



Comparison of Clinical and Radiographic Outcomes in Patients Recieving Single-Level Transforminal Lumbar Interbody Fusion (TLIF) with Removal of Unilateral or Bilateral Facet Joints

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Learning Objectives

By the conclusion of this session, participants should be able to:

- 1) Describe the perceived sagittal balance benefits of performing a bilateral facetectomy during TLIF.
- 2) Discuss, in small groups, how bilateral facetectomy may lead to greater clinical outcomes compared to unilateral facetectomy during TLIF.
- 3) Recognize the differences in clinical, radiographic, and surgical outcomes when comparing unilateral facetectomy versus bilateral facetectomy during TLIF.

Methods

The electronic medical records of 107 patients who underwent single-level TLIF with either a unilateral (UF, n=63) or bilateral facetectomy (BF, n=44) were retrospectively reviewed. Patient demographic information and perioperative outcomes were collected. Clinical outcomes were measured through Patient Health Questionnaire-9 (PHQ-9), Pain Disability

Results

All radiographic parameters showed no significant differences between the UF and BF cohorts at 1 year. While segmental lordosis increased significantly in both cohorts, there was no significant difference in the increase of segmental lordosis between the two cohorts at 1 year. Furthermore, lumbar lordosis did not increase significantly in either cohort. Perioperative complications were also similar between cohorts. EQ-5D, PDQ, and PHQ-9 scores significantly improved in both cohorts 1 year postoperatively. The PDQ score improved over the minimally clinical important difference (MCID) of 26 in only the BF cohort. A larger increase in PDQ scores following fusion in the BF cohort compared to UF cohort neared significance (-24.2± 28.9 vs. -33.4±29.8, respectively; p =0.07). There were no significant differences in other QOL measures between cohorts 1 year following operation.

Conclusions

The findings in the present study demonstrate that bilateral facetectomy during single-level TLIF may improve clinical outcomes to a greater degree compared to unilateral facetectomy without any significant differences in perioperative complications nor

Introduction

Bilateral facetectomy during transforaminal lumbar interbody fusion (TLIF) is a surgical technique utilized with the intent of creating a greater degree of segmental lordosis compared to unilateral facetectomy. However, the sagittal balance and clinical benefits of both techniques have not been well compared in the literature. We seek to determine whether a clinical and radiographic difference exists between bilateral versus unilateral facetectomy during TLIF.

References