

INTRAUTERINE CONSTRAINT: ALTERNATIVE METHODS OF
CORRECTING BREECH PRESENTATION
A REVIEW OF THE LITERATURE

JESSICA A. BAKKEN 13467
DARYL RIDGEWAY, D.C., ADVISOR

LOGAN CHIROPRACTIC COLLEGE AND UNIVERSITY
PROGRAMS
CHESTERFIELD, MO
OCTOBER 2012

ABSTRACT

When a family discovers they are expecting for the first time, one of the last things that crosses their minds is that of complications during labor and delivery. Whether a cesarean section is being performed by choice or incident, i.e. breech presentation, the ideal outcome is always for a healthy baby.

According to the Centers for Disease Control, in 2010, there were 3,999,386 births reported to U.S. residents with a 32.8 percent cesarean delivery rate, meaning 1 in 3 women will either make the decision for the surgery, the obstetrician will decide for the procedure or the mother will have unforeseen events during labor which will promote a cesarean section. (1)

The purpose of this paper is to review the alternative methods to help decrease the chance of cesarean section, such as: Webster Technique, Moxibustion and External cephalic version (ECV).

Key words: Intrauterine constraint, breech presentation, cesarean section, Webster Technique, Moxibustion, External cephalic version.

INTRODUCTION

A comprehensive literature review of intrauterine constraint of expecting mothers, increasing the likelihood of a fetus in the breech position, covering the alternative methods to externally promote the balance of the pelvis to allow optimum capacity within the uterus allowing the baby to move into the ideal vertex position without the use of the caesarean section procedure is hereby proposed. The medical term 'presentation' refers to the part of the baby that leads the way down the woman's birth canal. (2) In most cases, the crown of the baby's head leads the way, often referred to as the 'vertex presentation.' (2) The term "breech presentation" occurs in 3-4% of all deliveries (3). Most obstetricians are completely sure how to end delivery when the fetus is in breech presentation, by caesarean section as the only option. (3).

A baby presenting as breech is defined by Stedman's Medical Dictionary as a presentation of any part of the pelvic extremity of the fetus, the nates, knees, or feet; more properly only of the nates; frank breech presentation occurs when the fetus presents by the pelvic extremity; the thighs may be flexed and the legs extended over the anterior surfaces of the body; in full breech presentation, the thighs may be flexed on the abdomen and the legs upon the thighs; and in footling presentation, foot presentation, the feet may be the lowest part; in incomplete foot presentation, incomplete knee presentation, one leg may retain the position that is typical of one of the above-mentioned presentations, while the other foot or knee may present. (4) In these conditions, if the fetus presents in any of these manors at time of delivery there are two options that may precede, caesarean section or external cephalic version, according to the medical profession, in order to turn the baby before birth. If the baby is determined breech weeks prior to labor there are multiple non-invasive alternative therapies to turn the baby to the

vertex position while in-utero, such as acupuncture/acupressure with or without Moxibustion and Webster Technique.

Chiropractic and acupuncture techniques have demonstrated a high success rate in correcting those of breech presentation babies. These models of treatment are known to be safe and cost effective and do not require surgery compared to the medical model. (5,6)

MATERIALS AND METHODS

For this literature review, there were over 25 research editorials between 1993 and 2011 compiled at Logan Chiropractic College to determine the different therapies used for scenarios of breech presentation and the outcome of using each therapy, compiled during the months of August through October 2012. The data base chiropractic and key words “breech presentation” and “alternative therapies” were used to identify titles and abstracts of journal articles acquired through the Logan Learning and Resource center via internet and textbooks.

RESULTS

There are four types of breech presentations. The first type is called a complete breech where the thighs and knees are held in a flexed position. The second type is called a frank breech, where both hips are maintained in a flexion and both knees are extended. This presentation accounts for two-thirds of all breech presentations. The third type of presentation is called a footling position. The baby has the thighs extended as well as the knees and the baby can have one or both feet presenting first. The final breech presentation is called a kneeling breech. The knees are the presenting part here. The thighs will be extended either single or double and the knees will be flexed. The knee is the presenting part. (7, 8, 9)

Various causes of breech birth have been considered. Some studies concentrate on maternal factors while others concentrate on reasons within the fetus. One proposal is the fetus is unable to turn to a vertex position because of decreased amniotic fluid. (15) Mechanical factors are also considered such as pelvic size of the mother, but again, results only show “obvious anatomic deformities of the fetus, uterus and pelvis” in 15% of breech deliveries. While no single cause has been identified, the most consistent factor for breech presentation, at 21% of the time, is a previous breech presentation with the mother’s first pregnancy. (15) Thus, supporting the argument that maternal causes should be carefully considered in breech presentations.

