CASE STUDY

Resolution of Transverse Breech Presentation Confirmed by Ultrasound Following Webster Technique to Reduce Subluxation

Megan Afshar D.C.¹

Abstract

Objective: The purpose of this case study is to discuss the results obtained using the Webster Technique on a pregnant patient with a fetus in transverse presentation.

Clinical Features: A 28-year-old female presented at 36 weeks pregnant with her third child. A transverse position of the fetus was confirmed with ultrasound by the ObGyn.

Interventions and Outcomes: Through the use of Webster Technique protocol, the patient was found to have a sacral subluxation and taut fibers along the round ligament. After one Webster Technique adjustment, the fetus was confirmed to have moved from transverse position to vertex position via ultrasound.

Conclusion: This case describes a patient who was able to avoid a cesarean section and proceed with an uncomplicated vaginal delivery. Ultrasounds were obtained of the transverse position of the fetus before the administration of the Webster Technique and after with the fetus in the vertex position.

Key Words: Chiropractic, Webster Technique, breech, transverse position, subluxation, intrauterine constraint

Introduction

The normal lie for a fetus in the third trimester is in the vertex position, or head down. The prevalence of a fetus being breech, with feet or buttocks down, in the third trimester is approximately 2-4%.¹ According to Seeds² transverse lie, or shoulder presentation, occurs in approximately 1 in 300 deliveries. There are several complications that are associated with abnormal presentation, but these complications are compounded with transverse lie. Risk of premature rupture of membranes, placenta previa and higher perinatal mortality rates are elevated with transverse lie in comparison to vertex presentation.²

Many factors have been associated with a fetus settling into the breech presentation and not moving into the vertex position in the last trimester. These complicating factors include higher maternal weight gain, higher body mass index at term, smoking, increased hemoglobin values, as well as shorter umbilical cords.³,⁴ Other suspected risk factors include the shape of the uterus and the relaxation of the uterus.⁵

It has also been suggested that a musculoskeletal component and intrauterine constraint may influence the movement and position of the fetus. The pelvis and uterus must have the laxity required to stretch and provide room for the growing fetus. To accomplish this task, the pregnant body secretes the hormone relaxin. At times this laxity can

1. Private Practice of Chiropractic. Greenville, SC
Contribute to misalignments of the pelvis, which can give way to tension on the various uterine ligaments. The round ligament of the uterus is of great concern as it may cause intrauterine constraint if compromised, preventing the fetus from moving into the proper vertex presentation.9

Currently in America, 86% of breech presentations are birthed through Cesarean section. The risks involved with Cesarean include obstetric shock, uterine rupture, cardiac arrest and hemorrhage which can result in the need for a blood transfusion and/or a complete hysterectomy.7 The overall rate of Cesarean section continues to grow in America despite the 10-15% incidence rate the WHO has calculated as appropriate.8 In 2011, the rate of Cesarean sections occurring in the US was 32.8%, and roughly 12% of those were due to a breech presentation.9,10

The medical community has made external cephalic version (ECV) a common practice for women seeking an alternative to Cesarean section. ECV is a manual turning technique where the Obstetrician will try to turn a breech fetus to the vertex position by using specific hand movements.10 There are several complications associated with ECV ranging from severe maternal discomfort to changes in fetal heart rate, premature rupture of membranes, umbilical entrapment and preterm labor.11 Hofmeyr reported that fracture of the baby’s femur and fetal-maternal hemorrhage were also reported as complications.12 And research has shown that there is a higher rate of medical intervention associated with cephalic presentation pregnancies that had used EVC when compared with pregnancies where ECV had not been performed.13

There are complementary and alternative medical (CAM) options that are available to women wishing to influence the position of their fetus, but not undergo ECV. These therapies include moxibustion, acupuncture, laser, perinatal massage, and knee chest position. There is no supporting literature for any of these techniques with the exception of moxibustion.14 Moxibustion is a technique that uses an incense stick on a pressure point on the pinky toe. There is very little in the literature on the subject, and the research that has been done was not able to determine if moxibustion was more successful than ECV with the resolution of a breech positioned fetus.15-17

