

FULL-ENDOSCOPIC TRANSFORAMINAL DECOMPRESSION WITH MODIFIED REAMING TECHNIQUE ON LATERAL RECESS STENOSIS - OUTCOMES OF 155 CASES AND FIVE YEARS' EXPERIENCE: A CASE SERIES STUDY

Yu-Hsuan Chung, Ming-Hsien Hu

Department of Orthopaedics, Show Chwan Memorial Hospital, Changhua, Taiwan

Background:

Lateral recess stenosis (LRS) is a degenerative condition which is caused by bulging disc, hyperplasia of superior articular process and hypertrophy of ligament flavum. The advancement of transforaminal endoscopic lumbar approaches provides effective treatment not only for migrated herniation but also for stenosis.

Objectives:

We outlined a modified non-sequential foraminoplasty technique utilising a trephine and conducted a comprehensive review of our cases to demonstrate safety and efficacy of the procedure.

Materials and methods:

Patients with lumbar radiculopathy refractory to conservative treatment, diagnosed with Magnetic Resonance Imaging (MRI) and diagnostic root blocks, and underwent full endoscopic transforaminal decompression with the modified non-sequential foraminoplasty technique between April 2017 to September 2022 were included. Those with multiple level stenosis, previous surgery at the same level, unstable spondylolisthesis, lumbar herniated disc without stenosis, infection, fracture, or tumour were excluded. The study recorded the Visual Analogue Scale (VAS), Oswestry Disability Index (ODI), Modified Macnab criteria, as well as intra- and post-operative complications.

Results:

155 patients were included in the study. Clinical and post-operative outcomes revealed significantly lower back and leg visual analogue scale scores, as well as Oswestry Disability Index scores at various post-operative time points compared to pre-operative values ($P < 0.01$). At the final follow-up, the modified MacNab criteria were rated as follows: excellent in 65 patients (41.9%), good in 60 patients (38.7%), fair in 2 patients (1.2%), and poor in 28 patients (18.0%).

Conclusions:

Full endoscopic transforaminal decompression using modified non-sequential foraminoplasty technique is an effective and safe treatment for lumbar lateral recess stenosis.