



Cox® Technic Decompression Spinal Manipulation Resolves Symptoms Associated with a 17mm L3-4 Disc Extrusion

submitted by
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Introduction

This is a case study of a 52 year old Shipyard worker with right L3 radiculopathy due to a large disc extrusion who responded well to Cox® Technic Flexion Distraction and Decompression.

History

This 52 year old male presented to my office on September 8, 2009, with a chief complaint of right lower back pain with radiation into the right anterior thigh down to the knee. This pain began on August 27, 2009, when he was performing a dead lift in the gym, which involves bending from the waist keeping the knees locked, while holding weights. The pain is described as constant, ranging from 1-10/10 and tends to be worse in the morning. His symptoms are aggravated by forward bending, standing, prolonged sitting, driving and walking. He saw his primary care physician who reportedly diagnosed him with a “pulled muscle” and prescribed pain medications, which do not provide any relief. He reports constant numbness in the right anterior thigh, down to the knee, but denies any weakness in the lower extremities. He denies loss of bowel or bladder control and does not have any increased pain with coughing or sneezing.

Thus far, he has missed one week of work at the Shipyard. His job as a Metal Fabricator/Welder requires him to perform heavy lifting and “lots of climbing” on large cranes, which at this time he states would be unable to do without severe pain.

Physical Examination

September 8, 2009: The patient is able to ambulate unassisted, without any apparent gait disturbance.

Blood pressure in the left arm in a seated posture was 170/100 mm/Hg. Deep tendon reflexes in the lower extremities were +2/4 bilaterally. Motor strength in the lower extremities was +5/5 bilaterally. He states he has not taken his prescription anti-hypertensive medication for the last two days.

Lumbosacral spine active ROM was tested and found to increase lower back pain at end range bilateral lateral flexion.

Straight Leg Raise Test, Hibb's Test and Patricks test were negative for increased lower back pain. Yeoman's Test was positive on the right for right sided lower back pain.

Palpation revealed tenderness and hypertonicity at the quadratus lumborum muscles, right piriformis and lumbar erector spinae muscles. Motion palpation revealed decreased mobility and tenderness to palpation at the right sacroiliac joint. The lumbar spine was non-tender to palpation but restricted mobility was noted at L3-4.

Initial Impression

Right sacroiliac joint dysfunction, right sided L3 radiculopathy. Suspected L3-4 disc protrusion.

Treatment Plan

Gentle prone spinal manipulation to the sacroiliac joint to improve joint mobility and reduce pain; Cox Decompression Spinal Manipulation to increase the disc height by up to 17% and to provide up to 28% increase in L3-4 foraminal area to decrease irritation of the right L3 nerve root (1) and decrease the intradiscal pressure to as low as -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 exercise at the gym, forward bending from the waist, use of ice, and taking breaks from prolonged sitting or standing.

The recommended treatment frequency involves Cox Technic protocol one at three visits per week until pain is reduced by 50%, at which point the treatment frequency will be re-evaluated and protocol 2 will begin. (The patient was unable to come in daily, initially, due to financial constraints.) If at any point the patient fails to respond favorably to treatment as expected, I will consider ordering additional imaging and refer him to the Spine Center of Hampton Roads for co-management and a possible surgical consult. In addition, I advised him to take his anti-hypertensive medication as prescribed.

