



CASE REPORT: CLINICAL PRESENTATION OF A 12 MM L5 LUMBAR DISC BULGE, COMPOUNDED BY A 12 MM ANTEROLISTHESIS AND PARS DEFECTS AT THE SAME LEVEL, SUCCESSFULLY TREATED WITH COX® DECOMPRESSION MANIPULATION, AND ACUPUNCTURE

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INTRODUCTION:

A 49 year old professional administrative assistant presented to my office complaining of low back pain for 15 years. She reported her pain to be a 10/10 with 10 being worse. Because of her excess weight, she was not a good candidate for spinal surgery and requested an alternative solution.

HISTORY:

She was taking prescriptions including gabapentin and hydrocodone with acetaminophen 4 times per day. She was also receiving radio-frequency ablation every 3 months and has had multiple epidurals. She has been seeing a chiropractor for traditional Gonstead treatments “for years” with no relief. In 2004, she had gastric bypass surgery and lost 100 pounds. She has since gained it all back.

I accepted her case and reviewed 2 MRI studies without contrast of her lumbar spine dated 8/2/2010 and 7/17/2017. The images were over-read by Gary Longmuir, D.C., M.S, Ph.D., D.A.C.B.R. , for the purpose of views used in this case study. (A special thank you to Dr. Longmuir for reading the films and choosing the views.)

PRESENTATION AND EXAM FINDINGS:

Examination:

- Height 5’9”
- Weight 290 pounds
- Vital signs were within normal limits (WNL).
- Heart signs were WNL.
- Deep Tendon Reflexes including triceps and radial were all + 2 bilaterally

ROM Lumbar Spine:

- Flexion 30/60 With pain L5 S1
- Extension 5/10 With pain at L5 S1 refers to her left buttock and hip
- Right Rotation 5/40 With pain at L 5 on the right
- Left Rotation 5/40 With pain at L 5 on the left
- Right Lateral Flexion 8/25 With pain at L5 on the left
- Left Lateral Flexion 4/25 With pain at L5 on the left ROM

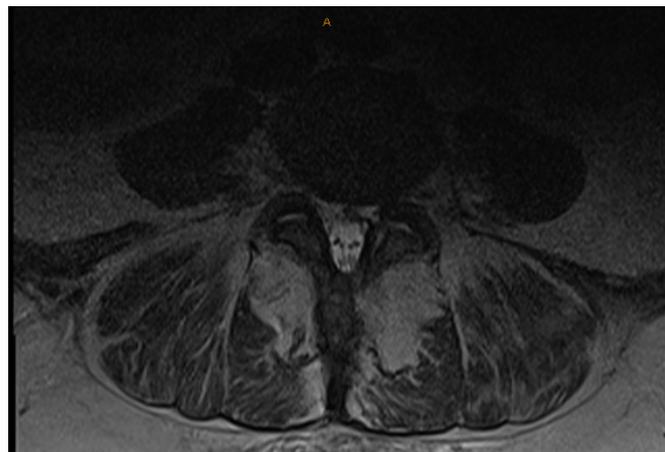
Muscle Strengths Lower Extremities:

- L2-3 Hip Flexors L 4/5 R 4/5
- Hip Extensors L 4/5 R 4/5
- L3-4 Knee Extensors L 4/5 R 4/5

- L5-S1 Knee Flexors L 3/5 with pain at L L5 S1 and left buttock R 4/5
- Hallucis Longus L 4-S1 L 3/5 R 3/5 *Both with pain at L/S spine referring to each ipsilateral buttock*
- Light touch, Deep touch, Vibration, Position Sense all within normal limits
- Palpation: Hypertonic Paraspinal muscles throughout the entire spine
- Sensation: Diminished light and deep touch at bilateral L5/S1 dermatomes

Orthopedic Examination:

- Straight Leg Raise - positive bilaterally with pain and pressure at the lumbosacral spine
- Braggard's - positive bilaterally with pain and pressure at the lumbosacral spine
- DLR - positive bilaterally with pain and pressure at the lumbosacral spine
- Patrick's Sign of 4 - positive bilaterally with pain at ipsilateral SI joints.
- Adam's - positive bilaterally with tenderness over the thoracic, lumbar, and sacral paraspinal muscles

