

# CASE STUDY

## Chiropractic Care of a Pregnant Patient Presenting with Intrauterine Constraint Using the Webster In-Utero Constraint Technique: A Retrospective Case Study

*Danielle Drobbin, B.A., D.C.<sup>1</sup> Claire Welsh, B.S., D.C.<sup>2</sup>*

### Abstract

**Objective:** The chiropractic care of a patient presenting with a malposition/malpresentation pregnancy using Webster In-Utero Constraint technique is described.

**Clinical Features:** A 41 year old and 36 week pregnant female presented to the office after her perinatologist via ultrasound stated the fetus was in a breech position and recommended a planned c-section. Patient stated she was looking for a natural alternative to a pre-planned cesarean section.

**Interventions and Outcomes:** Light-force, contact-specific (Webster In-Utero Constraint technique) chiropractic adjustments were performed on the sacrum, along with relief of abdominal ligamentous and muscle tension by use of manual trigger point therapy. After the application of 5 Webster Technique adjustments, the fetal position turned from a longitudinal fetal lie and breech fetal presentation, to a longitudinal fetal lie and vertex fetal presentation.

**Conclusion:** Chiropractic care of a malposition/malpresentation pregnancy using Webster In-Utero Constraint technique was presented. The relief of musculoskeletal and ligamentous causes of intrauterine constraint was achieved. These findings were noted through the use of pre and post ultrasonography and Leopold's Maneuver.

**Key Words:** *Chiropractic, pregnancy, Webster Technique, malposition, malrepresentation, intrauterine constraint subluxation*

### Introduction

Obstructed labor occurs when the passage of the fetus through the pelvis is mechanically blocked<sup>1</sup>. This obstruction is due to musculoskeletal and ligamentous disproportions creating intrauterine constraint. When it is not diagnosed quickly, or when it is improperly managed, obstructed labor is associated with significant complications.

Because of these complications, elective cesarean sections have risen to an all time high. According to data from the National Hospital Discharge Survey, the rate of cesarean section delivery in the United States rose from 4.5 per 100 deliveries in 1965 to 22.7 in 1985, and in 1985 an estimated 851,000 live births were cesarean deliveries.<sup>2,3</sup> During the past decade, cesarean birth rates have risen dramatically, reaching more than 50% in some regions of the world, despite a lack of evidence of any increase in obstetric emergencies.<sup>4-6</sup>

- 
1. Private Practice of Chiropractic, Atlanta, GA
  2. Private Practice of Chiropractic, Roswell, GA

Rubin, *et al*, found a maternal mortality rate due to caesarean section of 59.3 per 100,000 deliveries, compared to 9.7 per 100,000 for vaginal deliveries.<sup>7,8</sup>

Cesarean sections are surgical operations that have been shown to increase the chances of major complications during the birthing process. Some of the more severe life threatening risks include hemorrhage, blood clots, and bowel obstruction. Less severe and more common risks include longer lasting and more severe pain and infection, along with increased scarring and adhesions in the pelvis during recovery. Planned cesarean birth has also been associated with increased risks of fetal and neonatal mortality and neonatal morbidity, compared with spontaneous vaginal delivery.<sup>9</sup> It is because of these possible complications that as health care providers we should find alternative ways to treat complicated pregnancies.

The Webster In-Utero Constraint Technique is a chiropractic adjustment of the sacrum followed by a manual trigger point therapy of a myofascial nodule to reduce the effects of abnormal musculoskeletal and ligamentous effects causing intrauterine constraint. This paper will highlight the management of a patient with intrauterine constraint and the successful avoidance of surgical intervention.

## Case Report

### *Patient History*

The patient is a 41 year old 33 weeks pregnant female who was under treatment by a chiropractor for relief of musculoskeletal causes of intrauterine constraint. The perinatologist had confirmed by ultrasound that the baby was in a breech presentation. The patient presented into the office looking for an alternative to a cesarean section which was planned to occur at 39 weeks of gestation.

The patient had delivered one child, a 6lb 14oz baby girl on previously. The birth was induced at 41 weeks and 4 days. The patient had an epidural and delivered the infant vaginally without complications. After this birth the patient had one spontaneous abortion.

### *Chiropractic examination*

Upon initial physical examination, the patient stated having lower back pain and presented with the following notable findings: muscle spasm on palpation and point tenderness and pain at the vertebral areas of C2, C6, T3, T9, L3, L4, L5, and sacrum.

