

# Posterior cervical foraminotomy

see also Posterior full-endoscopic cervical foraminotomy

- Endoscopic Posterior Cervical Foraminotomy and Discectomy
- Clinical Outcome and Our Experience of 33 Consecutive Cases Treated With Cervical Microendoscopic Laminoplasty in a Single Clinic
- Comparative Study on Clinical Outcomes of Posterior Endoscopic Cervical Foraminotomy under Local Anesthesia with Conscious Sedation and General Anesthesia
- Posterior Cervical Foraminotomy Using Preoperative MRI Combined with Intraoperative Real-time Ultrasonography: Technical Note and Initial Experience
- Posterior Full-Endoscopic Cervical Foraminotomy and Discectomy: Surgical Techniques and Review of Outcomes
- Development and validation of a cost-effective three-dimensional-printed cervical spine model for endoscopic posterior cervical foraminotomy training: a prospective educational study from Turkey
- Trends in Cervical Spine Surgery in the United States: A National Database Analysis
- Reoperation Strategy for Failure of Cervical Disc Arthroplasty at Index and Adjacent Levels

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Short-term neck pain after posterior cervical foraminotomy (posterior surgery) compared with anterior cervical discectomy and fusion (anterior surgery) treating cervical radiculopathy has only been assessed once, retrospectively, to our knowledge. The aim of this study was to prospectively evaluate the course of neck pain for 6 weeks after both treatments.

Methods: This is a secondary analysis of the multicenter Foraminotomy ACDF Cost-Effectiveness Trial (FACET), conducted from January 2016 to May 2020. Of 389 patients who had single-level, 1-sided cervical radiculopathy and were screened for eligibility, 265 were randomly assigned to undergo posterior surgery ( $n = 132$ ) or anterior surgery ( $n = 133$ ). The primary outcome of the present analysis was neck pain, assessed weekly for 6 weeks using the visual analog scale (VAS), on a scale of 0 to 100. The secondary outcomes were arm pain, neck disability, work ability, quality of life, treatment satisfaction, motor and sensory changes, and hospital length of stay. Data were analyzed with mixed model analysis in intention-to-treat samples using 2-sided 95% confidence intervals (CIs).

Results: In the first postoperative week, the mean VAS for neck pain was 56.2 mm (95% CI, 51.7 to 60.8 mm) after posterior surgery and 46.7 mm (95% CI, 42.2 to 51.2 mm) after anterior surgery. The mean between-group difference was 9.5 mm (95% CI, 3.3 to 15.7 mm), which gradually decreased to 2.3 mm (95% CI, -3.6 to 8.1 mm) at postoperative week 6. As of postoperative week 5, there was no significant difference between groups. Responder analyses confirmed this result. Secondary outcomes showed small differences between groups.

Conclusions: Insight into the course of neck pain during the first 6 weeks after posterior compared with anterior surgery is provided. Despite initially more neck pain after posterior surgery, patients swiftly improved and, as of postoperative week 5, results similar to those after anterior surgery were observed. Our findings should enable improved patient counseling and enhanced shared decision-making between physicians and patients with cervical radiculopathy, where more neck pain in the first postoperative weeks should be balanced against the benefits of posterior surgery <sup>1)</sup>.

Saadeh et al., provided a step-by-step technique guide for performing an open posterior cervical foraminotomy on a 33-yr-old male with a history of left-sided pain radiating down the medial aspect of his left arm and left triceps weakness. Magnetic resonance imaging demonstrated a left-sided C6-7 disc herniation causing foraminal stenosis. Guidance on positioning, relevant anatomy, and appropriately planning the extent of bony decompression is also provided in a video. The patient, who consented to the recording of this surgical video, tolerated the procedure without complication, and upon follow-up had a significant improvement in his symptoms <sup>2)</sup>.

## Videos

<html><iframe width="560" height="315" src="https://www.youtube.com/embed/NTTiQ-nDwKo" frameborder="0" allowfullscreen></iframe></html>

## Case series

see [Posterior cervical foraminotomy case series](#).

<sup>1)</sup>

Simões de Souza NF, Broekema AEH, Soer R, Reneman MF, Groen RJM, van Dijk JMC, Tamási K, Kuijlen JMA; FACET Investigators. Short-Term Neck Pain After Posterior Foraminotomy Compared with Anterior Discectomy with Fusion for Cervical Foraminal Radiculopathy: A Secondary Analysis of the FACET Randomized Controlled Trial. *J Bone Joint Surg Am.* 2023 Mar 23. doi: 10.2106/JBJS.22.01211. Epub ahead of print. PMID: 36952440.

<sup>2)</sup>

Saadeh YS, Sabbagh MA, Smith BW, Joseph JR, Buckingham MJ. Technique for Open Posterior Cervical Foraminotomy: 2-Dimensional Operative Video. *Oper Neurosurg (Hagerstown).* 2019 Jun 19. pii: opz159. doi: 10.1093/ons/opz159. [Epub ahead of print] PubMed PMID: 31214699.

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Last update: **2024/06/07 02:58**