CASE STUDY: SACRO-ILIAC PROBLEMS AND THE BENEFIT OF PROLOTHERAPY OVER TIME

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The sacroiliac syndrome and ligamentous injection prolotherapy continue to be hot topics in current back care. I write to share with readers a case report.

A pleasant 83 year old white male was seen by myself in consultation initially in March of 1989, at the Washington Hospital in Washington, Pennsylvania, for symptomatic left sacroiliac pain. The patient was seen briefly, noted to have normal lumbopelvic alignment, and was injected with Depo-Medrol and marcaine, 0.25%. He subsequently did quite well and was discharged from the hospital with his symptoms resolved.

He was not seen again in the hospital until he was admitted by his family internist on 21.4.91 for a chief complaint of sudden onset of lower back, left hip and groin pain, incapacitating and non-ambulatory. Because of the past history of severe chronic obstructive pulmonary disease with emphysema, the patient had been on long-term steroid therapy. There was also a known history of chronic renal failure, congestive heart failure, and chronic lymphocytic leukaemia, all relatively inactive at the time of admission. Prior x-rays in 1989 had shown L3-4 degenerative disc disease and also some osteoporosis secondary to chronic steroids. Technetium bone scan in 1989 showed sacroiliac joint asymmetry.

The patient was seen in consultation at the Washington Hospital on 23.4.91 by myself. The internist had ruled out radiculopathy and neuropathy clinically, but because of the history was concerned about avascular necrosis of the hip. On physical examination during consultation, tumbar mobility was restricted, especially in flexion, with a chief complaint of left groin pain increased with lumbopelvic flexion from the standing position. However, good relaxation was present in the lumbar paraspinals with no evidence of spasm or tightness. The left iliac crest was noted to be slightly lower than the right in the functional standing position and there was 3+ to 4+ tenderness over the entire length of the left sacroiliac joint. A supine bridging maneuvre, followed by the knee chest position, followed by the patient attaining the long sit position produced a significant 2.5 cm left lower extremity functional shortening. The patient was intact neurologically, and my impression was symptomatic left anterior innominate, with a shorter left lower extremity and secondary left sacroilitis. However, it was felt that avascular necrosis of the left hip should be ruled out and an MRI was suggested.

Standard films of the pelvis and left hip showed no fractures, dislocations or significant bony abnormalities. Lumbar spine films confirmed the previously noted hypertrophic degenerative changes, especially at L3-4. An MRI of the left hip, including coronal plane studies, revealed no evidence for changes in the marrow to suggest avascular necrosis or other marrow infiltrative processes. A further complexity is that the patient had been seen in consultation by a urologist during this admission and during the March of 1989 admission. He had had prior work-ups for cancer of the prostate but they were previously normal. Because of this, the urologist suggested another Technetium bone scan. This was done on 21.4.91 and was found not to be consistent with any spinal metastatic disease. Technical factors prevented evaluation of the sacroiliacs with confidence; the left sacroiliac joint may have had increased activity. A standard A-Pradiograph in the standing position revealed a functional leg length discrepancy, with pelvic iliac crest imbalance. Accordingly, my recommendation to the attending physician was that the patient follow-up in my clinic, after discharge from the hospital, if no other serious explanation could be found for the patient's incapacitating back pain. While still in the hospital, prostate biopsy revealed well-differentiated adenocarcinoma, with potential for slow growth, and as noted previously no