There was significant decreased active range of motion in the lumbar and cervical regions in all directions. Orthopedic testing was completed: The Anterior Femoral Stress Test produced pain in the right anterior portion of the thigh. The Patrick A.K.A. Fabere test produced bilateral low back pain. The Foraminal Compression Test produced pain in the neck bilaterally. The Jackson Compression Test produced pain in the neck bilaterally. All neurological testing reported normal deep tendon reflexes bilaterally of 2+ at biceps, brachioradialis, triceps, patellar, and achilles. No radiographs were taken due to the contraindication related to pregnancy.

### *Chiropractic care*

Patient had previously been under chiropractic care for two years using the Thompson technique the entire time. To address the constraint the technique was switched to the light-force, contact-specific Webster in-utero constraint technique. The patient was analyzed and was found to have a posterior-right sacral base along with a myofascial trigger point on the lower anterior abdomen in the area by the round ligament.

A light-force, contact-specific, pisiform to right sacral base, side posture adjustment was applied with the line of correction being posterior-anterior, right-left, and superior-inferior. This was followed by a light effleurage trigger point therapy on the left lower anterior abdomen to release the muscle nodule. The Webster in-utero constraint technique was continually used on the next four visits over a ten day period. On each of these visits, the same sacral subluxation and myofascial trigger points were found.

The sacral base was found subluxated in the direction of posterior and left. The myofascial trigger point was found on the right lower anterior side of the abdomen in the area of the round ligament. All were corrected with the same technique. The left posterior sacral base was corrected using a light-force, contact-specific, pisiform to left sacral base, side posture adjustment with the line of correction being posterior-anterior, left-right, and superior-inferior. This was followed by light effleurage trigger point therapy on the right lower abdomen to release the muscle nodule. On one visit the C1 vertebra was also adjusted while patient was lying supine with a lateral index finger contact on the right transverse process, with a line of correction being superior-inferior, lateral-medial, and posterior-anterior.

### *Outcome*

After 5 Webster In-Utero Constraint Technique adjustments were given to the patient over a 1 month period, an ultrasound was obtained by the perinatologist. The ultrasound confirmed that the baby had moved into the vertex position and the planned cesarean section was cancelled. The patient had a vaginal delivery of a baby boy weighing 7lbs 8 oz without complications.

## Discussion

As the pregnancy process progresses, the hormone relaxin greatly increases and is secreted throughout the body creating pelvic laxity, which allows the pelvis to accommodate for the size and shape of the uterus as it gets larger. At the same time, this laxity decreases the amount of support on the pelvis to withstand environmental daily strain. From a chiropractic perspective, this alteration could lead to vertebral subluxations and in-utero or intrauterine constraints. Sacral misalignment causes the tightening and torsion of specific pelvic muscles and ligaments. Because these muscles and ligaments become tense, they have a constraining effect on the uterus which can restrict the baby's position and may prevent the baby from moving into the head down position in the final trimester. The Webster In-Utero Constraint Technique has been shown to balance the pelvic structures, muscles and ligaments.

An infant in a breech position from intrauterine constraint can lead to a longer and more painful labor with a greater chance of interventions such as external versions, epidurals, episiotomies and cesarean sections. The most common cause of obstructed labor is disproportion between the fetus head and the mother's pelvis.<sup>1</sup> In addition to its effects on maternal mortality, obstructed labor can be a significant contributor to infant perinatal morbidity and mortality.<sup>1,10</sup>

#### *Webster In-Utero Constraint Technique*

The Webster In-Utero Constraint Technique has two steps. The first step is a low force sacral chiropractic adjustment intended to relieve the tension exerted on the uterus due to sacral rotation.<sup>11</sup> The presence of trigger points or myofasciitis indicates possible skeletal and postural abnormalities.<sup>11,12</sup> Myofascial trigger points prevent the full lengthening of a muscle or other fascia and may be latent, eliciting pain only upon palpation.<sup>11-13</sup> The presence of a myofascial trigger point has been defined as a highly localized painful or sensitive spot in a palpable taut band of skeletal muscle fibers.<sup>14</sup> It is not uncommon that pregnant women with musculoskeletal trigger points often have low back pain because they can mimic other neuromuscular or back related musculoskeletal problems.<sup>15</sup> The underlying mechanism for the development of these discrete hyperirritable nodular areas of muscles, first described in 1949, is unknown. The commonly accepted pathological explanation includes an area of contracted muscle sarcomeres and irritable muscle end plates.<sup>16,17</sup>

