



Cox® Technic Decompression Spinal Manipulation Resolves Symptoms Associated with Disc Protrusion and S1 Radiculopathy, when Neurontin is Poorly Tolerated

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by

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Introduction

This is a case study of a 36 year old nuclear engineer diagnosed with posterior disc bulging at L5-S1 and moderate posterior displacement of the left S1 nerve root. Her symptoms were resolved with Cox® Technic Decompression spinal manipulation. She was co-managed by a medical doctor who prescribed Neurontin, but she had to discontinue the medication due to the side effect of severe depression.

History

This 36 year old female was an existing patient but had not had a severe episode of lower back pain until she presented to my office on 8/28/2012. She reported a one day history of severe sacral base pain with radiation into the left buttock, left posterior thigh and left calf. She woke up the previous morning with the pain and is uncertain as to what triggered her symptoms. She describes the pain as a constant, sharp, stabbing 8/10 pain that is severely affecting her ability to carry out her normal activities of daily living. Specifically, her pain is worsened by bending, crouching/squatting, lifting, lying down, mowing and changing positions. She denies any weakness, numbness or tingling in the lower extremities. She denies bowel or bladder incontinence.

Physical Examination

August 28, 2012: The patient is able to ambulate unassisted, without any apparent gait disturbance but she does have difficulty rising from a seated position and getting onto the examination table due to increased pain.

Deep tendon reflexes in the lower extremities were +2/4 bilaterally. Motor strength in the lower extremities was +5/5 bilaterally.

Lumbosacral spine active ROM was tested and found to increase lower back pain at 30 degrees flexion, 10 degrees extension. Extension reproduced the left calf and left buttocks pain.

Straight Leg Raise Test was positive at 45 degrees for increased LBP bilaterally. Braggard's test was negative. Patrick's test was positive bilaterally for increased lower back pain. Yeoman's Test was positive on the left for left sided lower back pain.

Palpation revealed tenderness and hypertonicity at the quadratus lumborum muscles, left piriformis and lumbar erector spinae muscles. Motion palpation revealed decreased mobility and tenderness to palpation at the left sacroiliac joint as well as decreased mobility of the lower portion of the right sacroiliac joint. L4-S1 was tender to palpation and restricted in mobility.

Imaging: Lumbar Spine MRI report dated 10/18/12

L3-4: minimal posterior disc bulge. Mild facet and ligamentous hypertrophy. No central foraminal stenosis.

L4-5: posterior disc bulge with facet/ligamentous hypertrophy with no central stenosis. Mild right foraminal stenosis, with effaced signal surrounding the right exiting L4 nerve root. No significant compression. See series 6, image 7 and series 3, image 10.

L5-S1: Posterior disc bulge with moderate left posterolateral disc protrusion causing moderate posterior displacement of the left S1 nerve root. Facet and ligamentous hypertrophy also present with moderate bilateral foraminal stenosis. Mild compression of the right exiting L5 nerve root possible. No central stenosis. See series 6, image 3 and series 3, image 10.

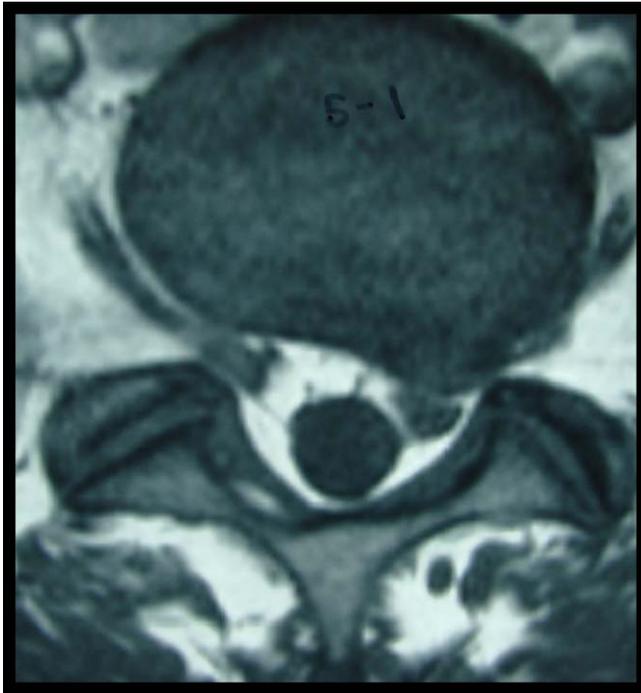


Figure 1. Left sided L5-S1 disc protrusion contacting the left first sacral nerve root



Figure 2. Coronal image showing disc space height and psoas muscle.

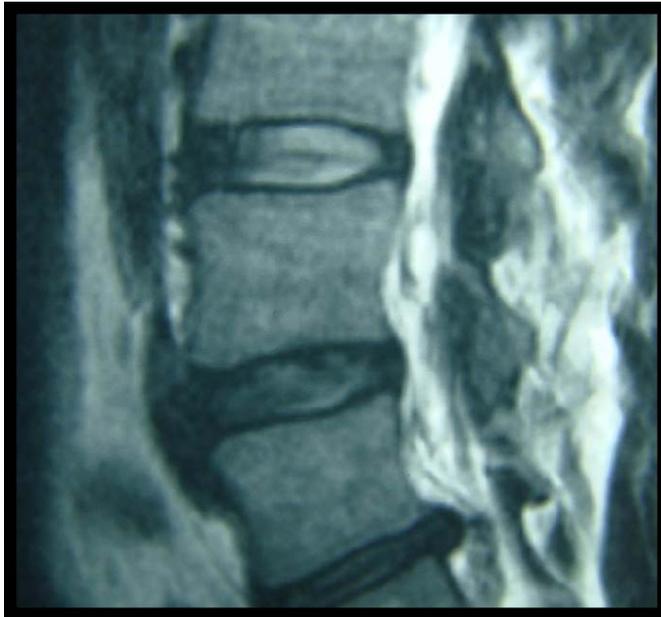


Figure 3. Sagittal view of the L5-S1 disc herniation. Also note early L4-L5 disc hypointensity.



