

Disc Herniation and Stenosis Cases Demand Careful Clinical Examination and MRI Imaging Correlation:

L3-4 Disc Herniation with Marked Motor Weakness, MRI Disc Herniation looks Small

A 53-year-old male is seen for the chief complaint of minimal low back pain and maximum right anterior thigh and leg pain, which started in July 2005. In 1988 he had an L5-S1 disc herniation surgically removed. He is a truck driver, constantly jumping and lifting which really aggravates his back problem. He walks with a cane when the pain is bad. He has consulted two chiropractors who had treated him with side posture and postero-antero thrust adjusting which really has exacerbated his symptoms.

Examination on 1-12-06 reveals that this patient lies with the right knee flexed, a positive Neri bow sign, a positive well leg raise sign, meaning that when we raise the left leg, it projects the pain down the right L4 dermatome. This patient is oriented x3, is quite alert, quite cooperative, and quite anxious for relief.

The deep tendon reflexes at the patella and ankle are +2 bilaterally. Pinwheel examination of the lower extremity reveals no hypesthesia. The ranges of motion of the thoraco-lumbar spine are 50 degrees flexion, and 0 degrees extension due to pain radiating into the right leg. Right lateral bending is 10 degrees, and 0 left. Marked pain on palpation of the lumbar spine is noted from L3 through L5, there is a marked loss of lumbar lordosis, the patient standing in the kyphotic sagittal posture. Sitting straight leg raise is very positive for low back pain. The Kemp's signs are extremely positive bilaterally. The supine straight leg raise produces both low back and leg pain. He cannot perform Patrick's sign due to the low back pain.

Muscle strength examination reveals grade 4 of 5 strength on the right dorsi-flexion of the foot and great toe. Foot eversion, and the right gluteus maximus testing shows grade 4 of 5 strength on the right side. All attempts to do any extension testing of the low back is met with extreme low back pain and extremity radicular symptoms.

An MRI was ordered due to the long standing pain with progressive neurological deficits. Please see the following images.



Figure 1

Figure 1 is a sagittal image of the MRI showing extensive degenerative change of the 3 lower disc levels. The L3-L4 disc reveals anterior disc herniation with endplate hypertrophy and ankylosis and a high intensity zone present. Note the large L3-4 disc prolapse which creates stenosis of the vertebral canal. Please see figure 2 which is the lateral view of the lumbar spine. This allows comparison of plain film findings to the MRI findings at L3-4. Figure 3 is the A-P of this man's lumbar spine. Also note the degeneration of the 3 lower discs as seen on these views, especially the L3-4 level.

Figure 2



Figure 3

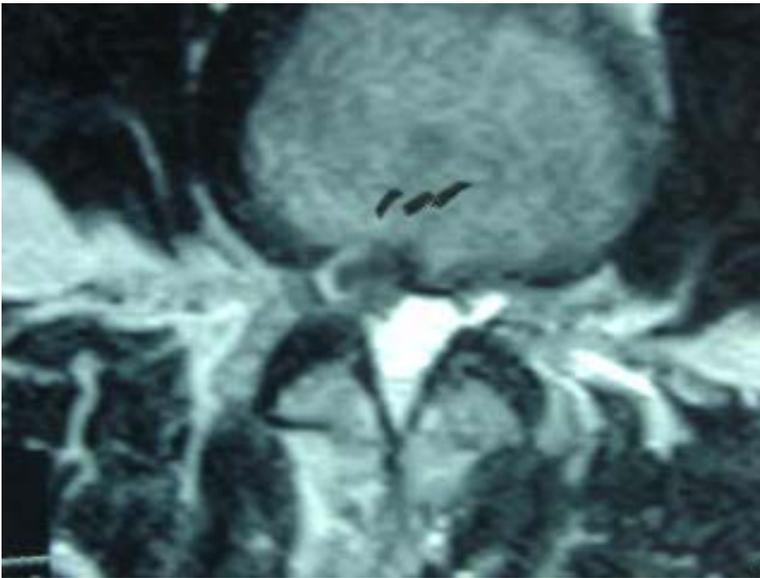


Figure 4

Figure 4 is the axial image at the L3-L4 disc level showing the right L3-L4 disc fragment lying within the osseoligamentous canal and lateral recess which would contact the L4 nerve root as well as contacting the thecal sac.

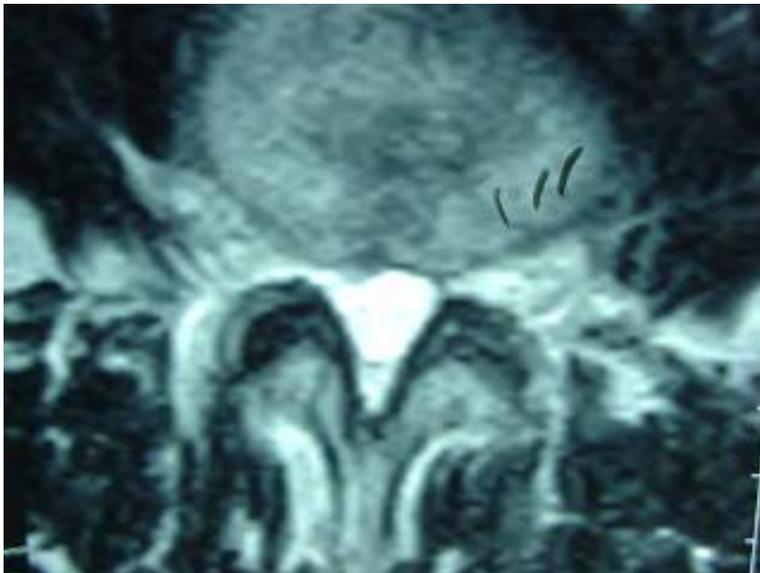


Figure 5

I also offer figure 5 which is the L3-L4 disc level axial view and offer for your consideration the possibility of a left intraforaminal free fragment of disc material.

These MRI findings and examination findings would coincide with the patient's clinical findings. Treatment is instituted on January 16, 2006, consisting of decompression flexion distraction adjusting at the L3-L4 level, only holding the ankle on the right side, and carefully tolerance testing the patient's ability to withstand this decompression treatment. Protocol 1 is followed. Following this, positive galvanism is passed through this L3-L4 free fragment and this is followed with paravertebral tetanizing currents at the L3-L4 level and into the antero-lateral leg and foot for rehabilitation and return of motor power. We will also probably use Acupuncture into the L4 dermatome distribution for return of motor power. This patient will take Discat Plus at 4 capsules breakfast and dinner for three months and then decrease the dosage by 50%. He will begin the first 3 exercises for stabilization, consisting of abdominal tightening, pelvic tilt, and knee-chest exercise. He will be carefully monitored for any increasing neurological deficits. We would expect at least 50% relief within 2 months of care. If not, neurosurgical consultation will be held on this case. The patient will attend low back wellness school February 13, 2006, where he will learn that this back is not cured but can be controlled through consistent exercises, decompression manipulation periodically, nutritional support, and ergonomic training.

For clinical interest, contrast this case to next month's case in which the patient has a huge L4-5 left free fragment with only low back and retrotrochanteric pain on the left side – no sciatica. A contrasting case report illustrating that the symptoms do not match the MRI; careful clinical examination and correlative diagnosis is mandatory in these disc herniation and stenosis cases.

Respectfully submitted,

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