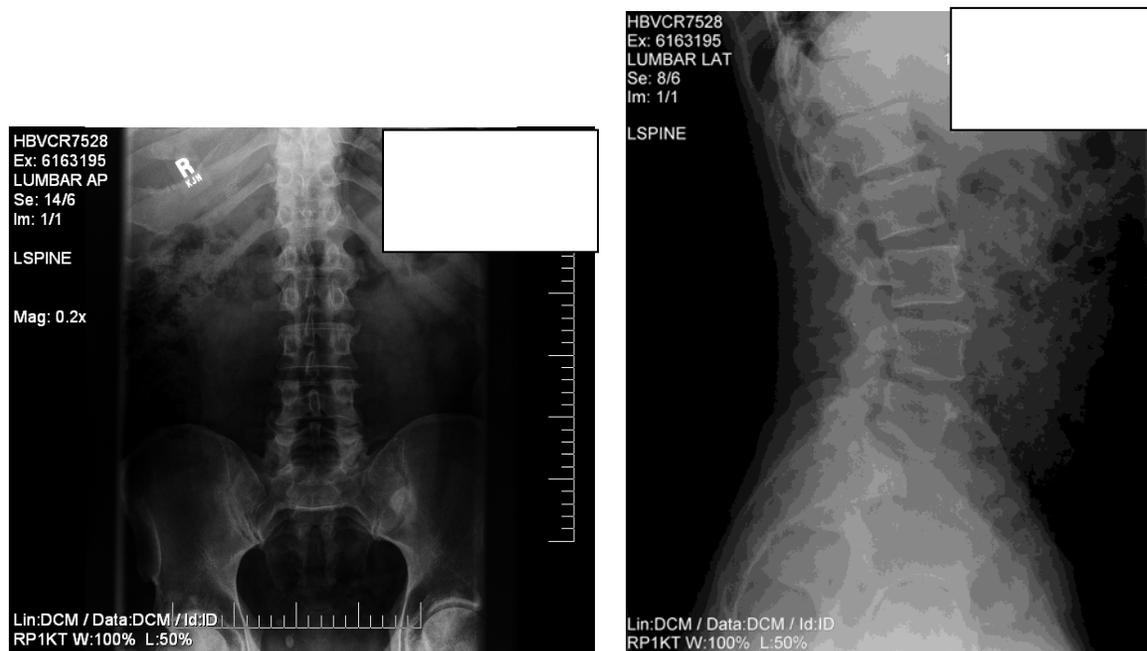
Discussion

After four treatments, the patient reported a 60% overall decrease in intensity and frequency of lower back and right anterior thigh pain and stopped taking all pain medications as a result. Prolonged standing and climbing continued to be provocative to his symptoms and therefore interfere with his ability to work. After his fifth visit, he reported an overall 80% decreased intensity and frequency of lower back and right anterior thigh pain.

At his seventh visit on September 21, 2009 he reported an exacerbation of symptoms after riding his motorcycle. At this point I ordered a lumbar spine x-ray series to determine the extent of degenerative changes in the lumbar spine and to look for lateral stenosis to explain the right L3 radicular symptoms.

Imaging

Lumbar Spine X-Ray dated September 23, 2009



“Four views of the spine show no evidence for fracture or subluxation. No lytic or blastic lesions are present. The pedicles are intact. The disk spaces are preserved. There is spurring at several levels. There is facet arthritis at L4-5 and L5-S1 bilaterally. There are degenerative changes involving the left sacroiliac joint. The visualized portions of the hips appear unremarkable. There is a small rim of calcification in the right upper quadrant which may represent a gall stone.”

Treatments on September 23 and September 25 relieved the exacerbated symptoms. On September 28, 2009, the patient reported an exacerbation, of unknown cause, of right

anterior thigh pain. The pain was described as a constant 4/10. At this point, I ordered a lumbar spine MRI for additional information as his symptoms were not explained by x-ray findings and I was considering a referral to the Spine Center of Hampton Roads for co-management.

Lumbar Spine MRI dated September 30, 2009



“Mild circumferential disk bulge. Superimposed right central disk extrusion with disc material extending 17 mm craniad along the L3 body (reference sagittal T2, T1 image 8). Extends towards the right lateral recess craniad where there is contact and likely some degree of compression of the exiting right L3 nerve root. Diffuse disc bulge combines with buckling of ligamentum flavum to cause mild to moderate focal central canal stenosis. Mild degenerative changes at other levels with moderate bilateral foraminal narrowing at L4-5 and on the left at L5-S1.”

Case Outcome

The patient did not return for treatment until October 5, 2009, at which point he reported a “huge improvement” in lower back pain and right anterior thigh pain, a 70-80% improvement since onset of care.

On October 19, 2009, he saw Dr. Theresa Jackson, Pain Management Physician at the Spine Center of Hampton Roads. Dr. Jackson stated he received marked improvement with chiropractic care and that he is neurologically intact. She did not recommend any further medical intervention at that time.

