

Transfacet Minimally Invasive Transforaminal Lumbar Interbody Fusion with an Expandable Interbody Device – Part II: Consecutive Case Series

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OBJECTIVE: The aim of this study was to quantify and evaluate clinical and radiographic results after transfacet minimally invasive transforaminal lumbar interbody fusion (MIS-TLIF) using the ALTERA® Articulating Expandable TLIF Spacer.

METHOD: A retrospective review was performed of 68 patients who underwent transfacet MIS-TLIF for degenerative lumbar spondylolisthesis. Patient-reported outcomes were assessed for pain and disability. Regional lumbopelvic and sagittal lumbar segmental parameters were evaluated preoperatively and postoperatively during follow-up.

L4-L5 Lateral Radiographs

ALTERA®
Articulating Expandable TLIF Spacer



Pre-Op



Post-Op - Day 1



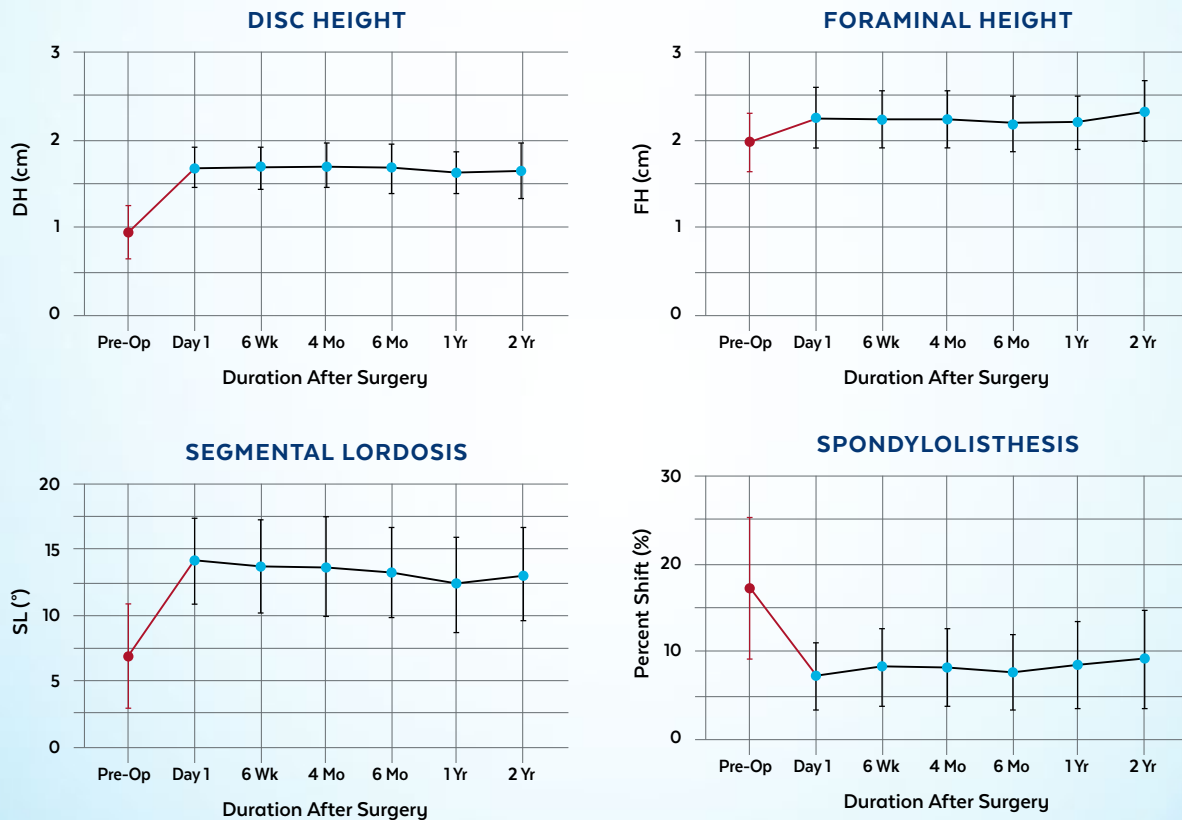
Post-Op - 6 Weeks

Radiographic outcomes after transfacet MIS-TLIF demonstrated improvements at the following operative levels: L2-L3 (7), L3-L4 (9), L4-L5 (54), and L5-S1 (4).

RESULTS

- Mean disc height increased significantly from $0.95 \pm 0.3\text{cm}$ pre-op to $1.67 \pm 0.3\text{cm}$ late post-op.
- Foraminal height increased from $1.98 \pm 0.3\text{cm}$ pre-op to $2.25 \pm 0.3\text{cm}$ late post-op.
- Segmental lordosis increased from $6.95 \pm 4.0^\circ$ pre-op to $14.12 \pm 3.2^\circ$ late post-op.
- There was immediate and sustained reduction of spondylolisthesis.
 - Mean percentage offset between vertebral bodies corrected significantly from $17.15\% \pm 8.17\%$ pre-op to $7.17\% \pm 3.8\%$ post-op and $9.14\% \pm 5.2\%$ late post-op.
- Patients with pre-op hypolordosis ($<40^\circ$) experienced significant increases in segmental ($+9.10^\circ$) and overall lumbar lordosis ($+8.65^\circ$).
- Fusion was observed in 50/53 (94.3%) levels after 12 months.

Sagittal Segmental Radiographic Measures



CONCLUSION: In this study, transfacet MIS-TLIF using the ALTERA® Articulating Expandable TLIF Spacer showed clinical improvements and restoration of radiographic sagittal segmental parameters. Regional alignment correction was observed among patients with hypolordosis at baseline.



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