



LUMBAR INTERVERTEBRAL DISC SYNDROME L4/5 RIGHT WITH COMPRESSION OF L5 NERVE ROOT AND FOOT DROP

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Case History

Patient initially presented to our office on September 28th 2016 with complaints of lower back pain and radicular component down the leg and into the foot. She also reported that she had been experiencing foot drop in her right leg. Previous workup had included evaluation by her primary healthcare company with the diagnosis of a lumbar strain. She presented as a 61-year-old retired female. She reportedly smoked 1/3 of a pack of cigarettes a day which she had done for the last 30 years and reported social alcohol usage. Her past medical history included motor vehicle accidents back in her 20's that had resolved. She had previously seen another chiropractor and had massage for 2 sessions prior to her presentation to our office. She reported no improvement to date. She did have a history of thyroid disease as well. Her chief complaint was lower back pain with grade 3 radicular pain into the right lower extremity and foot. She reported the onset and mechanism of injury as lifting boxes in her garage approximately 3 weeks prior to her presentation to our office. Her complaints started with lower back pain and over the course of those 3 weeks progressed into a grade 3 radicular component into her right leg. Her immediate symptoms were limited to lower back pain. She did have a prior history of similar complaint and prior treatment but had not ever experienced the radicular component.

Treatment History

Treatment consisted of 2 visits to another chiropractic physician with massage without significant improvement. She was also seen by her primary care physician's clinic without diagnostics or improvement. She reported that her symptoms were in fact worsening and described her symptoms as constant. The quality was described as dull, throbbing and tingling pain that she rated as an 8/10. Palliative factors included heat and ibuprophen. Provocative factors included sitting and coughing. She reported her bowel and bladder were in fact within normal limits.

Physical Examination

She presented as a normal female adult with a somewhat restricted gait, proportioned to slightly overweight appearance, good posture and cooperative demeanor. Vitals were recorded as follows; height 5'9", weight 185lbs, pulse 110 and left sitting blood pressure 146/89. Range of motion was recorded actively and by observation only. Flexion was recorded at 45/60, extension 15/25, left and right lateral flexion 15/25. Orthopedic testing demonstrated a positive finding to Kemp's with reproduction of radicular symptoms into the right lower extremity. Straight leg raise was also positive on the right at approximately 45 degrees and Braggard test was positive on the right with reproduction of sciatic pain in the right lower extremity. She was unable to heel walk and had foot drop evident in the right lower extremity. Sitting straight leg raise was positive bilaterally but more pronounced on the right. Bilateral leg raise reproduced localized lumbar pain. On palpation, she had +2/4 tight and tender muscles in the lumbar spine right greater than left with interspinous tenderness L4-S1. Myofascial trigger points were noted in the gluteus musculature and quadratum lumborum. Tenderness to palpation was noted as well in the right sciatic notch. Deep tendon reflexes were still symmetrical at +1 bilaterally in the patellar and Achilles reflex with a slight decrease in the right Achilles. Muscle strength



testing on the right lower extremity noted +3/5 in the tibialis anterior on the right side. 5/5 on the left side.

Radiographic Examination **(9/28/2016)**

Radiographs taken included AP and lateral views of the lumbar spine performed in the upright position. Mild degenerative changes were noted in the upper lumbar spine. Moderate degenerative changes were noted at L3-4-5-S1. There was mild right laterolisthesis at L3. Minimal dextro lumbar curvature with right rotation was noted. There was inferiority to the right pelvis and right femoral head. No evidence of recent fracture was noted. There was age appropriate calcification of the abdominal aorta and common iliac arteries. It was recommended that she follow up with her primary health care physician's office for additional diagnostic testing. She subsequently, at our request, did undergo a MRI examination on 10/8/2016.

Lumbar Spine Imaging

Clinical concern was progressive neurological deficit or motor deficit 3/5 or weaker in the right foot. A review of the appropriate clinical findings regarding the MRI included right posterior lateral disc extrusion of 7.4mm by 20mm extends caudally into the anterior epidural space along the L5 body, abutting the top of the right L5/S1 foramen. It completely effaces the right lateral recess. It abuts the right L5 nerve root and posteriorly displaces it, appearing to impinge against the superior aspect of the right lateral facet of L5/S1. Mild to moderate facet arthropathy is seen. The right L4/5 nerve foramen itself is mild/moderate narrowed. No significant left foraminal narrowing. Posterior epidural fat. Canal narrowing is mild to moderate.

