CASE STUDY:
56 YEAR OLD MALE WITH MARKED MOTOR WEAKNESS AND ATROPHY OF THE LEFT QUADRICEPS MUSCLE TREATED SUCCESSFULLY WITH COX® PROTOCOLS

presented by
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A 56 year old, healthy caucasian male presented to our office with a history of motor weakness and atrophy of the left quadriceps muscle group of 5 months duration. He also described numbness along the lateral aspect of the left leg from the hip to the ankle of the same duration. This patient is a licensed psychologist, as well as a professional dance instructor. His symptoms arose following a dance lesson and progressed rapidly. He had no radicular pain associated with the weakness, but did have a long standing history of recurrent back pain, and was treated occasionally by a chiropractor. He had been very active most of his life enjoying long distance running, mountain biking and dancing. His condition limited his ability to teach dance, as the loss of power caused him to be unstable and unsure of his footing. However, it did not affect his daytime occupation which primarily involved sitting. His examination revealed a noticeable wasting of the left anterior thigh muscles, with a strength rating of 0/5 on attempted lower leg extension. Patellar and Achilles deep tendon reflexes were absent bilaterally. He was unable to appreciate sensation around the left ankle when tested using a Wartenberg pinwheel. Apart from his history of recurrent low back pain, he has enjoyed excellent health throughout his lifetime.

His medical physician had referred him for physiotherapy treatment, and he elected to see an acupuncturist, but derived no benefit from either form of care. Four months following the onset of symptoms, he was referred for x-rays and CT scan of his lumbar spine. The CT scan (see image below) revealed the following as reported by a hospital radiologist:

There is osteophytosis seen extending form L3 to S1 anteriorly.

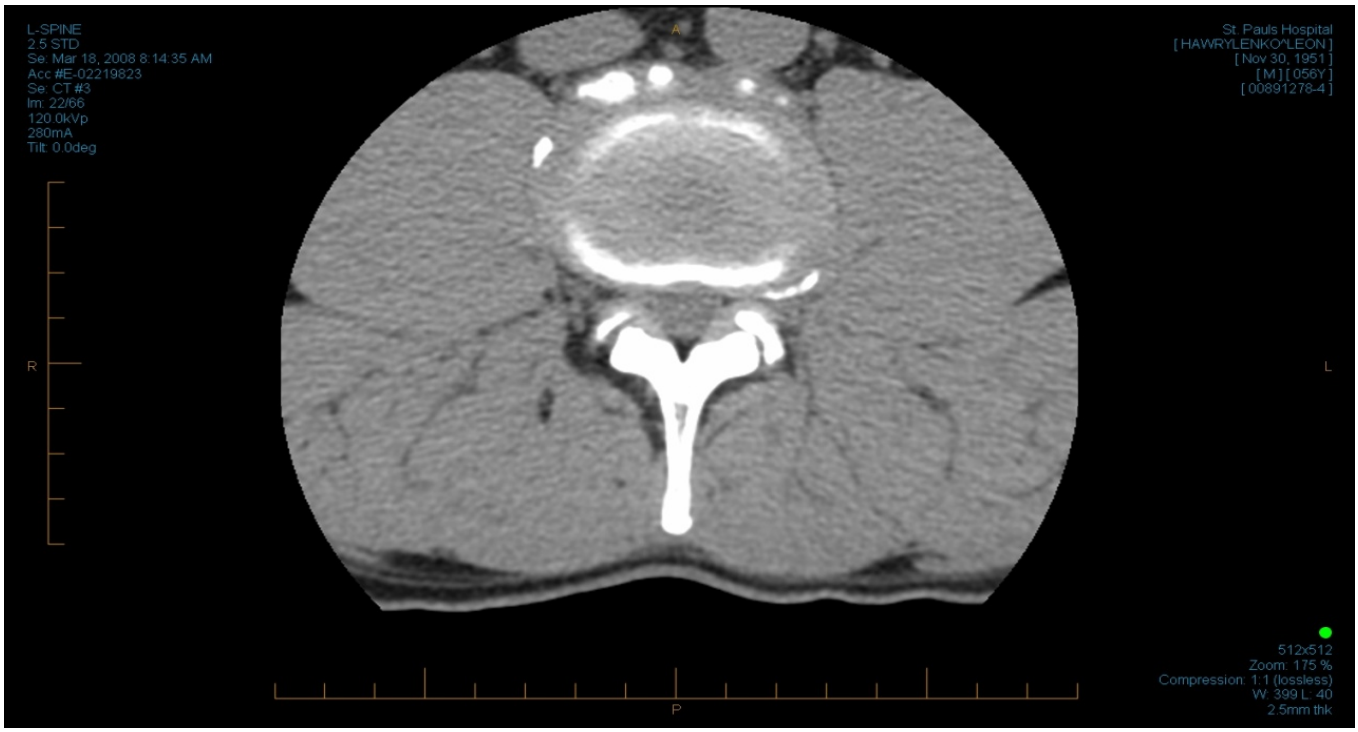
Broad based posterior disc bulging at L2-3 as well as ligamentum flavum hypertrophy with disc material extending into the left lateral recess and left neural foramen with compression irritation of the L2 and L3 nerve roots.

Broad based posterior disc bulging at L3-4 with moderate canal encroachment as well as mild bilateral foraminal narrowing

Broad based posterior disc bulging at L4-5 superimposed upon facet arthropathy and ligamentum flavum redundancy. Moderate canal encroachment and mild left and right foraminal narrowing

Left paracentral disc protrusion at L5-S1

Of interest is the concluding impression of the radiologist:
"Mild lumbar spondylosis as described above."



Note on this image:
This is a CT image of L2-3, left is reading right. *Broad based posterior disc bulging at L2-3 as well as ligamentum flavum hypertrophy with disc material extending into the left lateral recess and left neural foramen with compression irritation of the L2 and L3 nerve roots*

The motor branch of the femoral nerve associated with the quadriceps muscles arises from the second, third and fourth lumbar nerves. It was apparent that the combination of degenerative arthropathy, ligamentum flavum hypertrophy and multi-level disc herniation had contributed to stenosis in the osseoligamentous canals of the lumbar

spine causing nerve compression leading to weakness and numbness. At the time of his initial consultation with me, his pain was negligible.

After careful tolerance testing, we began treatment using the Cox® Protocol 2, which was tolerated very well. I also applied cold laser treatment to the affected discs and to the femoral nerve in the inguinal region near the femoral triangle. His treatments were scheduled every other day for the first two weeks. He reported a significant improvement of strength and a lessening of the numbness in his leg within the first 4 treatments. He was also asked to perform isometric exercises for the quadriceps and "wall sits" to his tolerance to encourage reconditioning of the affected muscles. He independently opted to return to his physiotherapist for co-management of his case. He reported that he had been prescribed Mackenzie extension exercises which immediately aggravated his back and reproduced numbness to his leg. He conceded that this was a mistake, discontinued physiotherapy, and agreed to follow my recommendations until his condition was resolved.

He has been treated 10 times using the Cox® Protocol 2 and his quadriceps strength has improved to a 4/5, and the muscle girth has shown visible improvement. He experiences very little numbness in the affected leg, and he is more confident on his feet during his dance lessons. We will continue to follow this patient as he understands the need for long-term management.

This case demonstrates that Cox® Protocols were the most appropriate when compared to other non-surgical approaches. An MR exam would have been beneficial; however, residents of British Columbia are rarely scheduled for this type of exam due to social medicine limitations. A private MR option is available, but it comes with a significant cost to the patient with no chance of insurance reimbursement.