Interbody Fusion without Direct Decompression as a Novel Treatment for Recurrent Radicular Pain Due to Epidural Fibrosis

Timothy J. Yee, Kevin Swong, Jay Nathan, Michael Strong, Mark E. Oppenlander
No disclosures.
Introduction

• Up to 28% of patients suffer from residual or recurrent radiculopathy after lumbar discectomy

• Postoperative radiculopathy may be due to epidural fibrosis, nerve root tethering, and micro-instability

• Management is typically conservative due to the risks of navigating scar during re-exploration; however, symptoms are often recalcitrant
Methods

• Case series of two patients with previous lumbar laminectomy and discectomy who presented with recurrent painful radiculopathy refractory to conservative strategies
• Gadolinium-enhanced T1 MRI showed homogeneous enhancement at the index level consistent with epidural fibrosis
• Both patients underwent lateral interbody fusion without direct decompression at the index level
Results

• Both patients noted immediate pain resolution postoperatively
• MRI at 1 month postoperatively demonstrated intact hardware, stable alignment, and reduction in epidural contrast enhancement
• Pain relief remained durable through 1-year follow-up
Discussion and Conclusions

• Degree of epidural fibrosis after lumbar discectomy has been correlated with postoperative pain and inconsistently associated with postoperative instability
• Posterior re-exploration is infrequently employed for management of epidural fibrosis due to the risks of nerve injury and CSF leak
• Lateral interbody fusion without direct decompression in our case series was associated with immediate and durable pain relief through 1 year of follow-up
• Advantages of the lateral approach include avoidance of traversing known scar and the ability to place large lordotic cages to eliminate micromotion and the associated traction on nerve roots