L5/S1: As aforementioned the right L4/5 disc extrusion extends to the superior aspect of the L5/S1 foramen and appears to impinge the right L5 nerve root against the superior aspect of the right facet. The disc extrusion primarily affects the origin of the right foramen. The remainder of the right foramen is narrowed primarily from the underlying disc osteophyte and arthropathy. Left foramen is mildly narrowed.

Clinical Impression:

1. L4/5 right posterior disc protrusion of 7.4mm by 20mm extending caudally to the superior aspect of the L5/S1 foraminal origin and appears to impinge the nerve root against the superior aspect of the right L5/S1 facet.
2. Multi-level degenerative disc disease and facet arthropathy is further detailed above.
3. Mild grade 1 posterior listhesis of L3 on L4.

See Figures 1 and 2 below.

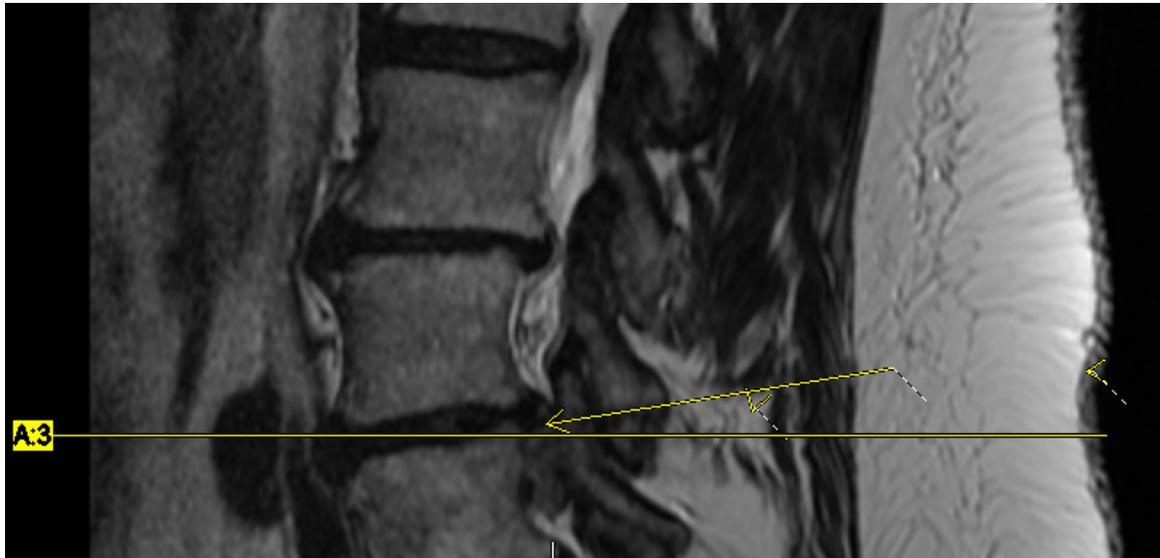


Figure 1

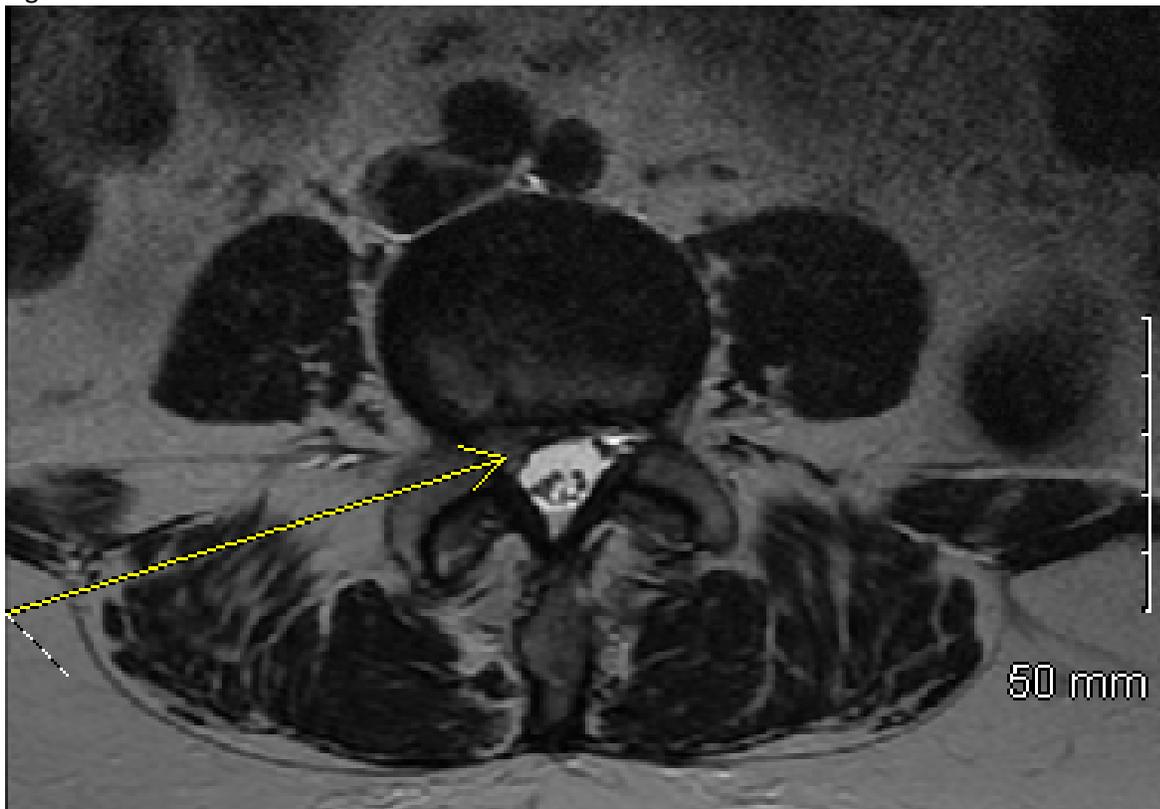


Figure 2

Diagnosis

Large disc extrusion HNP L4/5 right with resultant nerve root compression that is consistent with the patient's clinical presentation, subjective complaints and clinical examination findings. Based upon the initial presentation and examination it was determined that she should undergo Cox Protocol 1 treatment for a suspected L4/5 disc herniation on the right. She began care on September 28, 2016. She was seen subsequently on September 30, 2016, October 3, 2016, October 5, 2016, October 7, 2016 at



which time she reported approximately 50% subjective improvement to her complaints. Care continued on October 12, 2016, after the MRI scan that was performed on October 8, 2016. She continued to improve throughout her course of care and reported approximately 80% improvement by November 7, 