Figure 4. The L4-L5 disc level is patent.



Initial Clinical Examination Impression

Correlated MRI and clinical examination diagnosis: L5S1 left lateral disc herniation
Bilateral sacroiliac joint dysfunction, lumbar segmental dysfunction, lumbosacral radiculopathy.
Suspected lower lumbar disc protrusion.

Treatment Plan

Gentle prone spinal manipulation to the sacroiliac joints to improve joint mobility and reduce pain; Cox® Decompression Spinal Manipulation to provide up to 28% increase in L4-5 and L5-S1 foraminal area to decrease irritation of the affected nerve roots (1) and decrease the intradiscal pressure up to -192 mmHg (2); electric stimulation and cryotherapy as needed to help reduce pain and inflammation; massage therapy to reduce muscle spasm; and therapeutic exercise to increase lumbosacral stability. Home instructions include avoiding: sleeping prone, yard work, forward bending from the waist, heavy or repetitive lifting, and sitting or standing for longer than 20-30 minutes without a break. Patient was advised to use ice over lower back four times a day, 20 minutes on and at least 40 minutes off before reapplying and to put a pillow under the knees while lying supine or between the knees if side-lying.

The recommended treatment frequency involves Cox® Technic protocol one daily until pain is reduced by 50%, at which point the treatment frequency will be re-evaluated and protocol 2 will begin. If at any point the patient fails to respond favorably to treatment as expected, I will consider ordering additional imaging and refer her to the Virginia Orthopedics and Spine Specialists for co-management and a possible surgical consult.

Discussion

The patient was initially non-compliant with the recommended treatment frequency, due to financial constraints. The patient returned on 9/10/12, approximately two weeks later, and reported that her lower back and lower extremity pain was happening less frequently, although when felt, at an 8/10 intensity. Additionally, she stated she was no longer having pain with lying down or squatting. At her third visit on 9/17/12, one week later, she states she experienced relief of lower back and lower extremity pain until the previous day when moving boxes and sleeping on an air mattress exacerbated symptoms with the pain now being isolated to the left buttocks and calf. Her fourth visit took place nearly 4 weeks later on 10/15/12. She reported relief of symptoms after the third visit, for approximately two days. Then pain returned in the left buttock and calf but of a decreased overall intensity. She then experienced an exacerbation of pain, to an 8/10, on 10/14/12 after helping a friend move boxes and furniture. We discussed the need for her to follow the recommended treatment plan of no fewer than 2-3 visits per week in order to properly address and resolve her symptoms. She admitted that while she was having some financial difficulties, she understood the need to be compliant with the treatment plan in order to achieve the desired results. Her fifth visit took place on 10/18/12 when she reported two day's relief of left posterior thigh and calf pain until she experienced an exacerbation of unknown etiology the previous day, reporting pain to be a 10/10. She went to an urgent care facility and also saw a pain management physician at Virginia Orthopedics and Spine Specialists for additional evaluation. He ordered a lumbar spine MRI and prescribed prednisone as well as neurontin.

Patient compliance improved after receiving MRI results and co-management from a medical doctor, who recommended that she continue the Cox® Decompression, and she had three chiropractic visits from 10/22/12 through 10/26/12. On 10/26/12, she reported that the pain was now localized to the left posterior thigh, reduced in severity to a 5/10 at its worst, and was no longer radiating into the left calf. She saw her pain management physician on 10/25/12, who recommended that she continue seeking chiropractic care and did not make any further recommendations. By 11/9/12, her eleventh visit, she reported an overall 50% decrease in pain and Protocol 2 of Cox® Decompression Technic was initiated. She returned to the office for 4 more visits in the next two weeks, at which point she reported an intermittent 3/10 pain in the left posterior thigh. On 11/12/12, she indicated that the neurontin was causing severe depression, considered an infrequent but potentially severe side effect of the drug (3). She denied suicidal thoughts, stating “it hasn’t gotten that bad yet.” She stated that she had been advised by her pain management physician to discontinue the medication and continue with the Cox® Decompression Technic manipulation she had been receiving. Her symptoms continued to improve with chiropractic treatment even once she discontinued neurontin and her depression decreased markedly.

Case Outcome

After a total of fourteen visits over the course of eleven weeks, and despite discontinuing Neurontin, her symptoms were resolved and she was able to return to all normal activities of daily living.

Long Term Follow Up

Over the next three months, the patient returned for a total of three visits, each time indicating exacerbation of left sided lower back pain without radiation with a 1/10 severity. On March 11, 2013 she indicated she had not had any lower back pain or lower extremity pain and would return immediately if she suffered an exacerbation.

References

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