IMAGING:**Figure 1 - August 2, 2010****Figure 2 (30/42) – L5S1 – July 17, 2017**

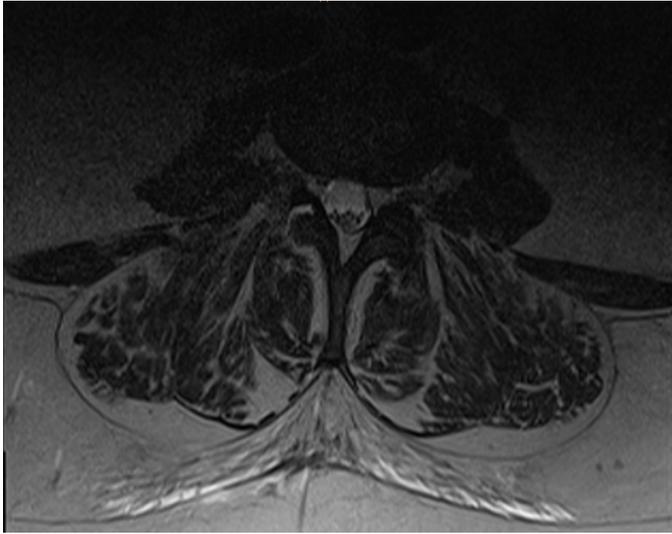


Figure 3 (22/42) - L4L5 – July 17, 2017



Figure 4 – Xrays July 17, 2017

MRI Report by Simon Med Imaging. (See Figures above.) Comparison: Lumbar MRI August 2, 2010

Findings:

MRI examination of the lumbar spine without contrast performed in 3T

- *Spinal column: there is mild levoscoliosis centered near L 2-3. There is a 12 mm anterolisthesis at L5-S1 with chronic L5 pars defects. The lumbosacral lordotic curve is otherwise smooth and physiologic. There is chronic 30% posterior wedging of L5. Disc degeneration is mild to moderate at L5 – S1 with narrowing, vacuum, and prevertebral spondylosis. Disc degeneration is mild from L2 – 3 through L4 – 5. No worrisome marrow – replacing lesions are seen. Anterolisthesis has worsened at L2 – 3 and L3 – 4; the other findings appear stable.*



- *T12-L1 is unremarkable.*
- *L1-2 is unremarkable.*
- *L2-3 is unremarkable.*
- *L3-4 is unremarkable.*
- *L4-5 demonstrates a 2 mm broad disc bulge. No hypertrophic facet DJD. No central canal stenosis. Foraminal stenosis is mild on the left. No significant change.*
- *L5-S1 demonstrates a 12 mm broad disc bulge with unroofing superiorly. There is a small disc extrusion migrating 3 mm above the L5 inferior endplate broadly across the midline into the left foramen. Facet DJD is mild on the right. No central canal stenosis. Foraminal stenosis is moderate on the left and mild on the right. No significant change.*
- *Spinal canal: the distal thoracic cord appears normal. No mass.*

DIAGNOSIS:

- 12 mm anterolisthesis L5
- 12 mm broad disc bulge L5
- Scoliosis
- Pars defect L5

TREATMENT:

Chiropractic Course of Care: Cox® Flexion Distraction Decompression Manipulation Technic Protocol 1 for lumbar spine was rendered. Tolerance testing was done to the lumbar spine prior to each visit. The intensive phase of her care, which was 3 days per week for the first 10 visits, then when 50% relief occurs, visits would be dropped to 2 times per week. This was the course of care that was rendered. Interferential current with local and distal acupuncture points were administered with the patient in a prone position. This was done utilizing a Body Cushion System to prevent extension of the patient's lumbar spine. Treatment consisted of lumbar distraction consisting of three 20 second distraction sets. Each 10 seconds consisted of five pumps of 4 second pumping movements with the contact on the spinous processes of L1-L4 vertebra, segmentally contacting and decompressing all levels to L4. Then from S2-S5. The lower sacral levels were done mainly for relaxation of the sacral musculature. Right lateral decompression was rendered at the L1-L3 levels. This was followed by interferential current to the L3 to the S2 levels as well. Acupuncture was rendered at local and distal points at the same time as the interferential current. This combination protocol was done for 10 minutes, then the needles were stimulated, and left on with the interferential current for another 10 minutes. The patient was instructed that if at least 20% relief was not attained by the 2 week re-exam, I would change my treatment protocol. She was also informed that if 50% relief was not attained within 4 weeks of care, she would be referred to a neurologist. The patient was to apply ice to the lumbar spine at home. An LSO and TENS unit were also used on a daily basis. She was advised not to sleep in a prone position, however she refused to sleep on her side, or back with appropriate pillow support. I recommended she purchase a large memory foam wedge to apply under her pelvis while sleeping, therefore keeping her lumbar spine out of extension. This recommendation was successful, as the patient was able to sleep in a prone position, while responding positively to my treatment protocol. Her treatment plan included 3 visits per week for 2 weeks, then re-evaluation. Upon the completion of that exam, she was then placed



on a continued program for three times a week for the next six weeks. At the end of six weeks, she came into the office twice a week. Then she came in for two weeks, of one visit per week. She continued until she could no longer afford treatments in my office. I was able to treat her with complimentary visits until she was in the full stabilization phase of her care.

OUTCOME/DISCUSSION:

It is my opinion that the patient's relief in symptoms were as a result of Cox® Decompression Manipulation, and acupuncture, done by these abovementioned protocols. Protocol 1 was highly effective in not only reducing the patient's symptoms, but also allowed her to sit at work daily, with no pain in her lumbar spine. She was also not having to receive RFA treatments. All opioid use was stopped within days of starting care in my office, as her pain was diminished that quickly. According to Cox and Trier (1), results found that all five patients with stable spondylolisthesis cases obtained 75% or greater relief from chiropractic adjustment of the type (Cox® Decompression Manipulation) used by the author. My clinical experience finds this technique to be the most effective treatment for lumbar spine conditions. A significant clinical benefit was that there was an older MRI for the primary radiologist to compare results to. The patient's symptoms revealed those generally indicative of disc involvement, and as she had a 12 mm bulge at L5 as well, the bulge at that level was also successfully treated. The Cox® Decompression Manipulation allowed the disc bulge pressure to decrease. Quillette and Kramer (2) hypothesized that as the vertebrae in the spine are distracted, a negative pressure develops in the disc, and sucks back a protrusion. This was necessary to allow me to adequately treat the anterolisthesis at that level. This decrease in disc pressure, I believe, was the reason the treatment worked. After numerous medical treatments including opioids, RFA, and physical therapy, Cox® Decompression Manipulation was the treatment that finally gave this patient relief. According to Guadavalli, Et al. (3) regarding exercise verses Cox® Decompression Manipulation, Subgroup analysis indicated that subjects categorized as chronic, with moderate to severe symptoms improved most with the flexion-distraction protocol.

ADDENDUM:

This patient had also reported later in her treatment, that she was scheduled to be evaluated for a bladder pacemaker implant, due to her incontinence. As it took a while to schedule that appointment, by the time she was to be evaluated, her incontinence was under control. Chronic patients with moderate to severe symptoms improved most with FD. I believe that with diet changes, Cox® Decompression Manipulation, and acupuncture, those symptoms were relieved as well.

REFERENCES:

1. Cox JM, Trier K: Chiropractic adjustment results correlated with spondylolisthesis instability. *J of Manual Medicine* 1991;6:67-72
2. ABSTRACT FROM THE PROCEEDINGS OF THE INTERNATIONAL SOCIETY FOR THE STUDY OF THE LUMBAR SPINE, SINGAPORE 1998 *Intervertebral Disc Pressure Changes During The Flexion-Distraction Procedure for Low Back Pain* Authors: Guadavalli MR*, Cox JM*, Baker JA*, Cramer GD*, Patwardhan AG**
3. Guadavalli MR, Cambron JA, McGregor M, et al. A randomized clinical trial and subgroup analysis to compare flexion-distraction with active exercise for chronic low back pain. *Eur Spine J.* 2006;15(7):1070–1082. doi:10.1007/s00586-005-0021-8