In addition, a technique was developed by Larry Webster DC in 1978 to address the sacral subluxation and distortion of the round ligament through chiropractic. The technique is defined as:

a specific chiropractic analysis and diversified adjustment. The goal of the adjustment is to reduce the effects of subluxation and/or SI joint dysfunction. In so doing neuro-biomechanical function in the sacral/pelvic region is improved.18

This technique involves light adjustments to the sacrum as well as soft tissue work done to specific pelvic muscles to restore function to the pelvis and aid in the fetus assuming the vertex position, ideal for vaginal birth.18

Case Report

History

The patient was a 28-year-old female who presented at 37 weeks pregnant with the fetus in transverse position. She had received chiropractic care early on in the pregnancy, but paused care at week 15 of the pregnancy. She started experiencing low back and sciatic like pains down both of her legs. And had decided to continue her chiropractic care.

The patient was pregnant with her third child. She went to the ObGyn for regular check ups, which included ultrasound. At her 36-week check-up, the ultrasound confirmed the fetus to be in a transverse position. Her ObGyn informed her on the statistics of transverse presentations moving back to the vertex position, and encouraged the patient to schedule a cesarean section. The patient was in search of an alternative to cesarean section when she presented to the clinic.

Both previous pregnancies ended with vaginal births and had no complications.

Chiropractic Examination

Palpatory examination revealed muscle spasm on either side of the back and point tenderness around L1 and Sacrum. Heel to buttocot test revealed bilateral leg lag. According to the Webster Technique, this indicates that the sacral base has moved posterior.

Interventions & Outcomes

The patient was analyzed and adjusted using Webster Technique. For correction of the posterior sacral base, the patient laid prone on a chiropractic table with a pregnancy pillow for comfort. The pelvic piece of the table was raised and the dorsal piece was lowered to make room for the patient’s belly. A contact was taken on the second sacral tubercle and the tables drop mechanism was used to achieve the adjustment. This particular adjustment on second sacral tubercle with the drop was done 3 times. The leg lag was rechecked using the heel to buttocot test, and it was markedly decreased on both sides.

With the patient in a supine position, the chiropractor palpated for taut fibers along the right and left round ligament. No taut fibers were felt in this position, so the patient moved to a seated position. In this position, the palpation revealed a taut fiber along the right round ligament. A gentle pressure was applied with the chiropractor’s thumb with an anterior to posterior and inferior to superior line of drive. After 20 seconds of sustained pressure, the taut fiber released.

At the patient’s 37-week check-up the fetus had moved into the vertex position confirmed via ultrasound. The patient continued receiving chiropractic care through the remainder of the pregnancy. She received 1 additional Webster Technique adjustment, and 3 Diversified Technique adjustments. She had an uncomplicated vaginal delivery at 40 weeks.
Discussion

A fetus is deemed as malpositioned when, in the third trimester, it has not moved into the normal vertex position. There are several variations of a fetus position that is not ideal for delivery. Under the category of breech is Frank Breech, where the fetus is lying vertically and just the sacrum is presenting (about 60%), Single Footling Breech, where the fetus is lying vertically and one leg and sacrum are presenting (about 35%), and Complete Breech, where the fetus is lying vertically and the sacrum with both feet are presenting (less than 5%). Another occurrence of malposition is Transverse Lie, where the fetus is laying horizontal and the shoulder is presenting. This is the most rare of all the malposition presentations.19

Complications with breech presentation are common and perinatal morbidity and mortality is increased three times when compared with fetuses in the vertex position. The most widespread complications include trauma and hypoxia, cord prolapse, congenital malformations, and even death.19 And while not detected until later, nearly 20% of term breech fetuses had a degree of handicap established by 4 to 5 years of age. These term breech children performed tests of balance, fine motor skills, visual acuity and stereopsis at a lesser level than their vertex counterparts.12