He had three more visits in that month and on October 28, 2009, he reported 100% improvement of lower back and thigh pain and a 90% improvement in anterior thigh paresthesia since onset of care. He then discontinued treatment for an unknown reason, by failing to come to his next scheduled appointment. Attempts in rescheduling him were unsuccessful.

Long Term Follow Up

April 11, 2011: The patient presented to the office with a chief complaint of neck pain and a secondary complaint of an intermittent 2/10 midline lower back pain. The lower back pain began on April 2, 2011, after returning to the gym “for the first time in a while” and doing the leg press. Since his October 28, 2009, visit he states he has a slight numbness “every now and then” in his right anterior thigh but no lower back pain. He continues his usual work duties without discomfort, in addition to hunting and riding his motorcycle. His lower back pain resolved after the April 11, 2011, visit which included Cox® Spinal Decompression Manipulation.

Further Follow up (provided 2/11/15)

This patient returned on February 14, 2012, with an eight day history of daily, 5/10 right sided lower back and buttocks pain with occasional numbness and tingling in the right anterior thigh. He reports he had been symptom free, since his last visit in April of 2011, however he recently has been very active in his job as a Crane Operator at the local ship yard, which involves “climbing up and down a crane all day long.” At his second visit on February 21, 2012, he indicated he had been symptom free since leaving the office for treatment and would schedule another appointment if the symptoms returned.

He returned on February 26, 2013, with a five day history of 7/10 left sided lower back pain without radiation. This pain began after lifting a heavy item at work. After seven treatments, he was symptom free and agreed to schedule another appointment if the symptoms returned.

He returned on October 11, 2013, after he woke with right sided lower back pain with right anterior thigh pain and paresthesia. He reported that recent work activities such as repetitive lifting and climbing on cranes, has contributed to this episode. After six treatments, he was symptom free.

He returned on June 18, 2014, with a 5/10 sacral base pain without radiation that began on June 2, 2014, after he was involved in a collision with an automobile while riding his motorcycle. He suffered multiple sites of lacerations and abrasions, but no fractures. After eight visits, his lower back was symptom free until he suffered an exacerbation, without known cause, on August 28, 2014. He described a right sided lower back pain with numbness and tingling in the right anterior thigh. After 10 treatments in four weeks, he reported that his lower back and thigh discomfort was overall 50-60% improved, unless he had to walk more than 20 yards. Working became problematic for him, as he is required to walk approximately 400 yards from the parking lot to his work site. Eventually, modifications were made, including a parking permit that limited the amount of walking required at work. Treatment continued and while he reported significant relief after treatment, his symptoms were easily aggravated, especially with walking.

A lumbar spine MRI was ordered and the report dated 11/12/2014 showed the following:

- L5-S1: There is a minimal broad based annular bulge without significant impression on the thecal sac. Facet and ligamentous hypertrophy is present but there is no significant canal stenosis. There is mild to moderate bilateral foraminal stenosis.
- L4-L5: There is a broad based disc protrusion and mild impression on the ventral thecal sac. Some facet and ligamentous hypertrophy is present resulting in mild to moderate canal stenosis. There is moderately severe bilateral foraminal stenosis with effacement of perineural fat right slightly greater than left. There may be a small perineural cyst on the right, far laterally.
- L3-L4: There is a broad based central disc protrusion and subtle impression on the ventral thecal sac. Some facet and ligamentous hypertrophy results in moderate multifactorial canal stenosis, in part from increased epidural fat. There is mild to moderate right foraminal stenosis. The left foramen is patent.
- L1-L2: There is a subtle broad based disc protrusion and impression on the ventral thecal sac. There is no significant canal or foraminal stenosis.

On December 2, 2014, he reported that he was no longer having right anterior thigh numbness or tingling and that his lower back pain was at least 80% improved. He declined a referral to Virginia Orthopedic and Spine Specialists, indicating he was satisfied with his response to Cox® Decompression Technique and not interested in medications that could impair his ability to work or an injection due to concerns about potential serious side effects. He said he would schedule another appointment if he continued to have pain.

As of February 10, 2015, he has not been back for treatment.

References

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