2016. She was discharged from active care on November 30, 2016 with the advisement to follow up with a return of her symptoms. It was explained to her that full resolution or 100% improvement to date was not likely to occur based upon the pathology and injury that she had sustained. She was, however, very pleased with her progress to date and in fact regained most of her foot drop issues. Muscle strength testing in the right lower tibialis anterior did increase to 4/5. She did not achieve complete resolution of her foot drop, however, her back pain subsided to approximately 90% and her right lower extremity weakness improved by 80%.

Conclusion

Patient experienced significant improvement with the application of Cox® Protocol flexion/distraction and decompression. Of additional note, pending the receipt of the MRI examination, her primary care physician's office recommended a neurosurgical consultation. To date, however, that consult has not taken place even though it was advised to the patient that this would be a reasonable course of action. The patient was instructed in back school and biomechanical factors to accommodate the pathology. She also was instructed in Cox® Protocol rehabilitative exercises including exercise 1, 2 and 3 (pelvic tilt, pelvic lift, knees-to-chest) from the very first day. Over a 30-day period of time she transitioned to be able to do all 10 exercises. The clinical outcome in this case was excellent. The patient's initial presentation would have strongly supported the need for neurosurgical intervention with her clinical presentation. Her response to the Cox® Management Protocol further illuminates the need for appropriate conservative management prior to undertaking surgical solutions.