

Chiropractic Care for a Patient With Subluxation & Unsuccessful Surgery of the Lumbar Spine

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ABSTRACT

Objective: The objective of this paper is to report on improved function and quality of life in a patient under chiropractic care who previously had unsuccessful surgery of the low back.

Clinical Features: The patient was a 58 year old male who entered the clinic with a primary complaint of low back pain and left lateral leg pain. He suffered an acute injury to the low back upon performing job duties and elected to have surgery on the lumbar spine. Afterwards, the condition has worsened.

Interventions and Outcomes: The patient was adjusted using specific osseous motion palpation/Gonstead manual adjustments. Improvements were noted in several areas. VAS improved from 2 to 8, although the Borg pain scale remained relatively constant.

SF-36 testing showed a decrease in Physical PCS in the initial stages of treatment and a rise in the latter stages and there was an increase in the Mental MCS. Posture showed significant improvement as did ROM for lumbar flexion in the initial phases of care.

Conclusion: This single case study demonstrates improved function and quality of life in a failed back surgery case. More research is needed in this vital area.

Key Words: *Chiropractic, Quality of Life, failed back surgery syndrome, low back surgery, lumbar spine, subluxation.*

Introduction

Back pain is one of the primary reasons that a person will visit a physician.¹ Souza reports that "Approximately 80% of adults will have low back pain at some time in their lives."² Back pain is treated by surgical means and non surgical means and literature has shown that many low back surgeries are not successful. Wadell states that for people who have simple low back pain, the rate of failure can be as high as 99%.³ With this failure, the condition is often made worse. Fager and Freidberg reported that there are a large number of patients who have had poor results from surgery and that because of the surgery, their pain and problem had worsened.⁴ This results in a condition known as failed back surgery syndrome.

This syndrome has been "...defined as the post surgical patient's experiencing considerable pain, having compromised neurological status, requiring the same dosage of pain medication, being unable to return to work and reporting an unimproved activity level."^{5,6}

The failed back surgery syndrome has also "...been described as a complex condition with many possible contributory factors. These include incorrect diagnosis, incorrect indication for surgery, psychological distress, compensation claims and surgical complications."^{7,8} This condition is relatively common according to Kim and Michelsen.⁹ Also, Rothman stated that almost 30% of people that he performed surgery on had already had one surgery on the lumbar spine.¹⁰ And Fager and Friedberg reported that in 1976 they had up to 105 patients with this condition sent to them.⁴ Thus, this is a prevalent condition that has a major impact on those affected.

As far as treatment goes, many surgical procedures have been attempted to salvage the failed low back but none have been uniformly successful.⁴ Thus, what other options do people have for low back pain resulting from surgery? As mentioned earlier, people have the option of non-surgical treatment. One natural, effective, non-surgical method of treatment for low back pain is chiropractic care.

1. Private Practice-Naples, FL

Research shows that people who have had previous back surgeries are now seeking chiropractic care.¹¹ The purpose of this paper is to report on the successful chiropractic care of a case of failed back surgery.

Case Report

History

A 58 year old male 5' 9" and 250 lbs. entered the clinic with a primary complaint of low back pain and left lateral leg pain. He reported that the condition originally began suddenly while performing job duties. He reached outward to get an item and heard and felt a pop in the low back. At that time pain radiated down the back of the right thigh and into the leg. He had little to no low back pain at that time.

He tried chiropractic at that time and reported the pain traveled down the left side of the lower extremity beginning around the left hip area, skip the thigh, and pick up again on the left lateral leg and sometimes go into the top of the foot. He still had very little back pain if any.

He had no success with chiropractic care at that time and surgery was recommended. Following surgery his pain was worse and he now had back pain in addition to lower extremity pain. He had a laminectomy of L5/S1 and he reported that the experience was "intense." He also reported that after the surgery the pain traveled down the right thigh and leg just like it did when he had the original injury. When the patient entered the clinic approximately 3 years following surgery, he described the pain pattern on the left lower extremity as described above. The pain upon entering the clinic was more on the left side of the low back and was rated as mild to moderate. He described the pain around the left lateral leg to be worse, especially around the fibular head. He described it as dull, aching and cramping. The patient feels the pain more after activity such as lifting and also after standing or walking. He reported the pain diminishes upon squatting or sitting.

