Minimally invasive unilateral approach for bilateral decompression of spinal stenosis and modified transforaminal lumbar interbody fusion for degenerative spondylolisthesis

KEVIN S. CHEN, M.D., KHOI D. THAN, M.D., FRANK LA MARCA, M.D., AND PAUL PARK, M.D.

Department of Neurosurgery, University of Michigan, Ann Arbor, Michigan

This video describes a minimally invasive approach for treatment of symptomatic grade I spondylolisthesis and high-grade spinal stenosis. In this procedure, a unilateral approach for bilateral decompression is utilized in conjunction with a modified transforaminal lumbar interbody fusion and percutaneous pedicle screw fixation. The key steps in the procedure are outlined, and include positioning, fluoroscopic positioning/guidance, exposure with tubular retractor system, technique for ipsilateral and contra-lateral decompression, disc space preparation and interbody grafting, percutaneous pedicle screw and rod placement, and closure.

The video can be found here: http://youtu.be/QTymO4Cu4B0.
(http://thejns.org/doi/abs/10.3171/2013.V2.FOCUS13190)

Key Words • minimally invasive • spinal stenosis • transforaminal lumbar interbody fusion • spondylolisthesis • percutaneous pedicle screw placement • video