

# Degenerative Lumbar Scoliosis with Stenosis Successfully Treated with Cox Distraction Manipulation

Presented By  
Robert E. Patterson Jr., D.C.  
Overland Chiropractic Health Services PA  
Overland Park, Kansas  
(913) 345-9247  
[drbob@overlandchiro.com](mailto:drbob@overlandchiro.com)  
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## Introduction:

This case is a 63 year old, white female who was first seen on January 27, 2009. She presented with a chief complaint of low back and left leg pain. She rated her pain as 9/10. She described the pain as being sharp in nature as well as aching and burning to the knee. She was in constant pain. Her symptoms were better with sitting, stretching, bending, and rest. Standing and walking increased her pain. She was generally worse in the mornings. Pain interfered with work, sleep, leisure and her mental attitude.

## History:

History revealed that she had previous low back surgery in 1992 for stenosis. She had done well following that surgery. In May of 2008 she suffered a heart attack and received two stents. In June 2008, she had a pacemaker implanted. It was not until after the heart attack that her leg pain recurred. She had an appendectomy in 1965. Medications and supplements for her heart included Plavix, Zocor, Toprol, aspirin, fish oil and CoQ10. She takes Allegra for allergies and Nexium for her stomach. She has a long history of acid reflux. Her first ulcer was found while she was in high school. She is borderline diabetic but is trying to control it with diet.

This patient was evaluated by a neurosurgeon who wanted to perform lumbar spine surgery with possible fusion. Her cardiologist would not approve of the surgery for at least one year. He told her she could not be off of anticoagulant medication because of the stents. The patient was being treated by a physical therapist. At that time, treatment had consisted of physical therapy twice a week for the previous two months with little relief. Therapy consisted of ice, ultrasound, electrical stimulation, and core strengthening exercises. In addition, she was undergoing pool therapy 1-2 days per week. Medication for her pain consisted of Percocet and Flexeril almost daily but she did not like to take them.

## Examination:

Examination revealed negative straight leg raising bilaterally. Faber-Patrick's test with the left leg produced pain in the left buttock, while right leg produced pain in the right buttock and hip. Nachlas test was negative. Yeoman's test on the left was positive. Internal and external rotations of the hips were negative bilaterally. Left hip flexion was positive for pain. Lumbar flexion relieved pain. Lumbar extension increased pain as did left lateral bending. Right lateral bending was negative. Left and right rotation both mildly increased her pain. The deep tendon reflexes at the knee and ankle were 2/2 bilaterally. No strength deficit was detected with extension of the great toe, dorsi-flexion of the feet, and plantar flexion of the feet at the ankles. Upon palpation, spinous tenderness was noted from T8-T10 and over the left piriformis muscle. The SI joints are fixated upon flexion.

**Imaging:**

CT with reformatted coronal and sagittal images performed as well as 3-D imaging.

A marked left convexity rotoscoliosis with degenerative disc and facet disease is noted. Disc bulging at L3-4, L4-5, and L5-S1. The disc bulging at L4-5 is moderately severe with partial calcification of the annulus. Central spinal stenosis is most severe at L3-4 with significant narrowing of the neural foramina on the left at L3-4 and L4-5.



Figure 1 is an AP view looking caudally at the 3-D CT image. This demonstrates the degree of rotation due to the scoliosis.

Figure 1

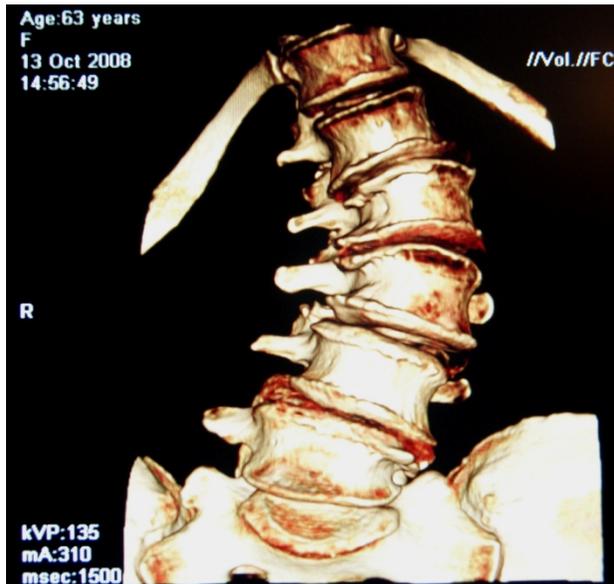


Figure 2 is an AP 3D CT image. This better helps us appreciate the degenerative changes in 3 dimensions. Lateral listhesis may be seen at multiple levels.

Figure 2

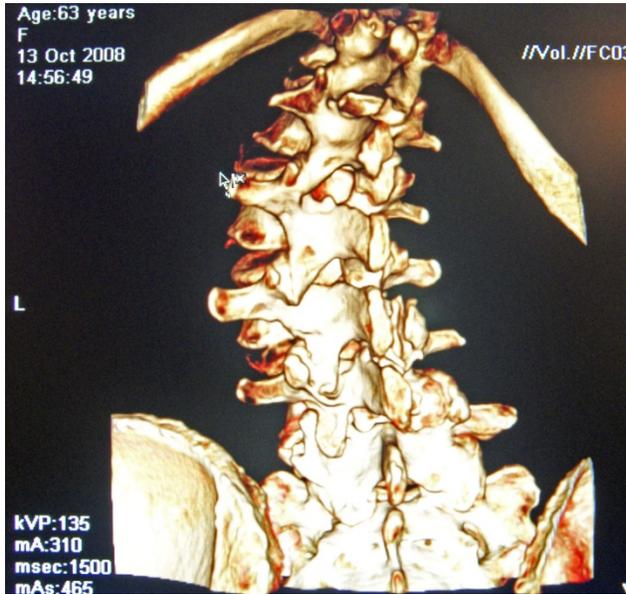


Figure 3 is a PA 3D CT image. It again helps us appreciate the degree of curvature and rotation in this patient's spine.