The patient's occupation used to be installer of sheet metal products for 25 years. He reported that the injury and surgery disabled him from his job; the surgery made him much worse and as a result, he claimed disability.

Chiropractic Examination

A chiropractic examination was performed and revealed postural abnormalities such as left head tilt, right high shoulder, left high ilium and left externally rotated foot. Inclination was used for lumbar range of motion (ROM). The results were as follows: flexion 30 degrees with mild pain at the right SI joint; extension 20 degrees with no pain; left lateral flexion 25 degrees with mild pain at the left SI joint; right lateral flexion 22 degrees with mild pain at the right SI joint; and right and left rotation were 5 degrees with mild pain at the left SI joint.

Orthopedic tests were performed and revealed the following: mild pain at the right SI joint on right Advancement test; SLR was negative, both legs could only be lifted to 45 degrees due to tight hamstrings, and it produced mild pain in the middle

lower back. Left Patrick Fabere test was positive for localized mild left hip pain, and Hibb's and Yeoman's tests were both positive for the right SI joint producing mild pain.

Other significant tests such as Valsalva's, Kemp's test, and Toe/heel walk were negative. Patellar and achilles deep tendon reflexes were +1 bilaterally. Sensation of the L1-S2 dermatome levels were within normal limits (WNL), although on the subsequent exam there was a decreased sensation of the right fourth metatarsal and toe that was not picked up on the first exam. The patient reported that he had it at the time of the first exam; he said that it was the result of surgery he had on the right ankle in 1986. Muscle tests for tibialis anterior, extensor hallucis longus, and peroneus longus/brevis were WNL.

Motion and static palpation for the cervical and lumbopelvic areas revealed the following findings: varying degrees of fixation for the Occ./C1, C1/C2, L5/S1, and SI joint articulations. Tenderness and muscle spasm were noted in these regions. Thoracic spine fixations and tenderness were also found.

Radiographic Findings

A-P lumbo-pelvic and lateral lumbar films were taken of the low back. These radiographs revealed a right lumbar listing, mild decreased disc height at L5/S1, anterior lipping and spurring at L5/S1, severe facet arthrosis at L5/S1, degenerative anterolisthesis of L5 grade 1, and non-united secondary ossification centers of the L1 transverse processes.

Outcome Measures

SF-36 testing, visual analog scale (VAS), Borg pain scale, posture, and ROM were utilized during care to monitor improvement in the patient's condition. SF-36 testing showed a PCS of 35 and an MCS of 44. VAS for that day was 5 on a scale 1-10. Borg pain scale revealed a 5,5,9 for pain right now, typical or average pain, and pain at its worst respectively. Ten on this scale is the worst, while ten on the VAS is the best. Initial posture and ROM findings have already been discussed.

Chiropractic Diagnosis

The diagnosis made was lumbar and pelvic segmental dysfunction with associated left lateral leg pain.

Treatment and Results

The patient was treated with specific osseous motion palpation/Gonstead manual adjustments to reduce vertebral subluxations contributing to the diagnosis. The analysis utilized was primarily instrumentation, motion palpation, static palpation, leg checks, and x-ray. The patient was adjusted in the lumbar and pelvic regions using side posture, in the thoracic region using primarily a Hi-lo table, and in the cervical region using primarily cervical chair and supine cervical sets. There were 4 re-evaluations and a re-physical. I will discuss the treatment, changes, and results for each of these periods, including a summary of the SF-36, VAS, and Borg pain scale.

1st Re-evaluation

The first re-evaluation was performed one month later. Up until this time, the patient's care plan was 3 times per week. After the initial physical, when the patient came back for the first adjustment, he had dropped from a 5 to a 2 on the VAS, thus either the physical or some other external factor had made him worse. Various segments were adjusted throughout his treatment. The major focus up to the first re-evaluation was on adjusting subluxations found at the Occ./C1, C1/C2, and SI joint articulations, although some thoracic adjusting was performed. He was mostly a 4 on the VAS during this period of care. Also during this time, he was also given stretches for the calf muscles, hamstrings and low back. By the time of the first re-evaluation on, the patient was a 5 on the VAS. SF-36 testing revealed a PCS of 30 and a MCS of 54. The Borg pain scale was 4,7,10. Lumbar flexion had a marked improvement from 30 to 50 degrees.

