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Case Reports

Chiropractic Distraction Spinal Manipulation on Postsurgical Continued Low Back and Radicular Pain Patients: A Retrospective Case Series



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Abstract

Purpose: The purpose of this case series is to report on changes in pain levels experienced by 69 postsurgical continued pain patients who received Cox Technic Flexion Distraction (CTFD).

Methods: Fifteen doctors of chiropractic collected retrospective data from the records of the postsurgical continued pain patients seen in their clinic from February to July 2012 who were treated with CTFD, which is a type of chiropractic distraction spinal manipulation. Informed consent was obtained from all patients who met the inclusion criteria for this study. Data recorded included subjective patient pain levels at the end of the treatments provided and at 24 months following the last treatment.

Results: Fifty-four (81%) of the patients showed greater than 50% reduction in pain levels at the end of the last treatment, and 13 (19%) showed less than 50% improvement of pain levels at the end of active care (mean, 49 days and 11 treatments). At 24-month follow-up, of 56 patients available, 44 (78.6%) had continued pain relief of greater than 50% and 10 (18%) reported 50% or less relief. The mean percentage of relief at the end of active care was 71.6 (SD, 23.2) and at 24 months was 70 (SD, 25). At 24 months after active care, 24 patients (43%) had not sought further care, and 32 required further treatment consisting of chiropractic manipulation for 17 (53%), physical therapy, exercise, injections, and medication for 9 (28%), and further surgery for 5 (16%).

Conclusion: Greater than 50% pain relief following CTFD chiropractic distraction spinal manipulation was seen in 81% of postsurgical patients receiving a mean of 11 visits over a 49-day period of active care.

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Introduction

Persistent low back and extremity pain following spine surgery is reported in up to 50% of patients.¹⁻³ Specific clinical outcome of spine surgery with fusion for degenerative lumbar spine conditions in 208 patients showed 62.5% satisfied, 19.7% partially satisfied, and 17.8% of patients dissatisfied.⁴ Postsurgical continued pain (PSCP) sends patients to the offices of physicians, surgeons, and pain specialists alike in overwhelming numbers.⁵ Although surgery for radiculopathy caused by herniated lumbar disk and symptomatic spinal stenosis shows improved short-term benefit compared with nonsurgical care, the benefits diminish long term.

Choi et al⁶ found that low back and radicular pain returned within 6 months or longer in 70% of 707 postsurgical cases and that 19% experienced no relief or had immediate aggravation of pain after surgery. Complementary alternative care was chosen by 47% of these patients, as opposed to conventional medicine, including herbal medicine, acupuncture, electro- and pharmacupuncture, bee venom, manual therapy, and physical therapy. Blond et al⁷ report that spine surgery can cause morphological change in neural tissue causing "neuropathic back pain" with increased response of peripheral nervous system receptor input to the central nervous system. Successful clinical pain relief of PSCP patients under chiropractic spinal manipulation is reported in this and other studies. Spinal manipulation is recommended by the American Pain Society and the American College of Physicians for primary care of low back pain.⁸

The financial burden of lumbar disk disorder care is in excess of 100 billion dollars a year to treat with 5% of the patients absorbing 75% of the cost.⁹ Spine care annual expenditures increased by 95% between 1999 and 2008. Chiropractic expenditures were stable, whereas physical therapy was the most costly service.¹⁰ Readmission rates for spinal stenosis decompression among Medicare patients are approximately 8%-10% per year, and fusion did not protect against subsequent readmission.¹¹ On second opinion for 155 consecutive patients who were suggested to have spine surgery, less than 44% were recommended to have it.¹²

The frequency and outcomes of chiropractic treatment of PSCP patients are not sufficiently documented. PSCP patients seeking care following spinal fusion are often diagnosed with sacroiliac joint pain, internal disk disruption, and zygapophyseal joint pain.¹³ A trial of conservative management which includes chiropractic

manipulation has been recommended as appropriate prior to surgical intervention.¹⁴

At present, there is little literature about the response of postsurgical patients to chiropractic care. Therefore, the purpose of this case series is to report on changes in pain levels experienced by 69 PSCP patients who received Cox Technic Flexion Distraction (CTFD).

Methods

Fifteen chiropractic physicians in North America retrospectively collected data from the records of 69 PSCP patients who sought their care for continued or recurrent spine and/or lower extremity pain following spine surgery. The patient treatment period was from February 2012 through July 2012. Informed consent was obtained from all patients who were included in this study. Information regarding subjective patient pain levels at the end of the treatment period and again 24 months later was retrieved from the records.

Two protocols of CTFD were administered depending on the patient symptoms. Both were performed with the patient lying prone on a specially designed manipulation table having a stationary thoracic piece and a moveable caudal section.¹⁵ In performing lumbar spine CTFD, the lumbar spine is positioned on the thoracic section of the table and lower extremities on the caudal section. All motions were tested for patient tolerance prior to delivery. This was done by performing CTFD starting at low application force and building to tolerable levels of treatment force but not exceeding tissue tolerance. The doctor's thenar hand contact is on the spinous process above the spinal segment as CTFD is applied. If no spine fusion was present, each vertebral segment to be distracted and manipulated was tolerance tested and treated. If spinal fusion is present, the unfused levels of the spine adjacent to the spinal fusion were treated. The treated spine levels were from the lower thoracic spine to the lumbosacral spine.¹⁵

Protocol I was used in treating patients with lower extremity radicular pain. Protocol II was used on patients exhibiting low back pain and lower extremity pain not extending below the knee or having attained 50% relief of their radicular pain while treated with Protocol I. Protocol I CTFD consists only of manual flexion or automated long y-axis distraction at a fixed flexion of the table's caudal section and delivered to patient tolerance. This is used in treating patients with radiculopathy and is the only form of CTFD used until the patient exhibits 50% objective and subjective relief

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