sign of any metastatic spread to the back or pelvis, by bone scan. Urology was reconsulted during the present admission and orchidectomy was done for prostate cancer.
The patient was subsequently seen in my outpatient office on 8.5.91. This time he was accompanied by his son. As part of our initial screening work-up, back patients are subjected to isometric computer evaluation using 10 functional work positions (NIOSH), with the Dynatron 2000 isometric testing apparatus. The patient was only able to complete 8 out of 10 tests and simply was unable to perform the pull-in and push-out work position.
The patient was then brought in the examining room and his history was subsequently reviewed by myself. It was at this point that I was astonished to hear the following story. The son told me that his father, my patient, had had only one prior episode of severe, incapacitating low back pain, left hip pain, and groin pain in his life. That evidently occurred in 1964 and the patient was subjected to a number of medical procedures, including electromyography, to rule out herniation and radiculopatby.
These were all negative. The patient's son was living in Philadelphia, Pennsylvania at the time, and he and his father were desperate. He placed his father into a van and drove him (in the supine position) to Philadelphia, approximately a 6 hour ride. The son had heard of a ‘back wizard’, an orthopaedic surgeon named Dr. Myers. He brought his father to Dr. Myers, who evaluated the patient and told him that "prolotherapy might help your father". The son went on to tell me that "Dr. Myers said that he was taught by a Dr. Hackett". Further "Dr. Hackett was taught by a Dr. Ongley". The patient was immediately placed under general anaesthesia the same day he was seen by Dr. Myers in 1964 and underwent manipulation followed by approximately "70 to 80 injections of ligamentous points" the son tells me. The response to injection prolotherapy was dramatic, the son states. He states that his father "couldn't walk, was doubled over, and was totally incapacitated". Yet on the same day, after receiving the injection and manipulations as outlined above, the patient himself was able to drive back to Pittsburgh, in the upright position, after treatment. The son stated that he thought Dr. Myers had injected "glucose and procaine". However, the patient, 83 years old but with excellent memory, recalled that "there were 4 different medications involved". They were also given medication labels and information packs and literature by Dr. Myers, 27 years ago, as patient education materials during the prolotherapy regime. Evidently over the next 6 to 9 years a total of approximately 300 injections were given and this patient's pelvis was stabilised successfully.
After obtaining the above history, I then undertook a physical examination similar to that performed in the hospital the week before. Upon placing the patient into the knee chest position in an attempt to initiate the long sit position and biomechanically evaluate for leg length discrepancy, there was a loud click which was observed in the presence of the patient's son. The patient was placed in a standing position and he noted significantly decreased pain. His pelvis was level and it was apparent that he had spontaneously at least temporarily reduced with regard to his pelvic malalignment. He was brought back to the computer analysis station and was asked to attempt to the pull-in and push-out manoeuvre and performed said quite easily without pain, complaints, or discomfort. On physical examination, both in my office and in the hospital, I bad also noted gynecomastia, a finding which the family physician had felt was consistent with chronic obstructive pulmonary disease, long-term.
Accordingly, my final diagnoses were chronic low back; with symptomatic left anterior innominate dysfunction and a left lower extremity leg length discrepancy with shortening of 2-1/2 centimetres, as well as a very unstable pelvis. It was also felt that the patient had a well-documented history of ligamentous prolotherapy 27 years earlier by Dr. Myers in Philadelphia, Pennsylvania. He had also been seen by me two years prior to the current intervention for active sacroiliac pain and had an injection for said pain. He was status-post recent (21.4.91 admission) orchidectomy due to the history of the cancer of

the prostate but had no evidence of metastasis. He was noted to have long-term steroid consumption by history, and also had physical findings consistent with feminisation.

DISCUSSION

The above case is extremely instructive and interesting from a number of viewpoints. A history of intact lumbopelvic function for a period of 27 years with the exception of isolated sacroiliac pain two years ago followed by recent recurrence of incapacitating left lower back pain, hip pain and groin pain was noted in this patient. Long-term benefits from injection prolotherapy would seem to be confirmed by this history.

Additional ligamentous weakening factors such as history of chronic oral steroids and the history of severe progressive feminisation, both associated with the chronic obstructive pulmonary disease, further testify to the apparent effectiveness of Ongley prolotherapy.

Clinical reduction of the objectively confirmed left anterior innominate with left lower extremity shortening followed by the ability to perform pull-in and push-out testing further confirmed temporary reinstatement of functional integrity. The pull-in and push-out dysfunction, in the above clinical context, has been demonstrated to be associated with structural abnormality (Frost, American Back Society Fall Symposium Abnormal isometric torque values in computerised individual muscle group functional capacity testing for cervical, mid-back and low back injury San Francisco, California 7 December 1991). In this particular case, the pull-in and push-out were subsequently functional after spontaneous reduction, thereby confirming the above prior sacroiliac dysfunction.

Based upon all of the above, the revival of Ongley injection prolotherapy (T. Dorman, Treatment for spinal pain arising in ligaments-using prolotherapy: a retrospective survey, San Luis Obispo, California 25 April 1990) is to be hailed as a potential long-term solution to chronic low back pain secondary to pelvic dysfunctions.

Dr. Bernard's findings (ABS Spring Symposium, Toronto 1991) are also confirmed by this case report. Specifically, Dr. Bernard stated "when two or more sacroiliac joint stress manoeuvres were positive, and other well-recognised causes of back pain are excluded, the diagnosis can be made with certainty. When recognised, a favourable therapeutic response may be anticipated with joint mobilisation, manipulation, or injection". This was a retrospective study based on 250 patients.

Finally, and most importantly, this patient's case is a piece of living medical history. It ironically highlights the frustration of some back caregivers currently working to ‘reinvent the wheel’ as well as ‘find the Holy Grail’. This is especially so as Dr. Ongley may very well have found it, over a third of a century or so ago! I would be interested in the readers' response and comments.