

Case Presentation for Herniated Nucleus Pulposus L5-S1

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ABSTRACT

CASE HISTORY: The patient is a 35-year-old male police officer, who presents with an antalgic gait and has been suffering from pain in his right posterior thigh. He suffers from acute pain which began a week before meeting with an orthopedic specialist who prescribed physical therapy for a strained hamstring. No traumatic incident or known cause for the pain has been identified. The patient's pain has affected his activities of daily living (ADL) and has been found to negatively affect his driving at work. **PHYSICAL EXAM:** Several orthopedic tests and range of motion assessments were conducted. It was found that the patient tested positive for the Slump 8 Test, an evaluation of leg and back pain disorders, and the Straight Leg Raise, a test for lower lumbosacral nerve root irritation. It was found that the patient's range of motion was severely compromised in flexion, extension, and in right lateral flexion of the spine. His left lateral flexion of the spine was found to be compromised, but not as severely as in the right lateral flexion. **DIFFERENTIAL DIAGNOSES:** Superior cluneal nerve entrapment neuropathy, gluteus medius muscle pain, Piriformis Syndrome, Sacroiliac joint pain, Tarsal tunnel syndrome. **TESTS & RESULTS:** Magnetic resonance imaging (MRI) showed that the patient had a Stage 2 Herniated Nucleus Pulposus at L5-S1. Stage 2 is referred to an incomplete protrusion of the nucleus pulposus into the annulus fibrosus. **FINAL DIAGNOSIS:** Stage 2 Herniated Nucleus Pulposus at L5-S1. **DISCUSSION:** The highest prevalence of herniated disc is among people age 30-50 years, where men are two times more susceptible for the pathology. Ninety five percent of herniated discs occur at the L4-L5 or the L5-S1 disc space. Herniation and degeneration of the discs at L5-S1 can cause radiating pain and decreased range of motion. Degeneration of the discs can cause the release of inflammatory proteins that irritate the adjacent nerves. Pain that is described as searing or sharp, versus achy or throbbing can indicate sciatica. The location of the compressed nerve can cause pain in different areas of the leg and foot. Treatment can include the addition of analgesics to the patient's daily regime if herniation and or degeneration is mild but a laminectomy may be required if condition presents as severe enough. In severe cases, lack of bladder and bowel control and changes or loss of perianal sensation were found, which can indicate conus medullaris or cauda equine syndrome, as a result of disc herniation. **OUTCOME OF THE CASE:** The patient completed a 4-week treatment plan that consisted of spinal stabilization, pain relief modalities, and soft tissue mobilization. He responded positively to methods such as electrical muscle stimulation, ultrasound, acupuncture, and myofascial release therapy. These treatments aided in the process of reversing the inflammation as a result of the herniated disc. Although, he responded positively to the treatment, the patient continued to experience pain especially when sitting for longer than one hour. He was prescribed pain medication such as NSAIDs, which were not helpful in relieving his pain. The patient was referred to an orthopedic surgeon who performed a micro-discectomy. **RETURN TO ACTIVITY AND FURTHER FOLLOW-UP:** Subsequently, his symptoms significantly decreased and he was able to return to normal ADL's without experiencing pain. The patient was cleared to return to his usual activities and further follow up was suggested.