

Minimally Invasive Instrumented Transforaminal Lumbar Interbody Fusion (Mini-TLIF) with Unilateral Laminectomy for Bilateral Decompression (ULBD) of Lumbar Degenerative Spondylolisthesis: Technical

Note and Preliminary Report on 44 Cases

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Introduction

To assess the efficacy of a surgical technique that is a minimally invasive instrumented transforaminal lumbar interbody fusion (mini-TLIF) with unilateral laminectomy bilateral decompression (ULBD) for lumbar degenerative spondylolisthesis.

Methods

We present a retrospective clinical study analysis of 44 patients with lumbar degenerative spondylolisthesis with central and bilateral lateral recess stenosis in a period between January 2011 and May 2012. Patients underwent unilateral mini-TLIF and ULBD followed by percutaneous pedicle screw fixation. The clinical, radiological data and operative data were collected and analyzed.

Conclusions

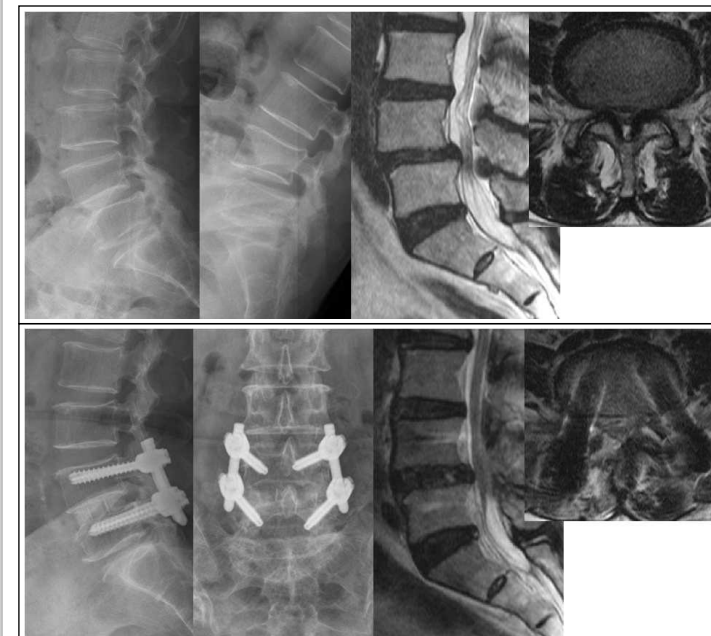
Instrumented mini-TLIF followed by percutaneous pedicle screw fixation is a safe, effective, and minimally invasive surgical technique for treating degenerative spondylolisthesis with central and bilateral lateral recess stenosis. Combined with contralateral decompression by undercutting the spinous process and lamina, it can allow direct posterior decompression on both sides. It has an advantage over open/bilateral TLIF or posterior lumbar interbody fusion (PLIF) in that it minimizes muscle dissection and scarring and also achieves all the surgical goals of the open procedure.

Learning Objectives

To present the effectiveness of TLIF combined with UBLD for central and bilateral lateral recess decompression with minimizing paraspinal muscle injury.

Results

The average follow-up period was 7.2 months. The visual analogue scale for back and leg pain and the Oswestry disability index, which recorded a preoperative mean of 7.5, 6.2, and 58.3% and a postoperative mean of 2.4, 2.1, and 14.5%, respectively, showed statistically significant improvement at the time of last follow-up evaluation. Mean operative time was 142.1minutes and estimated bleeding was 136.4cc. In terms of perioperative complications, there was 1 case of



Case presentation : Mini-TLIF with ULBD for Grade 1 degenerative spondylolisthesis at L4-5 level