CASE STUDY

Resolution of Breech Presentation and Successful Vaginal Birth Following Administration of Webster’s Technique: A Case Study

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Abstract

Objective: The purpose of this case study is to report on the resolution of a breech presentation in an expectant mother following a course of subluxation-based chiropractic care and administration of the Webster Technique.

Clinical features: A 33-year old expectant mother presented 8 months pregnant with her second child. There were no complications with her first pregnancy. A breech presentation was noted by her midwife and vertebral subluxation and muscle spasm were observed upon chiropractic evaluation.

Intervention and Outcomes: The patient was managed utilizing Webster’s Technique and progress was monitored, specifically noting changes in the baby’s position as reported by the midwife between adjustments. The fetus was no longer breech after nine visits and the mother delivered a healthy baby.

Conclusion: This case describes the resolution of a breech presentation and a normal vaginal birth following the administration of Webster’s Technique. More research is needed to determine the nature of outcomes related to the utilization of this technique.

Key words: chiropractic care, vertebral subluxation, breech presentation, Webster’s Technique

Introduction

Optimal fetal position prior to delivery is an extremely important factor in determining the ease of infant delivery. Vertex, or head down, is the ideal position for delivery because it best allows the fetus to negotiate its through the birth canal. Breech presentation is a condition in which the fetus is inverted with feet or buttocks down, a position which is far less conducive to uncomplicated vaginal delivery.

This occurs in 3-4% of all deliveries and can cause serious complications for both the mother and new baby.\textsuperscript{1} Although instances of breech presentation represent a potentially serious complication and obstacle to normal vaginal delivery, there is little consensus with regard to how best to handle this condition.

Several factors have been identified which may influence the occurrence of breech presentation. The most common characteristics noted are low birth weight, gestational age, mother’s age and parity.\textsuperscript{2} Other complicating factors such as

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Breech
smoking, maternal diabetes, placental implantation issues, congenital malformations and uterine anomalies may also contribute to the occurrence of breech presentation.\(^5,6\) Other hypotheses suggest fetal neuromuscular dysfunction, fetal movement deficiency or neurologic defects may be a reason that the infant does not turn to the vertex position for delivery.\(^7\) Assisting a breech fetus into the vertex position or, better still, taking measures to prevent the occurrence of breech presentations in the first place would offer a viable solution to a potentially serious delivery complication and would make much of the debate regarding the best method of delivering a baby in breech presentation obsolete.

There are options for expectant mothers who discover through ultrasound or palpation that their infant is breech within weeks of their due date. These common medical practices include scheduled Cesarean section, external cephalic version (ECV), and assisted vaginal delivery.\(^5,6\) There are risks and benefits associated with each of these options and the research regarding which is safest and most effective is not as clear as once thought. The Term Breech Trial published in 2000 concluded that cesarean delivery was safer for breech babies.\(^7,8\) Glezerman reports that 92.5% of over 80 medical centers stopped vaginal breech delivery after the release of the publication.\(^7,9\) Upon analysis of the Term Breech Trial inclusion criteria, Glezerman found them to be skewed in favor of planned Cesarean section and concludes that the recommendations from that publication should be withdrawn.\(^7\)

Although now regarded as a routine and fairly benign procedure, the risks associated with Cesarean sections must be weighed heavily. Today, 86% of breech babies are delivered via Cesarean section despite the number of risks involved, including obstetric shock, uterine rupture, cardiac arrest or hemorrhage leading to either a blood transfusion or hysterectomy.\(^10,11\) One study comparing birth outcomes by Green et al sought to determine whether increased occurrences of Cesarean deliveries in instances of breech presentation decreased the likelihood of asphyxia, trauma and death. The results showed no change in the occurrence of these types of complications.\(^12\)

