

CASE STUDY

Vaginal Birth After Caesarean (VBAC) with Twins Following Chiropractic Care: Case Report & Review of the Literature

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Abstract

Objective: To describe the outcomes following chiropractic care of a pregnant woman who was able to have a vaginal birth of twins after a caesarean (VBAC).

Clinical Features: A 34-year-old woman at 16 weeks gestation with twin girls presented with a chief complaint of acute left sacroiliac, left posterior hip and left buttock pain of unknown origin and 3 weeks duration. Her pain complaints had worsened since onset with the pain rated at 6/10. Rest was palliative while random weight bearing activities and climbing stairs were provocative. In addition, the patient had a desire to have a natural childbirth since giving a caesarean birth two years prior.

Intervention and Outcome: The patient was cared for with Network Spinal Analysis set at 2 times a week for 8 weeks and then re-evaluated for frequency with at least 1 time a week until the birth. The patient received 18 adjustments over the course of 19 weeks. The patient's presenting complaints abated and at almost 36 weeks gestation, she successfully delivered twins via vaginal birth after caesarean.

Conclusion: This case report provides supporting evidence on the benefits of chiropractic care for the pregnant woman with the desire for VBAC. We encourage further research in this field to facilitate a natural childbirth.

Keywords: *Chiropractic, twin pregnancy, VBAC, vaginal birth after caesarean, pregnancy, adjustment, Network Spinal Analysis, vertebral subluxation*

Introduction

A woman with a caesarean birth has two options with her subsequent pregnancy: planned elective repeat caesarean or planned vaginal birth or vaginal birth after caesarean (VBAC). It's acknowledged that there are risks and benefits for both planned elective repeat caesarean birth and VBAC, current sources of information are limited to non-randomized cohort studies. As such, Dodd et al.¹ advice on examining the study conclusions with caution. In the case of twin pregnancies following a caesarean; despite data from one

large multicenter study, no clear evidence of benefit from planned caesarean section for term twin pregnancies was found. However, caesareans continue to be scheduled with the consideration that twin pregnancies are associated with increased perinatal mortality (due primarily to prematurity) in addition to complications during birth. The option of planned caesarean section to avoid such complications must therefore be considered as advised by Hoffmeyr et al.² In addition to these clinical perspectives, there is also the pregnant woman's

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perspective on VBAC. Fenwick et al.³ found that women held strong views about the importance of working with their bodies to achieve a vaginal birth, which was considered an integral part of being a woman and mother. In addition, these authors noted that positive support from family and friends and a reluctance to undergo another caesarean was also influential. Women considered vaginal birth enhanced the health and well-being of the mother and baby, promoted maternal infant connection and eased the transition to motherhood. However, others have found that medical professionals' attitude toward birth in such situations is predominantly pro-caesarean.⁴ Chiropractors have long advocated for a natural childbirth. In support of this, we describe the chiropractic care of a pregnant woman with twins with the desire for a VBAC.

Case Report Narrative

A 34-year-old woman presented for care at 16 weeks gestation with twin girls and a complaint of acute left sacroiliac, left posterior hip and left buttock pain of unknown origin and 3 weeks duration. The off and on discomfort was described by the patient as sharp and non-radiating. Her pain complaints had worsened since onset with the patient providing numeric pain rating of 6/10 (i.e., 0=no pain; 10=worst imagined pain). She indicated that rest makes the symptoms feel better while random weight bearing activities and climbing stairs made her pain complaints worse. According to the patient, despite worsening since onset, her pain complaints affected her only occasionally. However, as she was pregnant with twins, she was interested in receiving chiropractic care early on in her pregnancy so the problem does not become worse. At her first visit she reported experiencing the pain "a couple of times a day".

Past history was notable with the following: the patient reported that her first pregnancy 2 years prior resulted in a caesarean due to the frank breech position of the baby. The patient revealed that she was involved in motor vehicle collision at 16 years of age and experienced pelvic pain. She received chiropractic care to address her pelvic pain. At 17 years of age, she suffered a compression fracture in "L4 or L5" after jumping off a cliff. No other treatment or diagnostic tests were performed to address her symptoms. A review of systems revealed no other presenting musculoskeletal complaints than the one presented with as described above. Additionally, no neurological, head and ENT, cardiovascular, respiratory, gastrointestinal or endocrine complaints were indicated by the patient. She also denied use of medications or previous illnesses.

