

CLINICAL STUDY SUMMARY

Minimally Invasive Transforaminal Lumbar Interbody Fusion with Expandable Articulating Interbody Spacers Significantly Improves Radiographic Outcomes Compared to Static Interbody Spacers

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OBJECTIVE: The purpose of this study was to compare the radiographic outcomes in patients treated with the ALTERA® Articulating Expandable TLIF Spacer in minimally invasive transforaminal lumbar interbody fusion (MIS TLIF) to outcomes in patients treated with traditional static spacers.

METHOD: A retrospective clinical study was performed of 48 patients with degenerative disc disease at one level from L2 to S1 with or without grade 1 spondylolisthesis who underwent MIS TLIF using either the ALTERA[®] Articulating Expandable TLIF Spacer or a static interbody spacer. Radiographic records were assessed for disc height, neuroforaminal height, and lordosis at baseline, 3 and 6 months, and final follow-up.

> ALTERA® Articulating Expandable TLIF Spacer







Anteroposterior – pre-op (A) and post-op (C)

Lateral – pre-op (B) and post-op (D)



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L5-S1 AP & Lateral Radiographs

Radiographic outcomes demonstrated the following improvements with the ALTERA[®] group at final follow-up:









RESULTS

- Anterior disc height improved significantly from baseline compared to the static spacer group at 6 weeks, 3 and 6 months, and final follow-up by averages of 2.6mm (79%), 2.8mm (92%), 3.4mm (105%), and 3.8mm (139%), respectively (P<0.05).
- Mean posterior disc height increased significantly compared to the static group by 1.2mm (65%) and 1.7mm (104%) at 6 months and final follow-up, respectively (P<0.05).
- Neuroforaminal height from baseline to final follow-up improved by 4.0mm compared to static spacers (P<0.05).
- Lumbar lordosis from baseline to 3 and 6 months improved significantly, by 4.4° and 4.0°, respectively (P<0.05), compared to the static spacer group.

CONCLUSION: In this study, MIS TLIF with the ALTERA[®] Articulating Expandable TLIF Spacer provided significant restoration and maintenance of disc height, neuroforaminal height, and lordosis compared to static spacers.



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