

Treatment of lumbar radiculopathy pain with saline plus lidocaine epidural injection in steroid contraindicated patients

*Keshin Purohit MD, David Ho DO, Richard Catabona DO, Edward Chang DO, Edward Barawid DO
UC Irvine Department of PM&R*

INTRO

Lumbosacral radiculopathy (LR) is a common etiology of acute and chronic low back pain that affects between 3% to 5% of men and women, respectively.¹ In patients with more severe symptoms, epidural steroid injection (ESI) is an effective and well-tolerated intervention for the treatment of neuropathic radicular pain. However, in patients with comorbidities such as uncontrolled diabetes, hypertension, immunodeficiency, osteoporosis, and glaucoma, steroid use is often contraindicated.² We present two cases of LR that were successfully treated via transforaminal epidural injection in steroid-contraindicated patients.

CASE #1

- 55-year-old male with history of lumbar stenosis (status-post surgical decompression) and diabetes (hemoglobin A1c 8.6%) presented with low back pain radiating to the left ankle.
- Imaging revealed a disc bulge with severe spinal canal stenosis and mass effect on bilateral L4-L5 traversing nerve roots.
- The patient underwent a transforaminal epidural injection with 2 mL of 1% lidocaine in normal saline.
- At 1 week follow-up, he reported 70-80% pain relief. Over the next 6 weeks, the patient was able to improve his glycemic control and returned to clinic for an epidural steroid injection.

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EPIDURAL STEROID INJECTIONS ARE CONTRAINDICATED IN VARIOUS MEDICAL CONDITIONS. IN THIS SUBSET OF PATIENTS, SALINE WITH LOCAL ANESTHETIC IS A PROMISING ALTERNATIVE INJECTATE THAT CAN PROVIDE LASTING PAIN RELIEF IN THE SETTING OF LUMBAR RADICULOPATHY.

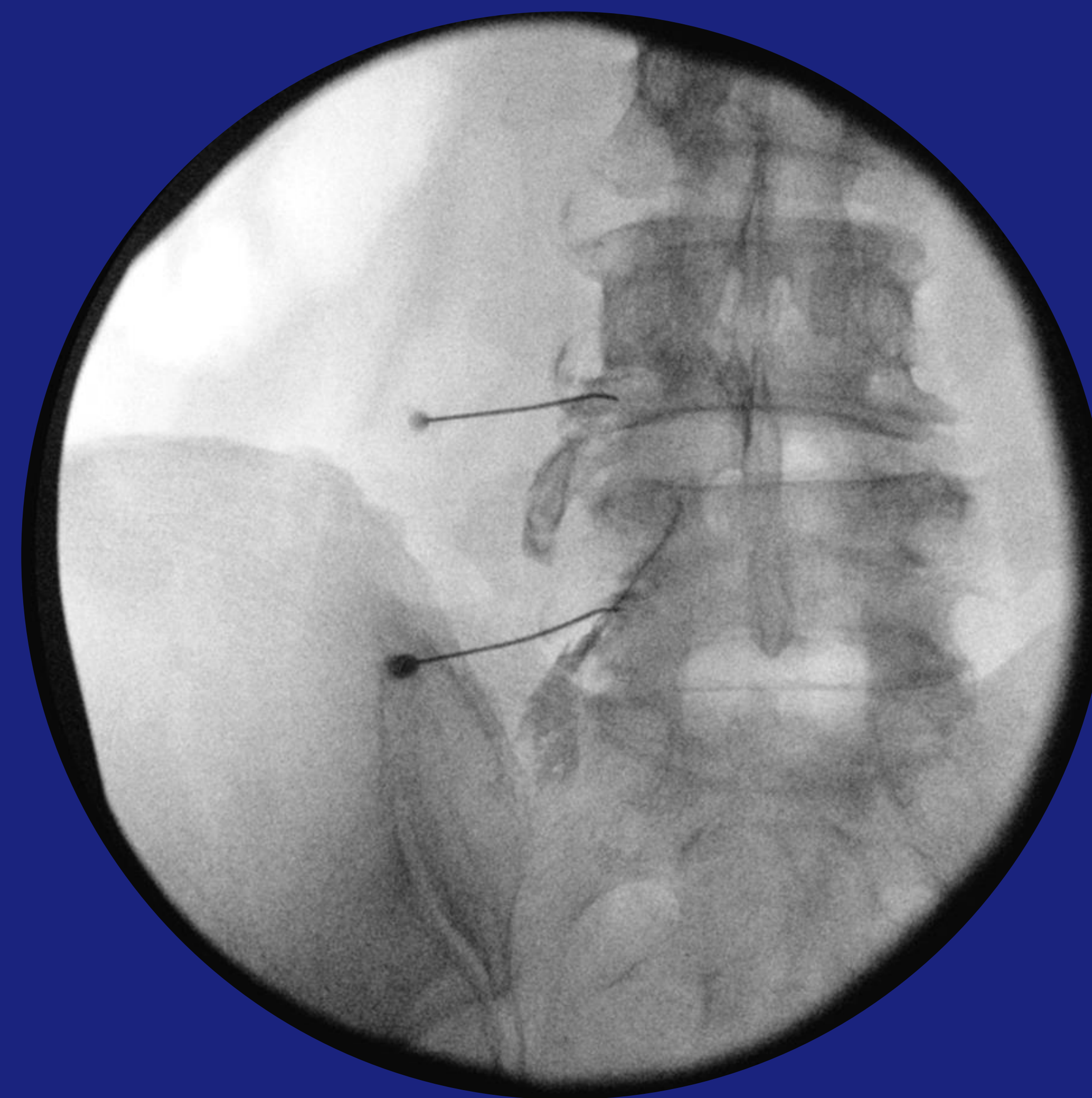


Figure 1: Fluoroscopy showing needle placements for L4/5 and L5/S1 transforaminal epidural injections