2nd Re-evaluation

The second re-evaluation was performed three weeks later. Up to this time the patient's care plan was 2 times per week. He was a 5 on the VAS on every visit during this period except for one. The major focus again was to the upper cervical area and pelvis, with some adjusting to the thoracic spine and the L2/L3 articulation.

Through this period of adjusting, the patient reported that the left leg pain had diminished significantly and the low back pain had diminished but was present more than the leg pain. Remember that in the initial stages of care, the leg pain was worse than the low back pain; thus the leg showed significant improvement. At the time of the re-evaluation, the patient was a 6 on the VAS. Posture was WNL, except for right high shoulder of 1 cm, and ROM for the lumbar spine revealed lumbar flexion increased another 10 degrees to 60 degrees.

3rd Re-evaluation

The third re-evaluation was performed in another three weeks. But before discussing this evaluation, I will discuss some events leading up to it. On the visit after the 2nd re-evaluation, the patient dropped back down to a 5 on the VAS. He made me aware that although he was retired, he had been doing a lot of bending and stooping while working on remodeling a house. This shows improvement in itself, that the patient felt well enough to partake in these activities at this time as he had not been able to engage in this type of activity. On the next visit, the patient reported that his left leg pain was 75% better since beginning care, and that his low back pain was 50% better. He was encouraged to continue his stretching exercises for the lower extremity.

On the following visit, the patient dropped to a 4 on the VAS due to some of the stretches aggravating the low back area. The stretches were modified and by his next visit, he was back to a 6 on the VAS. The major focus during this time continued to be on the upper cervical area and pelvis up to the re-physical. The L2/L3 articulation was adjusted as well as the upper and lower thoracic spine when needed. The care plan continued to be 2 times per week.

By the time of the third re-evaluation, the patient had no left leg pain and he was a 6 on the VAS. Posture analysis revealed left head tilt and high right shoulder 1cm.

Lumbar flexion remained the same at 60 degrees. SF-36 testing revealed a PCS of 34 and a MCS of 57. The Borg pain scale was 5,6,9. After the third re-evaluation, the same areas of the spine continued to be addressed when needed and the patient continued to improve. He improved to a 7 on the VAS and maintained it all the way up to the re-physical. He also had no left leg pain at all during this period.

Re-physical

At the time of the re-physical, the patient continued to maintain a 7 on the VAS. The following changes were noted: right high shoulder 0.5 cm., and lumbar flexion decreased to 45 degrees. All other lumbar ROM were WNL. Mild pain was present at the sacrum on lumbar extension, right and left lateral flexion and left and right rotation. The orthopedic tests that were positive before were now found to be negative. Patellar and achilles reflexes were the same at +1 bilaterally. Sensation was still decreased on the right 4th metatarsal and toe, a result of the ankle surgery. SF-36 testing revealed a PCS of 36 and a MCS of 56. The Borg pain scale showed improvement as well at 4,5,7.

4th Re-evaluation

This evaluation was performed within five weeks. Up to this point, the patient was being seen 1-2 times per week. The major focus for adjusting did not change as the patient continued to improve. The patient did not drop below a 7 on the VAS during this period and improved to a 7.5 on one visit and an 8 on another. He still had no leg pain and only complained of mild low back pain at one visit. At the time of this 4th re-evaluation, the patient reported a 7 on the VAS. Posture was WNL. SF-36 testing revealed a PCS of 35 and a MCS of 59. The Borg pain scale was 6,6,8. The patient's care plan continued to be 1 time per week.

The patient had been seen 32 times. He was up to an 8 on the VAS and still had no leg pain at all. When asked subjectively how he was doing, he reported feeling much better since beginning chiropractic care and that chiropractic care had made a big difference in his life. At the time of this writing the patient was still under chiropractic care at 1 time per week and had maintained a level of 8 on the VAS. He has continued to improve and has not yet reached his maximal optimal potential for health and wellness.

Discussion

This particular patient probably had sustained a prolapsed disc as a result of the original injury. It usually happens suddenly after years of micro-tearing, with a loss of elasticity involved. The symptomatology is just as it occurred in this case. The pain will alternate from side to side. Also usually no disc orthopedic tests will be found to be positive, due to the decreased elastic response.

These type of disc problems are often very difficult to treat.

