

CASE STUDY

Chiropractic Care of a Patient with Dystocia & Pelvic Subluxation

Joel Alcantara, D.C.¹ Justin Ohm, D.C.² Jeanne Ohm, D.C.³

Abstract

Objective: To report on the successful collaboration of chiropractors and midwives, we describe the care of a woman in labor with problems associated with dystocia.

Clinical Features: The patient is a 26-yr-old nulliparous female attended to during a home birth delivery with 3 midwives and her chiropractor. With lack of cervical dilation, descent and diminished uterine contractions along with decreased fetal heart tones at 23 hours of labor, all involved decided to initiate chiropractic care with the Webster Technique.

Interventions and Outcomes: The result of using Webster Technique was stronger and more frequent contractions with stabilized fetal heart tones. At 28 hours, the fetus was determined to be asynclitic. Synclitism describes the condition of parallelism between the plane of the pelvis and that of the fetal head. The midwives attempted various patient positioning and more homeopathic remedies, performing a surgical rupture of the patient's membranes with recommendation of further chiropractic care. At 34 hours of labor, the attending chiropractor performed the psaos release and ½ hour later, the patient was at complete cervical dilation. The labor progressed rapidly thereafter and a healthy baby girl was born.

Conclusion: The successful birthing outcome of a patient with dystocia through the cooperative efforts of the patient's midwives and chiropractor is described. We advocate continued co-operation in similar patients and for further investigation in this field

Key Words: *Chiropractic, pregnancy, dystocia, Webster Technique, subluxation*

Introduction

In 1998, Eisenberg et.al.¹ estimated that the total number of visits to complementary and alternative medicine (CAM) practitioners would exceed the total number of visits to primary care physicians for the next two years thereafter.

Furthermore, they estimated that Americans would spend some \$27 billion dollars out-of-pocket for such services.

In 2002, a much larger nationwide survey by Barnes et.al.² estimated that American utilization of CAM therapies may be as high as 62% when the use of prayer healing and megavitamins were included in the types of CAM therapies used.

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1. Research Director, International Chiropractic Pediatric Association, Media, PA
 2. Private Practice of Chiropractic, Media, PA
 3. Executive Director, International Chiropractic Pediatric Association, Media, PA

Today, the term *integrative medicine* is used to emphasize and reflect the vitalistic and holistic nature of the various CAM therapies in combination with conventional medicine. The term emphasizes the innate ability of the individual to heal, a Freirean approach to patient care and the relationship among its practitioners,³ and that the approach to patient care incorporates evidence-based practice.

Under the auspices of integrative medicine, the collaboration of chiropractors and midwives would seem a natural development considering their common theoretical and clinical framework for patient care. To report on such collaboration and its successful outcome, we describe the care of a woman in labor with problems associated with dystocia.

Case Report

The patient is a 26-yr-old nulliparous female attended to during a home birth delivery with 3 midwives and her chiropractor. The patient's labor began with strong contractions at 4-5 minute intervals. Twelve hours into labor, cervical dilation was at 4-5 cm with her contraction frequency and duration characterized as "inconsistent." With the patient exhausted and twenty two hours into labor, her cervix had dilated to 7cm but her contraction frequency and duration had diminished "significantly." The patient's lack of cervical dilation, descent and diminished uterine contractions are indicative of dystocia.

The midwives responded to the patient's lack of progress by using various homeopathic remedies and patient positioning which resulted in decrease fetal heart tones. At 23 hours of labor, the midwives determined that the fetus was asynclitic on the left side possibly due to one or both limbs being tucked under the chin, neck area or possible cord entanglement.

The midwives suggested an inversion technique with the patient prone with her chest flat on the floor and her pelvis raised in a caudal inclination to improve fetal positioning. The fetal heart tone improved but the patient's uterine contractions were still "weak" and the fetal positioning unchanged. At this point, the midwives discussed for the possibility of a transfer to the hospital.

Decision to Utilize Webster Technique

Following a discussion that included the patient, her chiropractor and the attending midwives, it was decided that the Webster Technique⁴ was to be applied.

With the patient already in the prone position, the Webster Sign was not difficult to perform wherein the patient's knees are flexed in a heel-to-buttock maneuver. The side with the greater resistance in the heel-to-buttock maneuver was the side of sacral posterior rotation (+θY or -θY). The patient was determined to have a left sacral posterior rotation (+θY).

The patient was adjusted accordingly for a left posterior rotation of the sacrum. Furthermore, the chiropractor alleviated the "tension" in the patient's right psoas with pregnancy psoas release technique. During this procedure, a sustained ligament contact in accordance with the Webster protocol⁵ resulted in the fetus being "felt" to move, as reported

by the mother. Thereafter, the midwives reported a significant improvement in labor progression since time of chiropractic adjustment. The patient's contractions became stronger and more frequent; and following cessation of the "all fours position," the fetal heart tones stabilized. Twenty eight hours into labor, the fetus was determined to be asynclitic again.

The midwives again attempted various patient positioning, more homeopathic remedies and performed a surgical rupture of the patient's membranes. Furthermore, they recommended further chiropractic care.