Intrauterine constraint is defined as any force external to the fetus itself that would prevent the fetus from its normal an expected descent into the head-down position. This constraint is suspected to be contributory to fetus malposition, which is found in 2-4% of all pregnancies in the third trimester.1,19 If the breech presentation is not corrected, whether spontaneously or through intervention, the majority of the pregnancies will end in Cesarean Section. The occurrence of a breech fetus spontaneously resolving after 34 weeks of gestation is about 9%.20 Doctors have reported favorable results with intervention to relieve the intrauterine constraint. According to Borggren, 92% of the cases that received intervention resulted in the resolution of the breech position.20,21

Cohain describes five common reasons why a fetus might not make the normal descent to the vertex position.22 Topping the list is lack of normal mobility of the pregnant woman, multiple pregnancies, constraint of the uterus due to shape or any other external or internal factor that would affect the movement of the fetus, any head shape that might not fit well into the inferior part of the pelvis, and shortened umbilical cords—which is extremely rare, but still a factor.

The Webster Technique looks at abnormal biomechanics in all weight bearing individuals, whether pregnant or not. In the case of the pregnant woman, these abnormal biomechanics might contribute to intrauterine constraint, but can be used on pregnant women who are not found to have a breech fetus. Initially the technique was described as a “breech turning technique”, but that language has been abolished from the description of the technique as to not get confused with ECV. While several women over the last 30 years have experienced spontaneous resolution of a breech presenting fetus after the application of the Webster Technique, the technique is focused on removing sacral subluxations and addressing soft tissue abnormalities.18 In this respect, the Webster Technique is addressing the source of the problem and not the sequela, the malpositioned fetus.

The Webster Technique is not known to have any associated risks when used on a pregnant woman. This extends to both the mother and the fetus. This perceived safety is based on clinical experience and a review of the literature surrounding the technique.19 It is important to note that the Webster Technique is not to be confused with the practice of obstetrics, nor is it to be associated with ECV. The trained chiropractor at no time is attempting to move the position of the fetus, but rather works with the pregnant woman’s ilia, sacrum, and soft tissue structures in order to realign the pelvis.21

A subluxation was in its early days defined by BJ Palmer, the developer of Chiropractic, as having four components: Misalignment or malposition of a vertebra; Occlusion or narrowing of the spinal canal that houses the spinal cord; Pressure or impingement from this misalignment placed on this spinal cord; Interference to the nervous system from the aforementioned.23 This concept was later expanded upon by Stephenson in his 1948 Chiropractic Textbook as “the condition of a vertebra that has lost its proper juxtaposition with the one above, or the one below, or both; to the extent less than a luxation; and which impinges nerves and interferes with the transmission of mental impulses.”24

According to Kent’s Dysafferentation Model of Subluxation there is both kinesiologic dysfunction and neurological involvement associated with every subluxation. This stems from the fact that each intervertebral motion segment is full of nociceptive and mechanoreceptive structures and therefore any input to the CNS that is misrepresented or misinterpreted will result in faulty response from the CNS.25 In that sense, Kent goes on to state, “if afferenent input is compromised, efferent response may by qualitatively and quantitatively compromised.”25 In short, motor dysfunction results from nerve interference and the nerve interference stems from the vertebral subluxation. The detection and specific correction of this vertebral subluxation is key to restoring a proper efferent response.25

Compressive forces are placed on the pelvis from the increasing weight as a result of the growing fetus, and the ligaments supporting the pelvis are loosened by the substantial levels of the hormone relaxin being released by the pregnant woman’s body.26 This can be a reason why pelvic instability is commonly noted throughout pregnancy. While the body is inherently prepared biomechanically to carry the growing fetus with its formed and forced closure of the pelvis, over the course of the pregnancy, muscles and ligaments fatigue and biomechanics alter. This results in continued instability and subluxations of the pelvis and sacrum.27

The instability and subluxations of the pelvis and sacrum will put tension on organs in the pelvis, including the reproductive organs. The round ligament is a main factor in the support of normal uterine positioning.21 When the round ligament is affected by tension placed on the pelvis, it can be palpated as tender nodules or myofascial trigger points.28 These myofascial trigger points place and even greater stress on to the uterus which further contributes to the intrauterine
constraint.21