Many obstetricians in the 1970’s felt that all breech babies should be delivered via cesarean section. They felt it was safer and had more control over the situation other than a breech vaginal delivery with the uncertainty and surprises that could take hours with the possibility of something going wrong. With the possibility of complications and liability many obstetricians will opt for a cesarean section. It is the fact that many doctors simply lack the training and experience to deliver babies in breech presentation and because of the lack of education in the field; many doctors are classify the procedure as a form of “defensive medicine” within the medical field, thus increasing the number of cesarean sections in the fear that something may go wrong, at that time they would be held liable as well as increasing the chance of malpractice. (7)

The controversy over appropriate management of breech presentation as well as disagreement regarding appropriate candidates for a trial of labor makes for a difficult phenomenon to study. The uncertainty of proper management of breech delivery is because of varying risk between vaginal versus caesarean delivery for both the mother and child. Caesarean

sections are not without risk and an added social cost. In general all women who undergo caesarean sections are at risk of infection, hemorrhage, amniotic fluid emboli and venous thrombosis. (16)

Today, due to the increased popularity of alternative therapies when a breech presentation is imminent, allows the mother to increase her knowledge of the multiple choices she has with the research recently being reviewed and studied. In the case of which the baby is under duress/distress an emergency caesarean section is warranted, thus the procedure is highly recommended to the mother by the presenting physician.

DISCUSSION

Numerous studies have documented that health care consumers all over the world are spending money out of pocket for alternative therapies and that billions of dollars are spent in the United States alone. Women use conventional health care services more frequently than men; thus, it is not surprising that women account for approximately two thirds of health care appointments of complementary and alternative therapies. (11) Reproductive health problems, including menstruation disorders, infertility, menopause, and dysfunctions of pregnancy and delivery, offer opportunities for clinical application of alternative approaches. Many midwives and nurses are interested in these approaches and have sought out special training. (11) This literature review, reviews three alternative approaches available for breech presentation: External cephalic version, Moxibustion and acupuncture, and Webster Technique.

The medical literature understands the need to balance the benefits and risks for both the mother and child. Current literature looks at ways to turn the baby before delivery. Increasing as a popular medical alternative to caesarean delivery is external cephalic version (ECV). (17)

External cephalic version (ECV) is recommended by the American College of Obstetricians and Gynecologists to convert a breech fetus to vertex position and reduce the need for cesarean delivery. (10) Before the procedure, blood is drawn, an ultrasound is performed, a non-stress test is performed, an intravenous access is established and a subcutaneous tocolytic agent is administered. (18) The doctor then places his/her hands on the abdomen moving the baby up and out of the pelvic bones. The baby is either turned forward or backward until the baby is in the vertex position. Rhogam is then administered after the procedure. This procedure is performed around the 37th week. (17) External cephalic version is taught in most obstetric residency programs and in some family practice residency programs. (18) It has been shown to lower the incidence of breech presentation at birth and decrease the number of cesarean sections. (19) The success rate is between 41%-77% with a 4.1% reversion rate. (17) ECV is not without its contraindications or possible complications. Overall complication rates have ranged from 1-3% since 1979. (17)

The risks of ECV include umbilical cord entanglement, abruption placenta, premature labor, premature rupture of membranes and severe maternal discomfort. (17) Transient fetal bradycardia as the most common complication for the fetus after ECV in up to 36% of cases. (20) There are also numerous contraindications for hospital procedures such as: significant third trimester bleeding, amniotic fluid abnormalities, uterine malformation, maternal cardiac disease, pregnancy induced hypertension, major fetal abnormality, uncontrolled hypertension, placenta previa, and suspected intrauterine growth restriction, abnormally small size, established labor, and gestational diabetes requiring insulin. (17, 20) ECV costs approximately \$1,000 per procedure. (17) Overall, ECV is an invasive procedure and not without potential harm to the baby.

Chinese-medicine practitioners have been turning breech babies with acupuncture with or without moxibustion for hundreds of years. (26) Moxibustion, a type of Chinese medicine which involves burning a herb close to the skin, to the acupuncture point Bladder 67 (BL67) (Chinese name Zhiyin), located at the tip of the fifth toe, has been proposed as a way of correcting breech presentation. (25) Acupuncture with or without moxibustion's general theory is based on the premise that there are patterns of energy flow (Qi) through the body that are essential for health, termed meridians. (12) Disruptions of this flow are believed to be responsible for disease. (12) Moxibustion should be done at 37 weeks or later, as it may trigger labor. (26) This treatment involves placing a lit moxa stick near the outer edge of the pinky toenail. This increases fetal activity and often corrects breech presentation. (26)

