



## Case Report #2 – Synovial Cyst

### SYNOVIAL CYST

In 1993, I coauthored an article on Lumbar Intraspinal Extradural Synovial Cyst, A Case Study in the *Journal of the Neuromusculoskeletal System* 1(4) with Lee Hazen, DC, a resident. This paper pointed out that the historic treatment of synovial cyst has been operative decompression and excision, facet joint injection, and direct cyst puncture; my paper was the first reported case of conservative chiropractic relief of the synovial cyst. Here is presented another case of a large L4-L5 left synovial cyst treated with Cox distraction manipulation and physiological therapeutics.

A 58 year old female was seen for the complaint of 4 months duration of low back and left L5 dermatome pain radiating to the leg and toes, which felt tingling and numbness. Failure of 50% relief of the pain within 4 weeks of care prompted an MRI to be ordered.

MRI of the lumbar spine (shown in axial and sagittal views, see respective arrows) shows degenerative disc disease at the L2-L3 through L5-S1 levels and specifically an 18x11x12 mm synovial cyst of the left L4-L5 facet joint. The mass has a hypointense rim and is filled with hyperintense fluid. The L4-L5 facet joints reveal degenerative hypertrophic changes. There is mild L4-L5 disc bulging. The left sided cyst does contribute to severe narrowing of the left lateral recess and the proximal left foramen, which would compress the L5 descending nerve root. This patient also has Bertolotti's Syndrome, namely, a transitional first sacral segment.

This patient was given 18 office visits from September through November 2002 with complete remission of low back and leg pain. Treatment consisted of Cox distraction adjusting of the L4-L5 intervertebral disc and facet joints by applying three 20 second distraction sessions to the L4-L5 disc space, each 20 second session consisting of 5 four second pumping movements of the caudal section of the instrument. At 50% relief of the radicular pain, the facet joints were placed into their physiological ranges of motion consisting of flexion, lateral flexion, circumduction, and mild extension. Electrical stimulation into the L4-L5 left facet joint consisted of positive galvanism for ten minutes followed by ten minutes of tetanizing current. Ice was applied during both electrical treatments to the low back. The patient applied ice packs at home daily for thirty minutes to the L4-L5 facet level. Nutritional support was Discat Plus (glucosamine and chondroitin sulfate), calcium citrate, and vitamins, minerals, enzymes, amino acids, and herbs in Formula 1. The patient went to Florida for the winter months and when returning 6 months later, this week, was still without pain in the low back or left leg.

### Discussion:

Lumbar intraspinal facet cysts are associated with significantly degenerated facet joints. L4-L5 is the most commonly affected spinal level, being more common in females. Symptoms are low back pain and unilateral nerve root involvement. The synovial cyst is also termed hypertrophic synovitis, cysts of the ligamentum flavum, ganglion cysts, and controversy exists over whether there is a true differentiation between these types of cysts. Tissue studies show that the synovial cyst contains reactive and dense fibrous connective tissue, hyperplastic synovial membrane, and fine calcifications. Regardless of the tissue pathology, treatment has included surgical removal via hemilaminectomy or laminotomy, steroid injection, direct puncture of the cyst, or now chiropractic distraction adjustment with physiological therapeutics.

It will take many years for this new treatment to become common practice. This statement is based on the work of Dr. Mary E. Frank, MD, board member of the American Academy of Family Physicians published in AMNews staff, Dec 23/30, 2002 in which she quotes the National Academy of Sciences that "An average of about 17 years is required for new knowledge generated by randomized controlled trials to be incorporated into practice, and even then application is highly uneven... and that there are insufficient tools and incentives to promote rapid adoption of best practices."

Armstrong reported in an article entitled CLINICAL GUIDELINES VERSUS CLINICAL PRACTICE IN THE MANAGEMENT OF LOW BACK PAIN, *International J of Clinical Practice* 57(1), 1003, that clinical practice does not follow current clinical guidelines for low back pain. He cited 200 patients referred to a large teaching hospital for care of low back pain. These patients had received McKenzie, exercise, and advice most commonly with rarely receiving manipulation. Low use of electrotherapy was recorded. The results emphasized that clinical guidelines are not observed in the care of low back pain and there is a need to address the barriers to the adoption of evidence based therapy for low back pain. I would comment that this paper endorses the failure of modern medicine to follow the Agency for Healthcare Policy and Research of the United States government which in 1994 stated that manipulation was the first line of care for low back pain in the United States. It is sometimes lonely to be a clinician who keeps abreast of current care options.

I hope you find this case both interesting and of clinical benefit.

Respectfully submitted, James M. Cox, D.C., D.A.C.B.R.