During step 2 of the Webster Technique, the woman's lower abdomen is palpated for nodules, taut bands, edema, adhesions, or tenderness in the area of the round ligament.<sup>11</sup> Upon location of the nodule, light effleurage trigger point therapy is performed to release latent or acutely painful muscle nodules. The efficacy of trigger point therapy is well supported by the medical literature and appears in many physical medicine and rehabilitation texts.<sup>11,12,18-20</sup>

#### **Conclusion**

The paper presented the chiropractic care of a 41 year old pregnant patient. As evidenced by this case, the Webster In-Utero technique was successful at relieving musculoskeletal and ligamentous causes of intrauterine constraint. It is important to note that this chiropractic technique solely corrects the sacral misalignments and musculoskeletal conditions leading to intrauterine constraint and is therefore completely within the chiropractic scope of practice. It is not the practice of obstetrics.

The Webster in-utero constraint technique may have the ability to facilitate easier, safer deliveries for both mother and infants. When successful, the Webster Technique can aid patients in avoiding the costs and risks associated with cesarean section, external cephalic version or vaginal trial of breech.<sup>11</sup>

#### **References**

1. Konje JC, Ladipo OA. Nutrition and obstructed labor. *Am J Clin Nutr.* 2000 Jul;72(1 Suppl):291S-297S. Review.
2. S M Taffel, P J Placek, and T Liss. Trends in the United States cesarean section rate and reasons for the 1980-85 rise. *Am J Public Health.* 1987 August; 77(8): 955-959.
3. Placek PJ, Taffel S, Moien M. Cesarean section delivery rates: United States, 1981. *Am J Public Health.* 1983 Aug;73(8):861-2
4. Belizán JM, Althabe F, Barros FC, et al. Rates and implications of caesarean sections in Latin America: ecological study. *BMJ* 1999;319:1397-402.
5. Bailit JL, Love TE, Mercer B. Rising cesarean rates: Are patients sicker? *Am J Obstet Gynecol* 2004;191:800-3.
6. Armson BA. Is planned cesarean childbirth a safe alternative? *CMAJ.* 2007 February 13; 176(4): 475-476.
7. Anderson G, Strong C. The premature breech: caesarean section or trial of labour? *J Med Ethics.* 1988 March; 14(1): 18-24.
8. Rubin GL, Peterson HB, Rochat RW, McCarthy BJ, Terry JS. Maternal death after cesarean section in Georgia. *Am J Obstet Gynecol.* 1981 Mar 15;139(6):681-5.
9. MacDorman MF, Declercq E, Menacker F, et al. Infant and neonatal mortality for primary cesarean and vaginal births to women with "no indicated risk," United States, 1998-2001 birth cohorts. *Birth* 2006;33:175-82.
10. Konje JC, Obisesan KA, Ladipo OA. Obstructed labor in Ibadan. *Int J Gynaecol Obstet.* 1992 Sep;39(1):17-21.
11. Pistolesse RA. The Webster Technique: A chiropractic technique with obstetric implications. *J Manipulative Physiol Ther, Volume 25, Issue 6, Pages E1 - E9 R.*
12. Blaser HW. *Massage: Current application.* In: Peat M editors. *Current physical therapy.* Philadelphia: : BC Decker; 1988;.
13. Travell JG, Simons DG. Baltimore: Williams and Wilkins; 1983.
14. Hong CZ. Specific sequential myofascial trigger point therapy in the treatment of a patient with myofascial pain syndrome associated with reflex sympathetic dystrophy. *Australas Chiropr Osteopathy.* 2000 Mar;9(1):7-11.
15. Gerwin RD. Myofascial aspects of low back pain. *Neurosurg Clin N Am.* 1991 Oct;2(4):761-84.
16. Minty R, Kelly L, Minty A. The occasional trigger point injection. *Can J Rural Med.* 2007 Fall;12(4):241-4.
17. Rudin NJ. Evaluation of treatments for myofascial pain syndrome and fibromyalgia. *Curr Pain Headache Rep* 2003;7:433-42.
18. Kottke FJ, Lehmann JF. *Krusen's handbook of physical medicine and rehabilitation.* 4th ed. Philadelphia: : WB Saunders; 1990;.
19. Braddom RL. *Physical medicine and rehabilitation.* 2nd ed. Philadelphia: WB Saunders; 2000.
20. Peat M. *Current physical therapy.* Philadelphia: BC Decker; 1988.