A trial in which researchers randomly assigned women to moxibustion treatment indicated higher success rates with moxibustion than with external cephalic versions. (13) In the Cochrane review, Coyle and colleagues examined the safety and effectiveness of moxibustion on changing the presentation of an unborn baby in the breech position, the need for ECV, mode of birth, and perinatal morbidity and mortality for breech presentation. (26) These investigators concluded that there is insufficient evidence from randomized controlled clinical trials to support the use of moxibustion to correct a breech presentation. The authors stated that moxibustion may be beneficial in reducing the need for ECV, and decreasing the use of oxytocin, a hormone best known for its role during and after childbirth. (26)

The studies of side effects of moxibustion for cephalic version of breech presentation were insignificant when detecting alteration to the fetus and the mother's well-being or other side-effects associated with the application to BL67. (27) Moxibustion appears to be safe for both the mother and the fetus. (27)

Chiropractor, Larry Webster, D.C. and developer of the “Webster In-Utero Constraint Technique,” has had great success in the correction of breech presentations. The research shows that Dr. Webster has had a 97% success rate. (5, 6, 9) Dr. Larry Webster, founder of the International Chiropractic Pediatric Association developed this adjustment as a safe means to restore proper pelvic balance and function. (21) It was developed to restore normal physiologic function of the mother and improve her comfort throughout pregnancy in preparation for a safer, easier birth. He reported that in women who presented with a breech baby, the results of the adjustment appeared to normalize pelvic neuro-biomechanics and facilitate optimal fetal positioning. (21)

The first step in diagnosing a breech baby is to determine the presenting part. To do this, the patient is lying supine with shoulders slightly raised and knees supported to relax the abdominal muscles. (22) The doctor takes a web index with the inferior hand at the lower uterine segments and the superior hand counter pressures. Webster’s technique consists of two parts. The first part is to determine the side of the mother’s sacral subluxation. With the mother prone, the doctor flexes the legs bringing them to the buttocks. The resistant side, or the side that feels as though it pushes back at the doctor, is the posterior sacral rotation subluxation. (23, 24) Eighty percent of the time, one leg will be more resistant and 20% of the time both legs will kick back resistance. (24) If both legs are resistant, the sacrum is base posterior and can be adjusted with a P-A/S-I line of drive. (22) If both legs are equal, the baby is in vertex position. (22) The adjustment can be done with an activator, diversified prone or diversified side posture. (22) If a post check of equal leg flexion does not show up, more pressure may be necessary to move the sacrum. (22)

The second step of Webster's Technique is a release of the trigger point in the rectus abdominus. (23) To release the trigger point, the patient is supine and the doctor stands on the opposite side of the sacral adjustment. To find the trigger point, with a knife edge/hypothenar contact, the doctor draws an imaginary 45 degree line lateral and inferior from the umbilicus and another 45 degree line from the ASIS inferior and medial. The trigger point should be where the lines intersect. The thumb can be rotated 15 degrees in either direction to feel the muscle bundle. The thumb holds 3-6 ounces of steady pressure with an inferior to superior contact to isolate the round ligament. Pressure is held for 1 to 2 minutes or until the muscle drops away. (23, 24) Classically, there are no other adjustments made on the mother that day. (22)

Treatment protocols for Webster's Technique are every 2-3 days until the baby turns or 3-10 visits in a 2-3 week period. (22, 24) Webster's Technique is not recommended for twins. (22)

CONCLUSION

Chiropractors have been using alternative therapies to reduce the percentage of fetal breech presentations for years and with an increase in demand of cesarean section obstetricians (7) are using, the knowledge and experience of doing such alternative therapies is becoming vital for a holistic form of healthcare and pregnancy.

In the survey testing the Webster technique, the surveyed Chiropractors reported a high rate of success (82%) in relieving the musculoskeletal causes of intrauterine constraint using the Webster Technique. (22) When successful, the Webster Technique avoids the costs and/or risks of external cephalic version or cesarean section. Due to these findings, the Webster Technique deserves serious consideration in the health care management of expectant mothers exhibiting adverse fetal presentation. (22) External cephalic version was another alternative therapy that was looked into, the risk and costs of the procedure may be higher than other non-invasive techniques as well as the chance the baby may revert to the breech presentation. (17) The least researched form of alternative therapy provided in this literature review is acupuncture with or without moxibustion. (26) The procedure utilizes the theory of Chinese acupuncture without penetrating the skin, but using the bladder meridian with heat and herbs. (26) The procedure has no known side effects, but the research has little significant findings. (26)

It was the goal of the literature review to determine the best possible therapy to suggest to expecting mothers on alternative therapies of breech presentation. Although there are no guarantees with each alternative therapy, the articles do give insight of three possibilities that are

a natural way to turn a baby that is presenting in a breeched manner and diminish the chance of a cesarean section.