However, side posture manipulation/adjustments have been shown to be effective in treating lumbar disc herniations.^{7,12}

A study conducted by Gatterman, Cooperstein, Lantz, Perle, and Schneider supports the fact that side posture adjusting is rated among the highest forms of chiropractic treatment for patients with low back pain associated with leg or buttock pain.¹³ It should be noted that treating this type of low back condition takes both time and patient compliance. This patient allowed that time and was consistently compliant; and as a result he began to show significant signs of improvement.

It was mentioned earlier that before having the surgery, the patient went to a chiropractor and the results weren't favorable. A possible explanation for this is the kind of technique used by the chiropractor. The patient reported that the chiropractor used an Activator on his low back and neck and only used manual osseous adjusting for his upper back. The fact that the Activator was used to adjust the low back instead of manual side posture adjustments could have been the reason the patient didn't improve. Cassidy et al reported in a study that up to 1993, there were no useful studies to show that the Activator was effective in managing lumbar disc herniations.¹²

Through the progress of treatment, the patient showed improvement in several areas. One area was the VAS. The patient improved from a 2 before the first adjustment to an 8 towards the end of the reported period. Another area that showed improvement was lumbar flexion range of motion. It improved throughout most of care but decreased slightly in the latter parts of care. It is suspected that this was due to a lack of compliance with stretching of the lower extremity muscles, especially the hamstrings. Stretching was enforced in the initial stages of care but not during the latter part.

All orthopedic tests were WNL on the re-physical which showed an improvement in joint, ligament and muscle function. Also, the patient's posture improved over the course of treatment. Posture is a direct window into the spine and nervous system and how they are functioning.

The Borg pain scale and SF-36 testing showed interesting results. The Borg pain scale only showed a decrease in present pain from 5 to 4 in two re-evaluations and a decrease in the pain at its worst from 9 to 7 and 8 on two re-evaluations. Otherwise it was fairly constant. The SF-36 testing showed a PCS of 35 and MCS of 44 upon beginning care. The PCS did not improve consistent with his subjective reports. The MCS, however, showed an improvement to 62 on re-evaluation and was 59 following re-evaluation, indicating chiropractic care's impact on the mental aspect of this patient's health.

A possible reason the PCS did not improve may be due to the patient's work habits while remodeling the house.

An important point to note is that the Borg pain scale and the PCS statistics conflicted with the VAS and patient reported improvement. The Borg pain scale stayed relatively constant and the PCS only increased slightly, whereas the patient's VAS continued to improve. The patient reported improving to the point of no leg pain and only slight low back pain. One explanation for this could be due to a limitation of matter. The patient's condition, as a result of the injury and complications

of surgery, may have been aggravated in certain positions while remodeling the house and he remembered these activities at the time of filling out the SF-36 and Borg pain scale each month. Such activities and low patient compliance with stretching before and after the activity could be reasons for these findings.

Other areas of improvement to mention are those of the patient's low back pain and leg pain. Nyiendo, Haas, Goldberg, and Sexton reported on a study showing that chiropractors were more effective than Medical doctors at treating pain that radiated below the knee.¹⁴ This finding held true in the current case study; chiropractic care was very successful in treating the patient's pain below the knee. The patient's leg continued to improve under chiropractic care, and during the last two months he reported no leg pain at all.

Also the patient's back improved to the point that it was only slight to mild in nature and is shown by improvement in the VAS. The improvement in this patient can be attributed to the reduction of vertebral subluxations in his spine and stretching of the lower extremity. By reducing these subluxations, proper motion and nerve function were restored to his spine and nervous system.

As a result, he enjoys increased mental function, no leg pain, diminished back pain, better posture and an overall better quality of life.

Conclusion

Literature has shown that failed back surgery syndrome is a common problem, and that more patients are seeking chiropractic care for the solution to such a devastating condition. Chiropractic care can improve function and quality of life as it did in this patient. It is my hope that this case will stimulate more research to be done on the efficacy of chiropractic care as an effective treatment for unsuccessful surgery of the lumbar spine. It is also my hope that people with low back disorders such as disc herniation will seek out chiropractic care first, due to the failure rate and consequences of low back surgery; and that people who have already had an unsuccessful surgery will see that chiropractic care could improve their quality of life when given the chance.

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