External cephalic version is the manual turning of a breech baby from the outside through manipulation of the abdomen. This practice is used with ultrasound technology to aid in achieving the vertex fetal position. There is an option to use anesthesia or sedation during the ECV, but many times this necessitates an immediate Cesarean if the procedure is unsuccessful.\(^13\) If the physician is experienced, ECV is successful 50-70% of the time.\(^10\) Although the success rate of ECV is fairly high, potential complications include the risk of fetal distress, longer labor duration and dystocia during labor.\(^13\)

If these invasive options do not appeal to a mother there are alternative methods that have been shown to aid in the turning of the fetus. These include moxibustion, acupuncture, knee chest position and perinatal massage.\(^14,15\) Additionally, a chiropractic technique developed by Larry Webster DC in 1978 known as the “Webster Technique” has been shown in the literature to reduce subluxations in the sacrum and pelvis with outcomes demonstrating a malpositioned fetus shifting to the vertex position.\(^15,22\) The technique involves light sacral contacts and relief of excess abdominal muscle and ligament tension which facilitates the pelvic structure to balance.\(^20\)

**Case Report**

**History**

A 33 year old female presents 8 months pregnant. She had met with a midwife several times throughout the duration of her pregnancy and the midwife monitored her progress. The midwife determined that the child was in breech presentation and she advised the mother that she should seek the care of a chiropractor. The patient had been under previous chiropractic care, though she was directed to see a chiropractor that specialized in working with pregnant women.

This was the patient’s second pregnancy and she had no concomitant conditions. Her first child was born vaginally with no complications within 6 hours of labor. The mother had no other current medical conditions and appeared to be healthy.

**Examination**

Examination revealed muscle spasms of the back and decreased range of motion in the sacrum and thoracic regions along with point tenderness in these regions with subluxations at the sacrum and T3. The heel to buttock test revealed leg lag on the left. This indicates that the left side of the sacrum had rotated posterior. Bilateral paraspinal thermal scanning was also conducted (Fig 1).

Thermal scanning compares infrared heat emission from the skin from one side of the spine to the other, has been shown to have high reliability and asymmetry of temperature has been noted in a number of health problems.\(^22\) A rolling thermal scan was conducted on the initial visit with mild differentials at C7, T1, T11, T12, L1 on the right and moderate differentials at T9, T10 on the right as well.

Paraspinal surface electromyography (SEMG) was also performed on the initial visit (Fig 2). SEMG is used to measure bilateral paraspinal muscle tone.\(^24\) The patient’s scan demonstrated asymmetrical muscle tone. Based on the exam findings, it was determined that the patient had vertebral subluxations at the sacrum and T3 on the initial visit. The patient was seen twice weekly for four weeks until delivery.

**Intervention & Outcome**

The main technique used in the course of treatment was the Webster Technique developed by Larry Webster DC in 1978.\(^16\) Known as the Grandfather of Chiropractic Pediatrics, Webster was heavily involved with chiropractic pediatrics, having founded the International Chiropractic Pediatric Association (ICPA) in 1986 and continued with a more biomechanical school of thought for the technique until his passing in 1997.

This technique is performed to help correct sacral misalignment, balance pelvic muscles and ligaments, which in
turn may reduce torsion and affect the woman's uterus and any resulting constraint on the baby. This might then allow the baby to move into the best possible position for birth. With the reduction of subluxation, there is also a concomitant reduction in nervous system stress and possibly dystocia.

The reduction of subluxation in a pregnant woman achieves the same goal in any other human regardless of age, gender or state of health. One concept is derived from the theory that alterations in mechanoreceptor function may affect postural tone. If afferent input is compromised, efferent response may be qualitatively and quantitatively altered. This would appear in the pregnant woman or any other patient as alterations in posture or the positioning of the pelvic ring, decreased range of motion of a spinal segment and muscle spasm or trigger points.

With alterations in structural form comes a subsequent change in function. The resultant aberrant motor patterns are reintegrated into the brain repeatedly and affect the manner in which the central nervous system processes and interprets information. Reducing the subluxation is necessary to restoring normal afferent input to the CNS, which in turn allows the body to correctly perceive itself and its environment, and therefore its functionality.

