

Case Presentation for Lumbar Radiculopathy Consistent with Foraminal Stenosis and Herniated Nucleus Pulpous

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ABSTRACT

CASE HISTORY: The patient was a 38-year-old male who presented with right lower extremity (LE) pain when performing lower back movements, with no specific low back pain. He stated that five months ago he felt an aching in his calves after performing a Romanian Deadlift, with shooting pain in his right lower extremity that radiated below the knee into the calf including paresthesia. The patient started a prednisone taper that helped relieve some of the symptoms, but after two weeks the symptoms resurfaced. The pain prevented him from exercising or performing certain ADLs. **PHYSICAL EXAM:** Examination of the right LE determined that reflexes at the patella and Achilles tendon are intact and strength remains present. Sensation decreased along the lateral right calf to the plantar surface of the right foot, but not along the lateral ankle or the foot dorsum. There was difference in sensation of plantar surface of the right and left sides. The straight leg raise test was negative. Increased tone of the quadratus lumborum on the right side was observed. Radiating pain down the right LE was reported while standing and extending the back. Forward flexion at the spine relieved the pain. **DIFFERENTIAL DIAGNOSES:** Disc bulge, low back pain, Lumbar radiculopathy, and Spondylolisthesis. **TESTS & RESULTS:** Patient had an MRI of the lumbar spine from the Anteroposterior (AP) and lateral view with flexion-extension. The AP view of the lumbar spine demonstrated no evidence of scoliosis, while the lateral view demonstrated a loss of lordosis that may be attributed to spasm of the back muscles. Further analysis showed that there appeared to be some degree of narrowing of the disc space at L5-S1, which is associated with facet joint disease extending from L3 to S1. **FINAL DIAGNOSIS:** L5 radiculopathy was consistent with L5-S1 foraminal stenosis on the right side with a disc protrusion. **DISCUSSION:** The prevalence of lumbar radiculopathy has been estimated to be about 3-5% of the population, affecting both males and females, with a male preponderance in the general population. Age is considered a primary risk factor, with symptoms typically beginning for males in their 40s, while females tend to be affected in their 50s and 60s. Current medical literature is at a consensus regarding the common causes of L5-S1 radiculopathy, intervertebral lumbar disc herniation. More than 90% of herniated discs occur at the L4-L5 or L5-S1 disc space. Compression of these spaces tend to produce a radiculopathy into the posterior leg and compromise or limit ADLs. Current guidelines suggest approaching lumbar radiculopathy in a conservative manner by educating patients, manual therapy, modifying exercises, staying active, and administration of a non-steroidal anti-inflammatory drug. **OUTCOME OF THE CASE:** Patient received one epidural steroid injection and is due for additional injection at L4-L5 or L5-S1. He was referred to physical therapy (PT) focusing on myofascial release and core stability exercises. Surgery was discussed but the patient stated that since he was improving, he would prefer to not proceed with surgical opinion at this time. **RETURN TO ACTIVITY AND FURTHER FOLLOW-UP:** Patient was instructed to perform his PT exercises along with light latissimus pull downs, chest supported back rows, and activities in the swimming pool. The patient will follow up over the next couple of weeks on his status post epidural steroid injection. Regarding disability, it has been determined that he will decide when he is ready to return to full administrative abilities. After his follow up, a program structured around his abilities for recovery and/or future need will be discussed.