At 34 hours of labor, the attending chiropractor performed the psoas release once again. One-half hour later, the patient was at complete cervical dilation. The labor progressed rapidly thereafter, and the patient began pushing. A healthy baby girl was born vaginally at home one hour (i.e., 35 hours of labor) after receiving her last spinal adjustment.

Discussion

According to Williams Obstetrics,⁶ the causes of dystocia may be due to the following variables: (1) abnormalities of the expulsive forces due to inadequate (weak) uterine forces or inappropriately coordination to efface and dilate the cervix (i.e., uterine dysfunction), or inadequate voluntary muscle effort during the second stage of labor; (2) the presence of abnormalities in the maternal bony pelvis resulting in dysfunctional pelvic contractions; (3) malposition or malpresentation of the developing fetus; and (4) abnormalities of the soft tissue structures of the reproductive tract that interfere or form an obstacle for fetal descent.

As reflected in the use of birthing augmentation to dystocia, the number of operative vaginal delivery or Caesarean sections performed, dystocia in the nulliparous is very common. In 2003, some 17% of women received oxytocin augmentation for dystocia⁷ while in 2004, the primary cesarean delivery rate (i.e., cesarean delivery in women without previous cesarean) increased to 20.6%⁸ with over 50% of these procedure as a result of dystocia.⁹

Medical Approach to Dystocia

Based on the data from hundreds of women in labor, Friedman¹⁰ defined the normal progress of labor as shown in Table 1 at end of report. However, according to Shields et. al.,¹¹ a more recent study examining 1,329 women in labor by Zhang et.al¹² would seem to indicate that the range/definition of normal labor is much broader when compared to Friedman's original definition from a mean rate of cervix dilation from 1.1 cm per hour to 1.2 cm per hour. For completeness, we provided a brief overview of the medical approach to dystocia. We iterate that this is by no means a comprehensive description but rather is intended to provide a general overview. In this effort, we credit the article by Shields et. al¹¹ upon which this writing was based.

According to Shields et.al.,¹¹ four issues must be considered when attending to the woman with dystocia. These considerations affect the course of care of the patient and they are: (1) the adequacy of the woman's contractions; (2) the presence of fetal malposition; (3) the presence of

cephalopelvic disproportion as a result of macrosomia or a contracted pelvis; and (4) the presence of other variables such as chorioamnionitis or non-reassuring fetal monitoring findings that impact the treatment options.

During the first stage of labor (the latent phase), dystocia is addressed by observation, sedation with antihistamines or mild narcotics, and labor augmentation. During active labor, amniotomy before oxytocin use may be sufficient to augment a slowly progressing labor. Oxytocin is provided to increase the frequency, strength and duration of contractions. In the second stage of labor, dystocia may be characterized by prolonged duration or arrested descent as a result of fetal malposition, inadequate contractions, poor maternal efforts or true cephalopelvic disproportion.

Manual rotation of the fetus is one option for the birthing clinician. A hand is positioned palm upward into the vagina, and during a contraction the hand serves as a wedge to flex the fetal head while the fingers exert a rotating force to bring the occiput to the anterior. Like all manual therapies, this requires training and clinical skill/experience. Another option is for the patient is to assume various positions or movements to resolve a persistent occipitoposterior or asynclitic presentation. These include knee-chest, hands and knees, pelvic rocking, lunging, side-lying, or asymmetrical sitting or kneeling.

In the case report presented, the midwives positioned the mother with the inversion technique as described above. At this second stage of labor, intravenous oxytocin can be initiated or increased to address contractions with decreased strength and frequency. According to Shields et.al., prolonged second stage of labor does not automatically indicate operative vaginal or cesarean delivery. Only a non-reassuring fetal heart tracing indicates a need for consideration of operative vaginal or cesarean delivery.

The Webster Technique

In the case presented, the Webster Technique^{4,5,13} was provided as a means of addressing the patient's lumbosacral subluxation concomitant with dystocia. The Webster Technique was founded on the clinical and theoretical framework of the application of a specific chiropractic adjustment, which reduces interference to the nervous system and facilitates balance in the pelvic structures thereby improving the physiological functioning of the pelvic muscles and ligaments. This in turn removes in-utero constraint and allows for the fetus to get into the best possible position for birth.

In light of the manual rotation procedure described above as an option for the attending clinician during the second stage of labor; perhaps the Webster Technique may provide an alternative and less invasive option for facilitating the fetus to assume the correct position for birthing. The Webster Technique is not nor does it impose upon the practice of obstetrics.

The Webster Technique is a specific chiropractic adjustment intended to correct sacral subluxation and is well within the chiropractor's scope of practice. As such, we advocate for continued co-operation between midwives and medical

doctors under the auspices of integrative medicine. At no time does the chiropractor attempt with a direct hands-on approach to change the position of the fetus as is done with the external cephalic version or direct manual rotation as described above.