REFERENCES

1. Hamilton B, Martin J, Matthews TJ, Osterman M, Ventura S, Wilson E. Births: Final Data for 2010. National Vital Statistics Reports 2012 Aug; Volume 61, number 1.
2. Enkin M, Keirse M, Neilson J, Renfrew M. A guide to effective care in pregnancy and childbirth. Birth 1995 Jun; 22(2): 101-10.
3. Arsenijevic S, Bankovic D, Dimitrijevic A, Djuric J, Protrka Z, Sorak M, Zivanovic A. Breech presentation at term: caesarean section or vaginal delivery. Srp Arh Celok Lek 2011 Mar-Apr; 139(3-4):155-60.
4. Stedman. Breech presentation: defined. Stedman's Medical Dictionary 28th Ed 2005.
5. Forrester J. Chiropractic Management of Third Trimester In-Utero Constraint. Can Chiropractor 1997; 2(3):8-13.
6. Kunau P. Application of the Webster In-Utero Constraint Technique: A Case Series. Journal of Clinical Chiropractic Pediatrics 1998; Vol 3, no 1.
7. Goer H. The thinking woman's guide to a better birth. New York: The Berkley Publishing Group 1999; 1-48.
8. West Z. Acupuncture in pregnancy and childbirth. London: Harcourt Publishers Limited 2001; 131-145.
9. Anrig C. Scientific Ramifications for Providing Prenatal Chiropractic Care. The American Chiropractor 1993 May/Jun; 20-3.

10. Carvalho B, Druzin ML, El-Sayed YY, Marcario A, Tan JM. Cost-effectiveness of external cephalic version for term breech presentation. *BMC Pregnancy Childbirth* 2010 Jan 21; 10:3.
11. Beal MW. Women's use of complementary and alternative therapies in reproductive health care. *J Nurse Midwifery* 1998 May-Jun; 43(3):224-34.
12. Cardini F, Weixin H. Moxibustion for Correction of Breech Presentation: A Randomized Controlled Trail. *Journal of the American Medical Association* 1998 Nov 11; Vol 280, no 18: 1580-1584.
13. Hu J, Li X, Liu J, Wang X. Moxibustion and other acupuncture point stimulation methods to treat breech presentation: a systematic review of clinical trials. *Chinese Medicine* 2009; 4:4.doi:10.1186/1749-8546-4-4.
14. Hannah ME, Hannah WJ, Hewson SA, Hodnett ED, Saigal S, William AR. Planned caesarean section versus planned vaginal birth for breech presentation at term: A randomized multicentre trial. *The Lancet* 2000; 256:1375-1383.
15. Moore K. *Clinically Oriented Anatomy*, 4th Ed. Baltimore; Lippincott Williams & Wilkins; 1999.
16. Elchalal U, Elram T, Eszra Y, Plotkin V. Significance of external cephalic versions and vaginal breech deliveries in counseling women with breech presentation at term. *European Journal of Obstetrics and Gynecology* 2000; 90:63-66.
17. Coco A, Silverman S. External Cephalic Version. *American Family Physician* 1998; 58:731-738.
18. Aisenbrey W, Catanzarite V, Nelson C. External Cephalic Version: Predictors of Success. *Obstetrics and Gynecology* 1999; 94:783-786.

19. Cunningham G, MacDonald P, Gant N, Leveno K, Gilstrap L, Hankins G, Clark S. Williams Obstetrics 20th Ed. Stanford. Appleton & Lange 1997.
20. Lau TK, Lo KWK, Rogers M. Pregnancy outcome after successful external cephalic version for breech presentation at term. American Journal of Obstetrics and Gynecology 1997; 176:218-223.
21. Ohm J. Chiropractors and midwives: a look at the Webster Technique. Midwifery Today Int Midwife 2001 Summer; (58):42.
22. Anrig C, Plaughner G. Pediatric Chiropractic. Baltimore. Williams & Wilkins 1998.
23. Plaughner G. Textbook of Clinical Chiropractic: A Specific Biomechanical Approach. Baltimore; Williams & Wilkins 1993.
24. Pistolese RA. The Webster Technique: A chiropractic technique with obstetric implications. Journal of Manipulative Physiological Therapy 2002; 25: E1-9.
25. Coyle ME, Smith CA, Peat B. Cephalic version by moxibustion for breech presentation. Cochrane Database Systematic Review 2012 May; 16;5:CD003928.
26. Yost H. Turn Turn Turn: Options for Turning and Birthing Breech Babies. Chiropractic for Life 2010; Issue #28.
27. Guittier MJ, Klein TJ, Dong H, Andreoli N, Irion O, Boulvain M. Side-effects of moxibustion for cephalic version of breech presentation. J Altern Complement Med 2008 Dec; 14(10):1231-3.