The physical examination findings were notable for the following. With the patient standing on dual weigh scales, the scales revealed 52.5 lbs on the left side and 50.5 lbs. on the right. The patient was 4 feet 11.5 inches tall. Upon inspection the patient presented with a right head tilt, left high shoulder and moderately anterior head carriage. A slight but observable hyperkyphosis of the thoracic spine was also noted. Digital palpation findings included spinal restrictions at the levels of C1, C2, C5, T1, T2, T11, T12, L2 and sacrum. Hypertonicity of the musculature was noted in the left lower thoracic, lower thoracic and right lower thoracic spine. With the patient prone, an analysis revealed a short left leg, negative

Deerfield and negative Cervical Syndrome test. An elevated iliac crest on the left side was noted. It was determined that the patient was experiencing vertebral subluxations at the levels of C1, C2, C5, L2 and sacrum as well as adverse mechanical cord tension with points of critical tension at the upper cervical complex and sacrum. Findings also included compensatory restrictions in the upper and lower thoracic spine, specifically T1, T2 and T11, T12. Paraspinal surface electromyography (EMG) and thermography were utilized to evaluate neurospinal integrity (see Figure 1).

The patient consented to a course of chiropractic care. Network Spinal Analysis was utilized for the care of the patient with a recommendation of 2 times a week for 8 weeks and then to be re-evaluated for frequency of at least 1 time per week until the birth of the patient's baby. The patient received 18 adjustments over the course of 19 weeks. Upon her third visit to the office the patient reported with no complaints of pain and declared, "this is the first time in a long while that I haven't felt the pain every day." Over the course of treatment, the patient noted that she occasionally "feel that feeling in my hip" but also reported "not nearly as much or for as long." After two months of care, the patient's symptoms resolved.

The patient was 35 weeks and 5 days gestation when she successfully delivered two girls vaginally after a prior caesarean section. The first infant was a cephalic anterior presentation and weighed 4 lbs. 13oz. The mother reported the pushing phase lasting approximately 40 minutes. The second infant presented in a posterior position "with her hand on her face" and weighed 4 lbs 3 oz. The patient reported that her second infant was born 20 minutes after the first. The mother experienced "back labor" during the birthing process which may have been due to the posterior position of the second infant. The babies were taken to the NICU immediately after their birth due to their low birth weight. However, they were quickly released to the mother and deemed "healthy."

Discussion

Two predominant themes are salient for discussion in the cases reported; that of twin pregnancies, particularly under chiropractic care and the chiropractic role in facilitating a woman's need to have a VBAC.

Approximately 2%-4% of all births constitute twin births and disproportionately add to the overall burden of perinatal morbidity and mortality in developed countries. With improvements in reproductive technology, the rate of twinning has increased by 76% between 1980 and 2009. In the United States, twin pregnancies have stabilized at 32 per 1000 births in 2006. The rate of preterm birth (<37 weeks) among twins is about 60%. Of all twin preterm births in the United States, roughly half are indicated, a third are due to spontaneous onset of labor, and about 10% are due to preterm premature rupture of membranes. Mortality related to preterm birth is highly influenced by the consequence of preterm premature rupture of membranes, followed by spontaneous preterm labor and lowest among indicated preterm births.⁵ In population-based studies, Lorenz⁶ noted that children born with neurodevelopmental disabilities are more prevalent in twins than in singletons births. This is mostly due to lower birth

weight and lower gestational age of twin births compared with singleton births. From a chiropractic clinical perspective, we encourage the chiropractor to maintain vigilance in monitoring for twin outcomes and for the mother to make a proper referral when necessary.

Caesarean deliveries represent almost one third of US births. Given that repeat caesarean is the most common single indication for caesarean, trial of labor after caesarean (TOLAC) with subsequent vaginal birth after caesarean (VBAC) is an important mechanism to reduce the overall caesarean rate. The 2010 National Institutes of Health Conference found that one of the biggest barriers to VBAC is the lack of patient access to TOLAC. Many women who currently deliver by repeat caesarean would be candidates for a TOLAC.⁷ To this we would add the role of chiropractic in facilitating VBAC. We therefore encourage chiropractors to continue to share their clinical expertise in case reports such as this. Medicine has acknowledged that other alternatives to obstetrical interventions with a potential for lowering caesarean rates exist and include non-pharmacological pain control methods (of which chiropractic could play a role) in addition to usual care, intermittent auscultation of the fetal heart (instead of electronic fetal monitoring), and multidisciplinary approaches.⁸

