

Clinical Application of PSLD (Percutaneous Stenoscopic Lumbar Decompression) in Degenerative Lumbar Spine Diseases

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Introduction

Lumbar spinal stenosis is an anatomical changes in which narrowing of the spinal canal, lateral recess,and intervertebral foramen can causes specific symptoms of the back and lower leg. Patients suffering from symptomatic lumbar stenosis has relied on several ways, medication, pain management or open surgery depending on its severity. Percutaneous stenoscopic lumbar decompression (PSLD) is a new technique for the decompression of the spinal canal, lateral recess, and foramen via a translaminar,unilateral approach. The Stenoscopy,optimized endoscopic system for lumbar stenosis is fitted surgeon to perform laminectomy, flavectomy, foraminotomy, diskectomy and is designed to offer easy handling the unilateral approach,bilateral decompression with 8.4mm outer diameter, 5.7mm working channel, and 12degree field of view.

Methods

The study was conducted from April 2016 to January 2017. We reviewed 250 patients treated surgically with PSLD after epidural anesthesia including 132 males and 118 females. Radiological change between pre and postoperatively were assessed using magnetic resonance imaging to compare pre and postoperative change of spinal canal volume in decompressed segment. Clinical outcomes were assessed using Visual Analogue Scale score and Oswestry Disability Index, operation time, duration of hospital stay.

Results

: Postoperative MRI shows less soft tissue damage compared to a conventional open decompression in all cases, and a significant increase of spinal canal volume,more than 90% with removal of pathologic thick ligament flavum. The mean improvements of pain score and functional improvement were 4.0 and 52%. Mean operating time was 52 minutes for bilateral decompression and mean hospital stay was 1.2 days.

Conclusions

Decompression of spinal canal with PSLD shows significant increase the spinal canal volume in decompressed segment. The local anesthesia, less damage of normal anatomical structures, short hospitalization are the main advantages of this new method. PSLD could be a feasible replacement for open decompressive surgery in symptomatic lumbar stenosis.

Learning Objectives

The goal of this article is to evaluate the efficacy of endoscopic decompression of spinal stenosis in symptomatic patient

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