

MRI of the Lumbar Spine

CLINICAL HISTORY: 50-year-old female with lumbar radiculopathy.

TECHNIQUE: Multiplanar, multisequence fat and water weighted images of the lumbar spine were performed.

COMPARISON: No previous study is available for comparison at this time.

FINDINGS: Mildly exaggerated lumbar lordosis is observed in the position of the examination. There is mild L2-L3 degenerative listhesis. Discopathy is noted at each level from L2-L3 through L5-S1 including vacuum disc phenomenon at L5-S1 as will be further elaborated below. The conus medullaris terminates at L1-L2 with expected morphology and signal characteristics. No acute vertebral body fracture, infiltrative process, paravertebral mass, or marked spondylolisthesis. There is slight anterior marginal osteophyte formation. At L5-S1 is type I endplate spondylosis.

Intervertebral disc levels:

T11-T12: Concentric disc bulging is associated with mild disc desiccation and marginal osteophyte formation.

T12-L1, L1-L2: Normal disc height, morphology and signal intensity without disc herniation, central canal or foraminal stenosis.

L2-L3: Mild degenerative retrolisthesis and minimal disc desiccation are identified. A right posterolateral and preforaminal 12 mm transverse dimension x 4-5 mm AP disc herniation with underlying spondylotic spurring produces minimal rightward thecal sac distortion, preforaminal and proximal neural foraminal narrowing that may affect the exiting right L2 nerve root in the appropriate clinical setting. The left neural foramen is widely patent. There is mild central disc bulging and spondylotic spurring.

L3-L4: Mild degenerative retrolisthesis with a concentric non-compressive disc bulging. There is minimal facet arthrosis and there are small facet joint effusions. No central canal stenosis.

L4-L5: Normal disc height and minimal loss of hydration. A concentric disc bulge is identified and a shallow left far lateral disc protrusion without radicular impingement, central canal or foraminal stenosis. Small facet joint effusions and slight facet arthrosis are identified.

L5-S1: Mild disc desiccation is identified without a disc extrusion. There is type I endplate spondylosis. A right far lateral and preforaminal chronic disc herniation and mixed spondylotic protrusion produce mild preforaminal and right neural foraminal narrowing. On the left is a very shallow mixed spondylotic protrusion and/or spondylotic spurring producing mild left neural foraminal encroachment.

IMPRESSION (MRI OF THE LUMBAR SPINE):

1. Moderate L2-L3 through L5-S1 discopathy as described in a level-by-level basis above.
2. At L2-L3 is a right posterolateral to far lateral neural foraminal disc herniation with spondylotic spurring which may produce multifactorial exiting L2 impingement in the appropriate clinical setting. There is no limiting central canal stenosis.
3. At L3-L4 and L4-L5 are concentric disc bulges.
4. At L4-L5 is also a left far lateral neural foraminal shallow disc herniation or disc protrusion without radicular impingement in the supine position of the examination.
5. At L5-S1 at which there is vacuum disc phenomenon and moderate disc desiccation is chronic discopathy that includes a small disc herniation and spondylotic spurring producing mild right neural foraminal narrowing and milder discopathy at the left neural foramen. Possible exiting right L5 radicular impingement. No central canal stenosis at this or any other level.
6. No fracture, infiltrative process, paravertebral mass, or severe spondylolisthesis.