

Lumbar Foraminal Stenosis Diagnosis

- An optimal disc height changes for successful indirect decompression with OLIF
- A novel deep learning system for automated diagnosis and grading of lumbar spinal stenosis based on spine MRI: model development and validation
- Non-Hodgkin's lymphoma presenting with lower extremity edema and radiculopathy in a post-kidney transplant patient: A case report
- Diagnostic performance of lumbar spine CT using deep learning denoising to evaluate disc herniation and spinal stenosis
- Clinical efficacy of robot-assisted single-position OLIF with lateral plate combined with posterior unilateral fixation for single-segment lumbar spinal stenosis
- Comparison of the early and medium term efficacy of oblique lateral interbody fusion combined lateral fixation and transforaminal lumbar interbody fusion in lumbar spinal stenosis
- Y-Style Unilateral Biportal Endoscopic Far-Lateral Approach for L5/S1 Foraminal Stenosis
- Oblique lateral interbody fusion with O-arm navigation for lumbar hemivertebra in an adult: A technical case report

Spine surgeons may overlook the pathology of [lumbar foraminal stenosis](#), particularly in patients with bilateral [radiculopathy](#). Familiarity with the clinical and radiological features of symptomatic [lumbar foraminal stenosis](#) is necessary to properly diagnose bilateral foraminal stenosis at L5-S1 level ¹⁾.

Radiological diagnosis is performed using multiple radiological modalities, such as [lumbar spine magnetic resonance imaging](#), including plain examination, and novel protocols such as diffusion tensor imaging, as well as dynamic X-ray, and computed tomography. Electrophysiological testing can also aid in diagnosis.

Imaging modality of choice

MRI is considered the imaging modality of choice to visualize and evaluate lumbar foraminal stenosis ^{2) 3)}.

The preoperative identification of lumbar [foraminal stenosis](#) (LSFS) is important because a lack of recognition of this clinical entity is often associated with [failed back surgery syndrome](#).

Ohba et al., demonstrates combination of conventional imaging techniques, to improve the detection of symptomatic foraminal stenosis.

Measurement of the foraminal width and height on CT imaging of the diseased side was significantly less than that on the intact side in the LSFS group. The grading scale for facet joint arthritis on the diseased side was significantly higher than that on the intact side in the LSFS group. The prevalence of the vacuum phenomenon and stage of intervertebral disk (IVD) pathology were higher in the L5-S1 spine of the LSFS group (95.2%) compared with the lumbar spinal canal stenosis (LCS) group (21.1%).

MRI study revealed that the prevalence of Type 3 Modic changes was significantly higher in the LSFS group (39.3%) compared with the LCS group (7.7%) ⁴⁾.

MRI

Lumbar Foraminal Stenosis Magnetic resonance imaging

¹⁾

Takahashi K, Yadav AK, Hashimoto K, Tsubakino T, Aizawa T, Tanaka Y. Foraminal Stenosis at L5-S1 as an Overlooked Pathology of Bilateral Radiculopathy: A Case Series. J Orthop Case Rep. 2022 Jun;12(6):13-18. doi: 10.13107/jocr.2022.v12.i06.2846. PMID: 37065529; PMCID: PMC10092388.

²⁾

Lee S, Lee JW, Yeom JS, Kim KJ, Kim HJ, Chung SK, Kang HS. A practical MRI grading system for lumbar foraminal stenosis. AJR Am J Roentgenol. 2010 Apr;194(4):1095-8. doi: 10.2214/AJR.09.2772. PMID: 20308517.

³⁾

Park HJ, Kim SS, Lee SY, Park NH, Rho MH, Hong HP, Kwag HJ, Kook SH, Choi SH. Clinical correlation of a new MR imaging method for assessing lumbar foraminal stenosis. AJNR Am J Neuroradiol. 2012 May;33(5):818-22. doi: 10.3174/ajnr.A2870. Epub 2012 Jan 12. PMID: 22241383; PMCID: PMC7968829.

⁴⁾

Ohba T, Ebata S, Fujita K, Sato H, Devin CJ, Haro H. Characterization of symptomatic lumbar foraminal stenosis by conventional imaging. Eur Spine J. 2015 Oct;24(10):2269-75. doi: 10.1007/s00586-015-3859-4. PubMed PMID: 25772088.

From:
<https://neurosurgerywiki.com/wiki/> - **Neurosurgery Wiki**

Permanent link:
https://neurosurgerywiki.com/wiki/doku.php?id=lumbar_foraminal_stenosis_diagnosis

Last update: **2024/06/07 02:56**