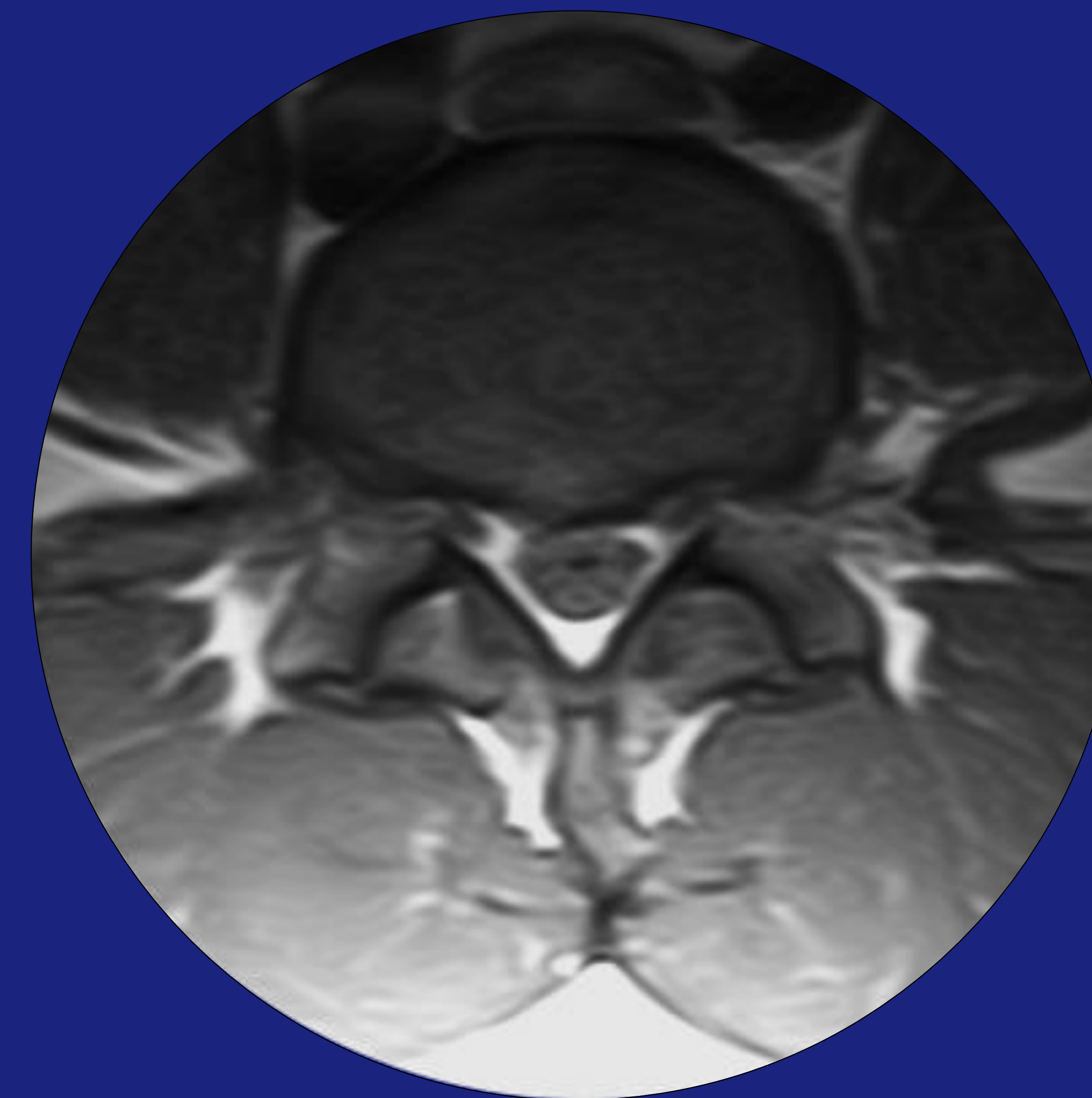


Figure 2: Lumbar MRI showing foraminal stenosis affecting the traversing nerve root

CASE #2

- 65-year-old male with history of diabetes (hemoglobin A1c 9.3%) presented with low back pain radiating to his left leg.
- Imaging revealed disc protrusion with high-grade left L4-L5 and bilateral L5-S1 neural foraminal stenosis.
- The patient underwent a multilevel transforaminal epidural injection with 2 mL of 1% lidocaine in normal saline.
- At follow-up visit, he reported 70% pain relief which lasted for up to 5 months.

DISCUSSION

- Lumbar radiculopathy pain refractory to conservative measures (physical therapy, medications, other modalities) is frequently targeted with fluoroscopy-guided epidural steroid injections. However, these interventional spine treatment options are limited in a large subset of patients who have contraindications to steroid use. Lidocaine is known as a fast-acting local anesthetic that may have relieved radiculopathy pain in our patients through the dilution of proinflammatory agents and processes.³
- Although this injectate solution lacks the anti-inflammatory properties that are present in steroids, a prior meta-analysis study revealed that lidocaine alone or with steroids were effective in alleviating pain in patients with lumbar radiculopathy and spinal stenosis.⁴
- Saline with anesthetic epidural injections may be a promising alternative to treat lumbar radiculopathy pain in patients who are not eligible for corticosteroid injections.

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Contact: purohitk@hs.uci.edu