Seeing the pelvis as a tensegrity model, stress and distortion on one part of the pelvis will have an affect globally on the rest of the pelvis. Once the pelvis subluxates and the bony integrity of the pelvis is altered, the round ligament is affected with a greater restraint placed on it.26 If this distorts the geometry of the pelvis, and the fetus cannot easily sit in its normal vertex position, breech or transverse lie presentation is possible. This distortion may be palpated on the body as it is expressed as tension in the soft tissue and misalignment of osseous structures, in particular the round ligament and sacrum.29

**Chiropractic Literature Review**

Although a breech positioned fetus is not common, it is estimated that nearly 4% of singleton pregnancies will result in breech presentation. The prevailing treatment in the medical community is cesarean section, with up to 86% of pregnant women with breech presentations undergoing this procedure.28 Most fetuses in a malposition will resolve before 34 weeks of gestation, but after the 34 week mark the chance of resolution decreases to 9%.20

Dashtkian and Whittle-Davis described the case of a 25-year-old female at 31 weeks of gestation with a breech presentation with hopes to prevent a cesarean section. The patient was analyzed and adjusted using the Webster Technique on two occasions. Four hours after the first adjustment, the fetus had moved from breech to transverse position. This was confirmed with a fetoscope by the chiropractor. After the second visit, the fetus moved from transverse to vertex position. This was confirmed on ultrasound by the patient’s obstetrician.14

Rubin described three cases who presented with breech presentation. All three underwent the Webster technique. Subject A received two adjustments before the fetus resolved to vertex position; subject B experienced a resolution in three adjustments; subject C, a resolution in four adjustments.11

Stone-McCoy and Sliwka described the case of a 37-year-old who presented to the office at 35 weeks of gestation with a fetus in the frank breech position with a scheduled cesarean section. The patient received a total of seven adjustments using the Webster Technique, and had a conformer resolution of fetus position after the fifth adjustment, which was confirmed on ultrasound by the patient’s obstetrician.30

Brill describes a case who presented to the chiropractor with breech presentation. After her third Webster adjustment, the patient was reported to have felt the fetus turn into the vertex position. She claims to have known the fetus was in the correct position after she felt her first ever “kick in the ribs.” The patient’s pregnancy ended in a vaginal birth at home.30

Alcantara, Ohm and Kunz describe a practice-based research network study that included a sample from 24 chiropractors and 81 pregnant subjects, all with malpositioned fetuses. All patients received Webster adjustments, but several sought additional forms of care—exercises, ECV, slant board, acupuncture, moxabustion and homeopathy. 70% of the subjects in this network study reported a correction to the vertex position by the time of delivery.27

Abbott describes a case where a 30-year-old female presents to the chiropractor at 12 weeks of pregnancy for sacroiliac pain. At 34-weeks it was determined by ultrasound that the fetus was in the breech position. In hopes of avoiding a cesarean section, the Webster Technique was utilized. After three adjustments, it was confirmed on ultrasound that the fetus had moved to the vertex position.31

Kunau presents a case series with resolution of five malpositioned fetuses in Amish women. Three of the cases presented with breech fetuses, one with a transverse presentation, and one with an oblique presentation. Each case underwent Webster adjustments. Each case saw resolution of the malposition and went on to have uncomplicated births—four of which were home births.32

**Conclusion**

This case report discussed the chiropractic management of a patient with a transverse lie fetus utilizing the Webster Technique. Women in this same position are often faced with the challenge of deciding what is best for their health and for the health of the fetus. Common solutions include cesarean section and ECV, however both come with risks to the mother and the fetus. It is suggested that more research be conducted on the safety and effectiveness of the Webster Technique on pregnant women experiencing intra-uterine constraint.

**References**

1. Kenfack, B. Does the Advice to Assume the Knee-Chest Position at the 36th to 37th Weeks of Gestation Reduce the Incidence of Breech Presentation at Delivery?. *Clinics in Mother and Child Health.* 2012;9:5