The Webster Technique involves analysis of the functional and spatial relationship of the bones of the pelvis in conjunction with manual correction of aberrant biomechanics through the employment of a light-force chiropractic adjustment of the sacrum. Aberrant biomechanical function is detected by performing a bilateral heel-to-buttock test, and seeing which leg lags behind the other. The leg which exhibits decreased ability to approximate to the buttock indicates the side of sacral posteriority. Pending this finding the patient would be adjusted to reduce the sacral subluxation.

The second step in the Webster Technique is to check leg lag again and ensure that the sacrum is no longer subluxated. The patient is then laid in the supine position and the final step in the adjustment is to reduce the tension on the opposite side round ligament. A taut and usually tender muscle fiber is found at this point, which can be released through trigger point therapy.

After nine adjustments the baby was determined to be in the vertex position. The position change was determined by the midwife after the 9th visit and the patient had a normal, vaginal delivery of her child.

**Discussion**

The connection between maternal musculoskeletal imbalance and likelihood of breeched fetal presentation is thought to be related to the eight ligaments which suspend the uterus in the pelvic cavity. These ligaments have both direct and indirect attachments to the pelvis, and it is essential that they all function properly without constrictions or spasms in order for the uterus to suspend properly without being excessively constrained.

Pressures and forces acting upon the pelvis and sacrum may ultimately alter the position of the baby. The obstetrician is concerned with this for the potential risk of causing dystocia (difficult labor). These ligaments have both direct and indirect attachments to the pelvis, and it is essential that they all function properly without constrictions or spasms in order for the uterus to suspend properly without being excessively constrained.

Special attention should be paid to the integrity of the round ligament and to the orientation of the sacrum because of the impact each of these factors has on proper uterine function. Also of interest are the sacrotuberous ligament, pubic bones, and the coccyx.

Drobbin and Welsh report on a 41 year-old, 36-week pregnant patient with breech presentation of the fetus presenting to the chiropractor. Using the Webster Technique, five chiropractic adjustments were performed on the sacrum in conjunction with manual trigger point therapy intended to release ligamentous and muscular tension. After the fifth adjustment, the fetus turned from a longitudinal lie and breech fetal presentation to the desired vertex position.

Stone-McCoy and Sliwka present another instance in which a breech presentation resolved following the application of Webster chiropractic technique. The patient was 37 years old and 35 weeks pregnant and wished to avoid a pre-planned cesarean section after learning through ultrasound that her baby was in breech position.

In this instance, Webster technique adjustments were delivered to address overall postural imbalances and, specifically, misalignments of the sacrum. This treatment was administered in conjunction with light effleurage trigger point therapy. After five Webster technique adjustments, ultrasound revealed that the fetus had moved out of breech and into a vertex position. The patient received a total of seven Webster adjustments, eventually having an uncomplicated vaginal birth approximately a month after the first adjustment was delivered.

Dashtkian and Whittle-Davis cite yet another example of Webster Technique adjustments playing an active role in the non-invasive resolution of a fetus in breech position. Here, a 25 year old patient at 31 weeks gestation presented with a desire to avoid a pre-planned cesarean and to resolve chronic low back pain which had been exacerbated by the pregnancy. After only two Webster adjustments, the fetus shifted from breech to transverse and then from transverse to vertex position and went on to be delivered vaginally without complication.

Rubin presents a study in which three women with breech presentations were found to have subluxation patterns consistent with Webster Technique analysis and corrective protocol. In each case, the patients’ sacra were adjusted using Webster Technique administered with an Activator Adjusting Instrument. In all three cases, the fetuses turned to vertex position within four adjustments. In two cases, uncomplicated vaginal delivery was the ultimate result; in one case, other complications developed during delivery which required an emergency cesarean section.