Figure 3

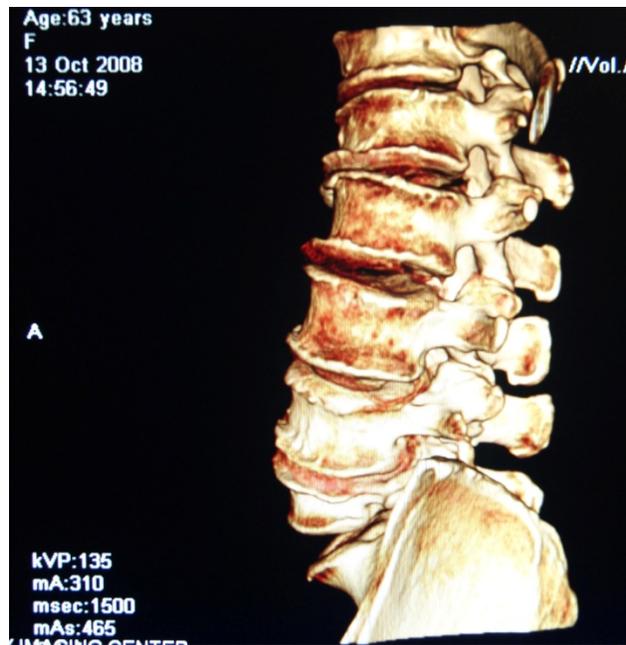


Figure 4 is a lateral view 3D CT image

Figure 4

### Diagnosis

The diagnosis in this case was:

1. Degenerative lumbar scoliosis with spinal stenosis
2. Central and left neural foramina lumbar spinal stenosis L3-4
3. Neural foramina stenosis L4-5
4. Left convexity rotoscoliosis with degenerative disc and facet disease

### Treatment:

Treatment goals were to reduce pain by at least 50-60%, improve the patient's activities of daily living, maintain her ability to continue working, and reduce her need for pain medication. She had been

unable to perform cardiac rehab due to her pain and an additional goal was to get her to the point that she could perform this much needed rehabilitation. A trial period of treatment consisting of 9 visits over a three week period was discussed with the patient.

The treatment used consisted of Cox decompression manipulation. The patient expressed some apprehension about chiropractic care so very gentle decompression was used to begin with. Treatment was initially focused on the lower thoracic and upper lumbar spine as well as the pelvis. The thoracic piece was rotated on the table in order to de-rotate the patient's scoliosis. The table was put in slight lateral bending as necessary, always looking to achieve the most comfortable position for the patient. Massage over the left buttocks was also used.

**Clinical Outcome:**

The patient tolerated the initial treatment well. By the fourth visit, I was able to introduce the use of ankle cuffs to her treatment. This provided her greater relief but it has always been done with great care given then degree of degeneration in her spine. Within two weeks of care, she had been able to go several days without the use of pain medication. After seven visits, her pain no longer extended past the buttock. Long axis distraction was added and eventually thoracic rotation while performing long axis distraction was used.

The reduction in her pain and increased mobility allowed her to continue working with her physical therapist to strengthen core. After three weeks of care she experienced a flare of right SI pain from either a physical therapy session or home exercise. We did additional treatment for the SI exacerbation and she was able to begin cardiac rehab approximately 2-3 months following her initial treatment in our office.

Today her condition is managed at a very high level. Because 1° to 3° per year of curvature progression occurs in 55-70% of adult scoliotics, I believe it is important to maintain as much flexibility and function in her spine as possible.(1) She receives treatment approximately every three weeks, for mild lower back tightness that gradually develops between treatments. She strives to be proactive in her care, in an effort to reduce the risk of experiencing another severe episode of pain. She rarely takes any medication for pain. She no longer experiences leg pain. She has been able to continue work on a full time basis. No surgery is contemplated at this time.

**Conclusion:**

I found the results of this case to be consistent with the findings of Gudavalli et al regarding flexion distraction providing superior relief of symptoms as compared to active exercise for the chronic low back pain patient. (2) In this case, as little as two weeks of flexion distraction manipulation was more effective than the previous two months of physical therapy.

This is an example of how Cox decompression manipulation can be used to effectively treat and manage a patient with significant scoliosis, stenosis and degenerative changes. In this patient's case, her heart condition and medications afforded her the opportunity to seek chiropractic care and avoid a second back surgery. I feel confident that if it were not for her cardiologist, she would have undergone back surgery with an uncertain outcome.

Respectfully submitted,  
Robert E, Patterson Jr., D.C.

References:

1. *Low Back Pain, Mechanism, Diagnosis and Treatment*, Fifth Edition, James M. Cox, DC, D.A.C.B.R., pg 597
2. Gudavalli, et al. "A randomized clinical trial and subgroup analysis to compare flexion–distraction with active exercise for chronic low back pain." European Spine Journal 15.7 (2006): 1070-1082.