

# TREATMENT OF A LUMBAR SPINE SYNOVIAL CYST WITH COX® DECOMPRESSION ADJUSTING.

Enclosed is my case report on a patient who underwent Cox® Decompression Adjusting treatment for a lumbar spine synovial cyst.

## CASE HISTORY:

On 12-13-2004, a patient presented to me with an acute low back injury, which was sustained that day while at work. The patient had fallen to the floor while trying to break up a fight between students at the school where the patient is employed. The patient remained on the floor restraining a student until help came. Upon standing up after the altercation ended, the patient developed lower left lumbar spine pain, which radiated into the left buttock and down the left leg. The pain quality was described as severe stabbing and shooting. The patient presented to me at the end of the workday for the evaluation and treatment of this condition.

## HEALTH HISTORY:

The patient has a past health history of spinal surgery to remove a synovial cyst at the right L4-L5 facet in January 2004 and gall bladder surgery. The patient also has a history of high blood pressure which is presently controlled with medication, hay fever and occasional low back pain for which was treated with chiropractic manipulative therapy.

## PRESENT COMPLAINTS:

Initially, the patient presented with severe left lumbar spine pain, which was described as stabbing and shooting. This lumbar spine pain radiated into the left buttock and down the back of the left leg into the left foot. Sitting, standing, bending, lifting and sneezing, aggravated the pain. The patient rated the low back and left leg pain at a 10+++.

## PHYSICAL EXAMINATION:

The patient is a 51-year-old female who is 5'2" tall, weighting 127 pounds. The patient was observed to have an average appearance, was in severe pain with difficulty upon ambulation and had a limping gait. The patient held herself in a right antalgic position while standing or sitting. Palpation of the lumbar spine revealed severe muscle spasms and tenderness upon pressure at the L3, L4 and L5 levels on the left, as well as tenderness at the left sacroiliac joint, left buttock and left Piriformis muscle. Ranges of motion of the lumbar spine 105 degrees on flexion, 20 degrees with pain on extension, 25 degrees on right lateral bending, 10 degrees with pain on left lateral bending.

## ORTHOPEDIC/NEUROLOGICAL EXAMINATION:

The patient was observed to have a positive Minor's sign, a positive left leg Bechterew's test, a positive Valsalva's and Bechterew's with Valsalva test. There was a positive left Kemp's, left Neri Bow and left Lewin's tests. The patient was able to toe walk, heel walk and had a decreased lumbar lordosis. The patellar and ankle DTR were rated at a +2 with an absent Babinski reflex. There was a positive left straight leg raise at 30 degrees with a positive left Braggard's and left medial hip rotation tests. Well leg raise, Linder's and Patrick tests were negative. Yeoman's, Ely's, Nachlas's Tests were positive on the left with tenderness noted at the left popliteal fossa. Prone Lumbar Flexion test was

positive. Muscle strength of the lower extremity, which included dorsi-flexion, plantar-flexion, hallux flexion, hallux extension, foot eversion, gluteus maximus, biceps femoris and quadriceps, were rated at +5 of 5. A sensory examination of the lower extremities was within normal limits.

#### LUMBAR SPINE MRI EXAMINATIONS:

1. MRI study of the lumbar spine without contrast dated 1-2-2004 taken at a local hospital revealed minimal budging discs at L2-L3 and L3-L4 causing minimal impression upon the ventral margin of the thecal sac. The foramens are patent bilaterally. Mild to moderate spinal stenosis caused by ligament and facet hypertrophy with mild narrowing of the neural foramen and lateral recesses bilaterally. At L5-S1 there is a small disc central disc protrusion with associated annular tear causing mild impression upon the ventral margin of the thecal sac. The foramen appears patent bilaterally.
2. Lumbar spine myelogram with post myelogram CT and reformatting study performed by a neurosurgeon dated 3-9-04 revealed a probable synovial cyst involving the facet joint at the level of L4-L5 on the right which compresses the adjacent thecal sac. There is also evidence of a diffuse annular bulge as well as degenerative facet changes, which results in a mild to moderate degree of secondary canal stenosis as well as lateral recess stenosis bilaterally at this level. There is mild asymmetric annular disc bulge at the level of L5-S1 which mildly compresses the thecal sac and asymmetrically and is slightly more pronounced on the right. (Synovial cyst was surgically removed in April 2004.)
3. MRI study of the lumbar spine pre and post gadolinium dated 12-23-2004 revealed mild osteoarthritis with mild early degenerative disc disease from L2 to S1. A cystic structure, measuring 1.1 x 0.9 cms., is noted in the left sided neural foramina at L4-L5 level suggestive of synovial cyst causing narrowing of the neural foramina and compression of the left L4 nerve root. Minimal fluid is noted in the left-sided facet joint at L4-L5 level as well as minimal compression of the left lateral aspect of the thecal sac at the same level secondary to hypertrophic changes involving the facet joints.



Figure 1. Axial view of L4-L5 disc from the 12-23-04 MRI study showing the synovial cyst at the left facet joint.



Figure 2 - Axial view of the L4-L5 disc from the 12-23-04 MRI study showing a left-sided synovial cyst.



Figure 3 - Axial view of the L4-L5 disc from the 12-23-04 MRI study.

#### DISCUSSION:

Past health history reveals that on January 2, 2004, the patient was referred by her PCP for a lumbar spine MRI study. (Report #1) Upon receiving the results of this MRI study, the PCP referred the patient to a neurosurgeon, who performed a lumbar spine myelogram dated 3-9-04, which revealed a right-sided synovial cyst at the L4-L5 level. (Report #2) This neurosurgeon had performed spinal surgery to remove the right-sided synovial cyst in April 2004. The patient had fully recovered from the April 2004 surgery and was asymptomatic. After experiencing the traumatic event to her lumbar spine on 12-13-04, the patient presented to me and then to a workers compensation physician on 12-23-04, who referred the patient for a lumbar spine MRI study which revealed the left sided synovial cyst measuring 1.1x 0.9 cms.. (Report #3) The WC physician instructed the patient to return to the

neurosurgeon for an evaluation of her condition. The patient elected to undergo a non-surgical course of treatment in the form of Cox® Decompression Adjusting/Manipulation.

#### CLINICAL OUTCOME:

From my initial examination, it was my opinion that the patient had sustained a left lateral disc herniation of the L4-L5 disc. The patient was given a treatment plan of Cox® Decompression Adjusting for 4 weeks at a frequency of 3x per week along with tetanizing electrical stimulation, ice applications and a home stretching program with activity restrictions. Tolerance testing was performed which indicated that the patient was unable to tolerate prone Cox® Decompression Adjusting, protocol 1. So, the patient was placed in the left side lying position and protocol 1 was able to be performed without lateralization of pain. The contact points in this position were L2 and S1. After 8 treatments, the patient reported that she had no pain in her left leg and she rated her lumbar spine pain at a 3 and was able to work without limitations. After 16 treatments the patient rated her back pain at a 1 without leg pain. After a total of 26 treatments, the patient had minimal residual effects from her condition and was instructed to return as needed. This patient was very happy with the result from the Cox® Decompression Adjusting as a second spinal surgery to remove another synovial cyst had been averted.

Respectfully,

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Submitted 4-11-06