Bilateral tubular minimally invasive approach for decompression, reduction and fixation in lumbosacral lythic spondylolisthesis

GIUSEPPE M.V. BARBAGALLO, M.D., FRANCESCO CERTO, M.D., GIOVANNI SCIACCA, M.D., AND VINCENZO ALBANESE, M.D.

Neurosurgery Department, Policlinico "G. Rodolico" University Hospital, Catania, Italy

This video demonstrates the minimally invasive surgical technique used in a 56-year-old woman suffering from L-5 spondylolysis and grade 2 L5–S1 spondylolisthesis. The first author used expandable tubular retractors bilaterally to perform neural decompression, mini-open TLIF, spondylolysthesis reduction and L5–S1 pedicle screw fixation. L-5 cement augmentation was performed through cannulated and fenestrated screws to enhance resistance to screw pull-out secondary to reduction maneuvers.

Sequential surgical steps related to microsurgery, spondylolysthesis reduction and instrumentation are shown and commented.

We submit that in cases of lythic spondylolisthesis a bilateral traversing and exiting nerve roots decompression is a safer option prior to performing the deformity reduction and fixation; the proposed minimally invasive technique may help in reducing surgical morbidity and improving postoperative recovery.

The video can be found here: <http://youtu.be/G4Qdg-A-Y3M>.

(<http://thejns.org/doi/abs/10.3171/2013.V2.FOCUS13196>)

KEY WORDS • double tubular retractor • lythic spondylolisthesis • mini-TLIF • percutaneous screw fixation • spondylolysis • video

Manuscript submitted April 29, 2013.

Accepted May 30, 2013.

Please include this information when citing this paper: DOI: 10.3171/2013.V2.FOCUS13196.

Address correspondence to: Giuseppe M.V. Barbagallo, M.D., Viale XX Settembre 45, 95129 Catania, Italy. email: giuseppebarbagallo@hotmail.com.