Professional Imaging Consultants, Inc.

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Patient Name: SAMPLE MRI LUMBAR 1, Radiology Report

Referring Dr. / Clinic: Mark Johnson, DC Date of Study: August 07, 2013

MRI OF THE LUMBAR SPINE WITHOUT CONTRAST:

Multiplanar multisequence images were obtained without contrast.

CLINICAL HISTORY: 61 year-old female with history of back pain and right leg pain for 3 weeks. No recent trauma.

COMPARISON STUDIES: No comparison studies available.

VERTEBRAL NUMBERING: Five lumbar segments are identified using the lumbosacral junction as the reference.

ALIGNMENT: Marked reduction of the normal lordotic curvature with mild reversal the lordosis from L1 through L4 with apex at L2-L3. Findings may be associated with muscle spasm and/or joint dysfunction and needs be correlated clinically and compared with weight bearing x-rays. There is also retrolisthesis of L5 by 3 mm which should be compared with weight bearing x-rays rule out translational hypermobility or instability.

OSSEOUS STRUCTURES: Normal vertebral body height. No marrow infiltration or bone destruction. Posterior arches are intact.

CONUS MEDULLARIS/CAUDA EQUINA: Conus is normal in morphology and signal intensity and terminates at the L1 level. Cauda equina has a normal appearance and distribution within the thecal sac.

PARASPINAL SOFT TISSUES:Paraspinal muscle mass is preserved and the muscles have a symmetric appearance. Visualized abdominal and pelvic soft tissues are unremarkable.

- T12-L1 level: Imaging the sagittal plane only. Mild anterior spurring with desiccation and diffuse annular bulging by 1 mm.
- L1-L2: Disc height is maintained and the disc is well-hydrated. No annular bulging, posterior spurring or disc herniation. No appreciable facet arthrosis or ligamentous thickening. Dimensions of the central spinal canal and the lateral recesses are within the normal range. Foramen are patent.
- L2-L3: Disc height is maintained and the disc is well-hydrated. No annular bulging, posterior spurring or disc herniation. No appreciable facet arthrosis or ligamentous thickening. Dimensions of the central spinal canal and the lateral recesses are within the normal range. Foramen are patent.
- L3-4: Mild loss of disc height with diffuse posterior annular bulging by 3 mm compressing the thecal sac and contacting the L4 nerve roots. Complex annular tear extending to the outer fibers posteriorly and centrally including both radial and concentric components. No focal disc herniation but the annular tear involves the innervated zone of the annulus. Mild bilateral facet arthrosis or ligamentous thickening. Combined factors have resulted in mild central stenosis. Mild bilateral foraminal stenosis with the annular bulging contacting both L3 nerves. Clinical correlation regarding L3 radiculopathy is advised.
- L4-5: Mild to moderate loss of disc height with desiccation. Diffuse annular bulging by 2 mm contributing to mild bilateral foraminal stenosis contacting the L4 nerves. In addition, posterior right central extrusion type disc herniation measuring 6 mm AP by 14 mm in width accompanied by caudal right central subligamentous migration of extruded disc material by 8 mm (L5 pedicle level). The extruded disc material occupies the majority of the right lateral recess. Herniation compresses the thecal sac and posteriorly displaces the right L5 nerve root. Findings demonstrated on T2 sagittal 4/13 and T2 axial 20/26 and 21/26 and 22/26. Accompanying annular bulging contacts the left L5 nerve root. Moderate bilateral facet arthrosis at mild ligamentous thickening. Combined factors have resulted in mild to moderate central stenosis (T2 axial 21/26).
- L5-S1: Advanced loss of disc height with desiccation. Retrolisthesis of L5 is again noted by 3 mm. Diffuse posterior disc osteophyte complex by 3 mm, contacting the S1 nerve roots and clinical correlation regarding S1 radiculopathy is advised. The disc osteophyte complex and moderate to advanced bilateral facet arthrosis have resulted in moderate to severe bilateral foraminal stenosis compressing the exiting L5 nerves. Dimensions of the central canal are still within the lower end of the normal range.

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IMPRESSIONS:

- 1. Disc Herniation (Extrusion Type) L4-5 Level: Posterior right central extrusion type disc herniation measuring 6 mm x 14 mm (AP x transverse) with right central caudal subligamentous migration of extruded disc material by 8 mm, too the L5 pedicle level. Herniation compresses the thecal sac and posteriorly displaces the right L5 nerve root and occupies the right lateral recess. Clinical correlation regarding right L5 radiculopathy is advised.
- 2. Central Canal Stenosis: Multilevel acquired central spinal canal stenosis which is mild and L3-L4 and mild and moderate at L4-5.
- 3. Foraminal Stenosis: Multilevel foraminal stenosis which is mild and bilateral at L3-L4 and L4-5 with annular bulging contacting the L3 and L4 nerves. Moderate to severe bilateral foraminal stenosis with compression of both L5 nerves.
- 4. Discogenic Spondylosis: Advanced spondylosis L5-S1 with prominent posterior disc osteophyte complex compressing the S1 nerve root sleeves. Mild/moderate spondylosis L4-5 and mild L3-L4.
- 5. Annular Bulging: Posterior annular bulging L3-L4 and L4-5 by 2 mm to 3 mm compressing the thecal sac and contacting the L4 and L5 nerve roots as described.
- 6. Annular Tear L3-4: Complex annular tear involving the outer most fibers of the L3-L4 disc centrally. Tear is located at the innervated area of the annulus. Annular tears have been documented as potential pain generators (discogenic pain) with or without referral/radiculopathy.
- 7. Abnormal alignment: Generalize reduction of lordosis which could be associated with muscle spasm and/or joint dysfunction. Clinical correlation advised. Retrolisthesis L5 by 3 mm which should be compared with weight bearing x-rays to rule out translational hypermobility or instability.

<u>Electronically signed by Edward J. Dailey, D.C., D.A.C.B.R</u> on August 07, 2013 at 12:20:03 Radiologist Edward J. Dailey, D.C., Diplomate, American Chiropractic Board of Radiology dfr: