



Treatment of Lower Back Pain In A Patient With A Lumbar Synovial Cyst

By

Bret A. White, DC, DABCO, CCSP

Vero Beach, FL

(772) 631-3995

bwhitedc25@gmail.com

www.tcsportschiro.com

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HISTORY

A 75 year old male widower and retired mailman who presents with lower back pain radiating into the right buttock of non-traumatic onset that has lasted for 4 to 5 months thus far. He is a non-smoker who drinks 1-2 alcoholic beverages per week. Both parents died in their 70s, mother due to lung cancer and father due to cancer with bone metastasis. Prior diagnoses include Merkel Cell Carcinoma (neuroendocrine carcinoma) of the skin on left lower extremity 10 years prior, residual lymphedema in left leg from the radiation therapy, controlled hypertension, controlled atrial fibrillation, and synovial cyst newly diagnosed by his neurologist.

CHIEF COMPLAINT

The lower back pain radiating into right buttock is getting progressively worse. He describes it as a sharp-stabbing pain that is worse when standing, walking down stairs, and on right foot heel strike. The pain is slightly better when sitting but still painful. He rates his pain as a 3-4 out of 10 (10 being worst pain possible) while at rest and sitting and "fairly severe" when standing or walking.

EXAMINATION

He is right handed, 6'2" tall and 190 pounds. His blood pressure is 147/99 (right arm/seated), pulse 63 bpm, and respiration 16 rpm. He has a left head tilt, high left shoulder, right high pelvis and right rib hump. There is significant swelling in the left extremity for which he wears compression stockings. His gait was unassisted but has an antalgic limp. Lumbar AROM were all decreased [F=40° E=11° RLF=11° LLF=12°]. RLF was particularly painful. Patellar and Achilles deep tendon reflexes 2+/4+ bilaterally. Vibratory sensation was intact at the mid-tibial shaft bilaterally. Motor strength in the left extremity was considered 5/5 bilaterally. Minor's sign was not present. Straight leg raise test elicited increased local low back pain on the right at about 45°. Well leg raise test did not elicit any subjective changes. Cox® Tolerance test was negative.

IMAGING

An MRI was performed prior to his presentation at our office revealing the synovial cyst at L4-L5.



Figure 1



Figure 2

DIAGNOSIS

A synovial cyst at L4-5 causing low back and leg pain is diagnosed.

TREATMENT PLAN

The treatment plan established his being treated 3 times a week for 2 to 4 weeks with Cox® Technic Protocol II to the lumbosacral spine seeking 50% relief of pain according to the Cox® Technic System of Back Pain Management protocols. 50% relief is measured subjectively by patient report on a numerical pain scale of 0 (no pain) to 10 (worst pain) and objectively via straight leg raise, Kemp's and range of motion. Cox® Protocol II is specific spinal manipulation and mobilization in all ranges of motion to the affected segment, L4-L5 for this patient, and is appropriate for patients whose pain doesn't extend below the knee and/or have attained 50% relief of pain. He remains under the care of his primary care physician, neurologist and cardiologist. At home, he is doing the Cox® Lower Back Home Exercises (#1-4 pelvic tilt, pelvic lift, knee-chest, and hamstring stretch).

TREATMENT OUTCOMES

This 75 year old male was treated a total of 6 visits over 2.5 weeks. His pain improved significantly, now only in lower back and no longer radiates into the right buttock. He says the pain is less severe and less frequent and only while standing and walking. He has no pain while sitting or bending. He has a high left shoulder and high right pelvis which the lumbar AROMs still somewhat decreased, but non-painful. Minor's sign is not present. Straight Leg Raise test is negative. Kemp's test is negative. His subjective findings were that on sitting/rest his initial 3-4 out of 10 rated pain is now 0 on a numerical pain scale, and on standing/walking his initial description of fairly severe pain is now a 1-2 out of 10 on a numeric pain scale. His Oswestry score improved by 12% particular improvement with "personal care" and "social life" categories and significant improvement with "lifting" and "changing degree of pain." His active lumbar spine ranges of motion were all non-painful with flexion increasing by 3%, right lateral flexion increasing by 4%, and extension and left lateral flexion increasing by 8%.



He presented to my office 1 ½ weeks before Christmas and only treated at a frequency of twice weekly due to holiday visitors, etc. He felt markedly better after his fourth visit, and we agreed to re-evaluate on his sixth visit. He determined that he was feeling the best that he had in many months and decided he did not wish to continue with further care. I opined that further improvement could be achieved; however he was discharged as per his request with recommendation to continue home exercises and to return to my office for any exacerbations. A 3-week follow-up phone conversation revealed he was still feeling well.

DISCUSSION

Once thought to be a surgically treated issue, pain related to synovial cyst responds to conservative treatment. In his study, Wilby describes the synovial cyst as a build-up of facet joint fluid due to a blockage by fragments of articular cartilage and bone embedded in the walls of 89% of cysts and in the walls of a bursa-like channel originating from the medial aspect of the facet joint capsule and extending into the ligamentum flavum. (1) Synovial cysts primarily occur at L4-L5 but may be seen at L3-L4 and L5-S1. They may present with radicular pain, neurogenic claudication or neurological deficits. A third of synovial cyst patients also have degenerative spondylolisthesis. (2-6) Current research recommends conservative treatment first before surgery for synovial cyst pain. (7) Cox® Technic protocols are described in the literature for conservative treatment and relief of synovial cyst pain. (2,8,9)

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