

# Epidural Lipomatosis as the Cause of Refractory Radiating Low-Back Pain: A Case Report

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FIGURE 1



**Figure 1:** MRI of the lumbar spine, sagittal view  
**Figure 2:** MRI of the lumbar spine, axial view  
**Figure 3:** MRI of the lumbar spine, axial view

Multilevel spinal stenosis of varying degrees secondary to epidural lipomatosis

## CASE DIAGNOSIS

Epidural lipomatosis as the cause of refractory low-back pain with radiation in a 68-year-old male.

## CASE DESCRIPTION

A 68-year-old male with a past medical history of obesity presented to an outpatient clinic with progressive low back pain that radiated down the right posterolateral thigh. His pain was rated 10/10 and was exacerbated with physical activity. MRI of the lumbar spine revealed epidural lipomatosis contributing to severe neuroforaminal stenosis and multilevel spinal canal stenosis. The patient failed conservative management, including physical therapy, Neurontin, oral steroids, ice, heat, and electrical stimulation. He was referred to neurosurgery and the decision was made to proceed with multi-level decompressive laminectomies and bilateral foraminotomies with epidural lipomatosis resection. Post-operatively, the patient had impairments with activity tolerance, strength, and pain, resulting in functional deficits with activities of daily living. He was subsequently admitted to a comprehensive inpatient rehabilitation program where he regained significant function and was discharged home independently.

## DISCUSSION

Epidural lipomatosis remains a rare disease that may lead to spinal cord compression. Patients with epidural lipomatosis may be asymptomatic, but often present with back pain and manifestations of spinal cord compression. Males are affected more than females, and the thoracic spine is the spinal segment most often involved. Common causes include central obesity, exogenous glucocorticoid exposure, and Cushing disorder. MRI is the standard diagnostic imaging modality. Treatment may include conservative management, but surgical intervention is often necessary if more severe neurologic deficits are present.

## CONCLUSIONS

Epidural lipomatosis is a condition described by excess fat accumulation in the epidural space. Patients with epidural lipomatosis may be asymptomatic, but often experience varying degrees of neurologic deficits secondary to spinal cord compression. While it remains a rare phenomenon, it should not be overlooked, especially in patients with a history of exogenous steroid use, obesity, or other metabolic disorders.

## REFERENCES

1. Kim K, Mendelis J, Cho W. Spinal Epidural Lipomatosis: A Review of Pathogenesis, Characteristics, Clinical Presentation, and Management. *Global Spine J.* 2019 Sep;9(6):658-665. doi: 10.1177/2192568218793617. Epub 2018 Aug 13. PMID: 31448201; PMCID: PMC6693071.

FIGURE 2



FIGURE 3