Alcantara and Ohm present a case in which chiropractic intervention during a difficult delivery resolved acute complications and resulted in the delivery of a healthy baby girl. The patient was a 26-year old nulliparous female, attended to by three midwives and a chiropractor. After 23 hours of difficult labor there was a lack of cervical dilation and diminished uterine contractions, along with decreased fetal heart tones.

At this point the patient was adjusted for a left posterior...
rotation of the sacrum, after which a psoas release was performed on two occasions. One hour later the patient had achieved complete cervical dilation, and the baby was delivered without incident one hour after the patient received her adjustment.17

Thomas reports on a 28-year old woman seeking chiropractic care for a second time after a previously successful experience with the Webster Technique.22 The patient had been 37 weeks along in her first pregnancy when her fetus was found to be breech. At the time she sought chiropractic care and after the appropriate techniques were applied her fetus turned to the vertex position allowing a complication free vaginal birth. 34 weeks into her second pregnancy her nurse midwife found that her fetus was breech once again utilizing Leopold’s Maneuver and advised her to return for chiropractic care. After one application of the Webster Technique by her chiropractor the patient returned to the nurse midwife and found the fetus to have turned to the vertex position.22

McCoy, Stone-McCoy and Kwon performed a retrospective outcomes study of 104 pregnant women under chiropractic care.26 All patients involved were pregnant at some point while under care. The patients received chiropractic adjustments to reduce vertebral subluxation, as well as Webster Technique when sacral misalignments were present.

Of the 104 women 20 were found to be breech or have another fetal mal-presentation; 17 of which had successful conversion to vertex while under care. 30 women had cesarean sections, half of which were pre-planned and the others were due to complications at the time of delivery. 67% of the group studied had vaginal births after an average of 19 adjustments while pregnant. This retrospective review of chiropractic care and the application of Webster Technique during pregnancy exemplifies some of the positive outcomes these gentle, effective treatments can provide.26

A Practice Based Research Program conducted by the ICPA included 24 practicing chiropractors submitting data on their patients with abnormal pregnancy presentations.27 Of 81 women with abnormal fetal presentations, diagnosed by a combination of palpation and ultrasound imaging, 63 cases were analyzed. It was found through data analysis that in 69% of the cases, application of Webster Technique was followed by resolution of the breech condition. Given the safety and effectiveness of chiropractic care and Webster Technique, based on this research program and other case studies, further research is warranted to promote this type of care for all pregnant mothers.27,28

Further evidence for the effectiveness of Webster Technique in resolving instances of intrauterine constraint and breeched fetal presentation is demonstrated in a survey conducted by Pistolese.16 Surveys were mailed to 1047 US and Canadian members of the ICPA inquiring as to their own personal experience with regards to the use of Webster Technique in resolving instances of breeched fetal presentation and intrauterine constraint.

In total, 112 surveys met the study inclusion criteria and were analyzed. Of these studies, 102 (92%) resulted in the successful resolution of breeched fetal presentation. Although relatively minor in scale, this survey demonstrates that, when employed, Webster Technique may have a very high rate of success in resolving instances of breeched fetal presentation. Given the costs and risks associated with traditional medical approaches to these situations, at the very least this data warrants further inquiry into the viability of Webster Technique as a primary intervention in instances of breeched fetal presentation.16

Conclusion

When a pregnant mother with a breeched infant is faced with a course of action that could impact her and her child’s life forever all options must be explored. The traditional medical routes are effective, yet come along with some very serious risks that must be considered. Although more research needs to be done on the Webster Technique and chiropractic care during pregnancy they are both extremely safe and effective ways to alter fetal position to allow for the best delivery possible.

References

7. Glezerman M. Five years to the term breech trial: The rise and fall of a randomized controlled trial. AJOG. 2005 Aug 18; 194: 20-5.


Figure 1. Thermal Scan on Initial Visit

Figure 2. Surface EMG on Initial Visit
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