

Transforaminal endoscopic approach “effective” in treating most common causes of failed back surgery syndrome

New research shows that endoscopic transforaminal decompression is a minimally invasive surgical technique that produces good results and does not “burn bridges” for a more conventional decompression/fusion approach

“Endoscopic foraminal decompression will add to the surgical armamentarium of minimally invasive spine surgery and the treatment of failed back surgery syndrome,” said Anthony Yeung, Desert Institute for Spine Care, Phoenix, United States.

Yeung told delegates at the ISSAS annual meeting that failed back surgery syndrome due to recurrent herniation and foraminal stenosis post-laminectomy/decompression is commonly seen in spine care. “Although conventional surgery for recurrent herniated nucleus pulposus is nearly as successful as the index

procedure, it is a challenge to both surgeon and patient to consider repeat surgery from the same surgical approach. When there is lateral stenosis and extraforaminal herniated nucleus pulposus, especially at L5-S1, many patients require decompression and fusion as a ‘salvage procedure,’” he said.

Yeung et al carried out a prospective collection of outcome data in patients with failed back surgery syndrome due to recurrent lumbar disc herniation and/or foraminal stenosis. These were reviewed and analysed by an independent reviewer. All surgeries were by a transforaminal endoscopic approach for

discectomy and foraminal decompression by four surgeons in a single spine group and in an outpatient setting.

“The prospective outcome data which we collected included Visual Analogue Scale (VAS), Oswestry Disability Index (ODI), and SF-12. The data were collected and recorded at the initial office visit, pre-operative and postoperative visits, follow-up visits, and final follow up before discharge. “A final clinical rating using modified MacNab criteria by the reviewer summarised the outcome,” Yeung said.

He emphasised that the chosen method of surgery was a shared decision



Anthony Yeung

between patient and surgeon. “All procedures were performed at an ambulatory surgical centre and all patients were discharged to home the same day,” he said.

The average follow-up period was, minimum 12 months, average 30 months. Levels involved were L2-3 (n=6), L3-4 (n=6), L4-5 (n=14), L5-S1 (n=11). 24 patients

VAS score was 6.2, and ODI 43%. Endoscopic decompression provided improvement of 4.4 and 33% respectively.

Complications

Complications on the foraminal approach resulted in dysesthesia in four patients within the two week post-operative period. Yeung stated that dysesthesia resolved spon-

decompression and fusion as the alternative for their failed back surgery syndrome,” said Yeung.

Yeung said, “The transforaminal endoscopic approach is ideal for failed back surgery syndrome due to recurrent herniated nucleus pulposus and lateral stenosis. Residual axial back pain from non-discogenic axial may need further work-up

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“It is important to note that all patients were satisfied with their initial decision to avoid ‘open’ surgery, as most were otherwise candidates for decompression and fusion as the alternative for their failed back surgery syndrome,” said Yeung.

had surgery at one level, five patients had surgery at two levels and one patient had surgery at three levels. The endoscopic decompression technique combined foraminal “selective” discectomy with foraminoplasty, decompressing the lateral recess by ventral facet soft tissue and bone resection. Intra-operative chromodiscography was used to outline the foraminal disc protrusion/extrusion.

Results

In the 30 cases of recurrent disc herniation and foraminal stenosis, the average pre-operative

taneously in the three mild cases within two months with transforaminal epidural and sympathetic blocks. One case of moderate/severe dysesthesia took four months for significant improvement and eventual resolution. Three out of 30 (10%) were considered cases of clinical failure when additional surgery (fusion) was recommended when back pain in the post-operative period was unacceptable to the patient.

“It is important to note that all patients were satisfied with their initial decision to avoid ‘open’ surgery, as most were otherwise candidates for

to consider dorsal endoscopic rhizotomy versus the standard decompression and fusion.”

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