The theoretical and clinical framework of the technique is the facilitation of proper functioning to the pelvic area and reduction of intrauterine constraint, allowing the fetus to get into the best possible position for birth. Correlating the cause of dystocia with the corrective accomplishment of the chiropractic adjustment vis-à-vis the Webster Technique are the following: (1) Specific chiropractic adjustments to the lumbosacral spine may have neurological effects facilitating adequate contractions of the uterus and dilation of the cervix; (2) Adjustments to the lumbopelvic may structurally correct pelvic misalignments contributing to dystocia; and (3) The correction of fetal malposition/malpresentation are corrected.

Chiropractors and Midwives

A recent survey of Certified Nurse Midwives indicates that CAM usage by pregnant women is common. More than 90% of midwives reported recommending CAM for their pregnant patients for stimulation of labor and maternal relaxation in labor. Specifically related to chiropractic, midwives refer to chiropractors to address pregnancy-related musculoskeletal complaint of low back pain, sciatica and malposition.¹⁴

Although others have advocated for co-operation and collaboration between chiropractors and midwives¹⁵⁻¹⁷ and has been our experience in clinical practice; to the best of our knowledge this is the first description of the successful collaboration between chiropractic and midwifery in the care of a patient with dystocia. As described in the body of the case report, the addition of chiropractic during the birthing process helped immensely--as attested to by the midwives and the patient herself.

The use of various homeopathic remedies and patient positioning (i.e., inversion technique with the patient prone with her chest flat on the floor and her pelvis raised in a caudal inclination) resulted in improved fetal heart tone but the patient's uterine contractions were still "weak" and the fetal positioning unchanged.

The participation of the attending chiropractor helped to address the patient's failure to progress, resulting in correction of the fetal malposition and the eventual progression of labor. A systematic review by Hofmeyr and Kulier¹⁸ concluded that having a woman assume the hands and knees position for a specified period near the end of pregnancy had no effect on fetal position at delivery. However, their review did not include studies of women in labor.¹⁸ This study highlights the specifics of what happens when caregivers co-operate to work together to address possible complications of labor.

A number of significant implications arise from this case report when one examines the factors preventing the incidence of dysfunctional labor in nulliparous women. These are: (1) the use of labor support such as doulas, midwives and from our perspective – chiropractors are substantial; (2) there is avoidance of hospital admission in the latent stage of labor; (3) there is avoidance of elective induction with an unripe

cervix; and (4) cautious use of epidural analgesia is facilitated.¹⁹

Although no healthcare intervention is 100% safe, the choice of this patient to be attended to by her midwives and her chiropractor highlighted her wishes to have as natural a childbirth as possible. This case report described how dystocia and its possible complications were successfully addressed by the midwives and chiropractor. No complications or adverse outcomes could be documented as a result of the presence of the chiropractor during the birthing process. Case reports serve an important function in research. The information they provide are noteworthy for the practicing clinician and for education, but also serve to inform higher level research designs such as in randomized controlled clinical trials.

A selective review of the literature using MANTIS and Pubmed databases supports our notion that, to the best of our knowledge, this is the first reporting of its kind in the scientific literature on the chiropractic and midwifery care of a patient with dystocia with positive outcomes. Pubmed (1966-2007) was searched using the terms “dystocia AND chiropractic” resulting in no available abstracts. MANTIS (1965-2007) was searched using the terms “dystocia,” “birth trauma” and “pregnancy” resulted in similar findings. We acknowledge that the chiropractic care of the pregnant patient has been described in the scientific literature²⁰⁻²³ but to the best of our knowledge, this is the first describing the care of a pregnant patient with dystocia.

In closing, we caution the reader on the lack of generalizability of the findings of the case report presented. Although we advocate for the co-operative effort of chiropractors and midwives in the care of the pregnant patient during gestation and birthing, the success of the efforts described herein are not generalizable. Inherent in its research design, the positive findings in this and in all case reports/case series may be attributed to the following: (a) regression to the mean and (b) the result of placebo. Furthermore, both the chiropractor and her patient may have made incorrect inferences from the chiropractic treatment applied due to (c) the demand characteristics of the therapeutic encounter and (d) subjective validation.

The use of controls, randomization and manipulation of the independent variable (i.e., the care employed) must be examined in higher level designed studies to fully determine the role and salutatory effects of chiropractic care in similar patients. We also advocate for continued clinical documentation of similar cases in the scientific literature.

Conclusion

We described in this case report the successful outcome of a patient with dystocia through the cooperative efforts of the patient's midwives and chiropractor. We advocate for continued co-operation in similar patients and further investigation in this field.

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Stage of Labor	Labor Abnormality	
	Protracted	Arrested
Latent		
Nulliparous	>20 hrs	Not Applicable
Multiparous	>14 hrs	Not Applicable
First Stage of Labor		
Nulliparous	<1 cm per hour of dilation	≥ 2 hours of active labor without cervical change
Multiparous	<1.2 cm per hour of dilation	≥ 2 hours of active labor without cervical change
Second Stage of Labor		
Nulliparous or Multiparous	With no regional anesthesia:> 2 hours duration Or With regional anesthesia:> 3 hours duration < 1 cm per hour descent	No descent after 1 hour of pushing

Table 1. Traditional definitions of abnormal labor (Modified from Shields et.al.)¹¹