Beucher et al.⁹ assessed maternal outcomes during trial of labor (TOL) and elective repeat caesarean delivery (ERCD) in women with a previous caesarean delivery and found that patients with a previous caesarean delivery, the risks of maternal complications are rare and similar between TOL and ERCD. There is an increased risk of complete uterine rupture in case of TOL. Nevertheless TOL has a favorable benefit/risk balance in most cases and its success reduces the risk of short and long-term maternal complications. Maternal morbidity is mainly due to the failure of the TOL and to the risk of unplanned caesarean delivery during labor (EL2). The risk of complete uterine rupture significantly increases with TOL versus ERCD but it remains low at about 0.2 to 0.8% for women with one scar on the uterus (EL2). The occurrence of a post-surgical wound, mostly from the bladder, is rare (less than 0.5%) regardless of the planned mode of delivery (EL2). Facing the risk of hemorrhage requiring hysterectomy or blood transfusion, data are heterogeneous because of the nature of the populations studied. These risks do not seem to vary with the mode of delivery (EL3). The risk of post-partum venous thrombo-embolic complications and infections (endometritis and maternal fever) appears to be similar in both TOL and ERCD (EL3). The risk of infection is primarily related to the additional presence of obesity (EL2). While maternal morbidity progressively increases with the number of iterative caesarean sections, maternal morbidity in TOL after a previous caesarean delivery decreases with the number of successful TOL (EL2). Lopez et al.¹⁰ found that the risk of the main neonatal complications is low whatever the route of delivery after previous caesarean delivery. However, the risk of perinatal mortality, bag-and-mask ventilation, perinatal asphyxia, is higher after TOL compared with ERCD. The risk of transient tachypnea is higher after ERCD compared with TOL.

Regardless of the data, caesarean delivery rates are steadily increasing globally. In the United States, 1.5 million

childbearing women have caesarean deliveries each year, and this population continues to increase.¹¹

The factors contributing to these observed increases are complex. Khunpradit et al.¹² evaluated the effectiveness and safety of non-clinical interventions for reducing unnecessary caesarean sections based on a literature review. Again we remind the reader that this is a medical perspective rather than an integrative approach. The authors concluded that implementation of guidelines with mandatory second opinion can lead to a small reduction in caesarean section rates, predominately in intrapartum sections. Peer review, including pre-caesarean consultation, mandatory secondary opinion and postcaesarean surveillance can lead to a reduction in repeat caesarean section rates. Guidelines disseminated with endorsement and support from local opinion leaders may increase the proportion of women with previous caesarean sections being offered a trial of labor in certain settings. Nurse-led relaxation classes and birth preparation classes may reduce caesarean section rates in low-risk pregnancies. In their review of the literature, Guise et al.¹³ concluded that there is still no evidence to inform patients, clinicians, or policymakers about the outcomes of intended route of delivery because the evidence is based largely on the actual route of delivery. However, Guise et al.¹³ concluded that VBAC is a reasonable choice for the majority of women based on their systematically review of the evidence about maternal and neonatal outcomes relating to VBAC.

Chiropractic Care

As a context to further discussions, we performed a review of the literature published in the last five years using Pubmed (2012-2017), Index to Chiropractic Literature (2012-2017) and Manual, Alternative and Natural Therapy Index System (MANTIS) (2012-2017). We used the terms (“VBAC OR vaginal birth after caesarean OR Trial of Labor after caesarean” in Boolean combination with chiropractic. We found 5 case reports.¹⁴⁻¹⁸ Drobbin and McClain¹⁴ described the care of 35-year-old multiparous female receiving chiropractic care at 34 weeks gestation with a frank breech fetus as confirmed by US imaging. The patient had a history of caesarean section and was seeking chiropractic care for vaginal birth after caesarean section (VBAC). Over a two-week period, the patient was analyzed and adjusted utilizing Webster and Diversified techniques. The patient underwent four adjustments with her baby positioning itself into a vertex position as confirmed by ultrasound imaging.

Spear and Alcantara¹⁵ described the care of a 28-year-old woman at 29-weeks gestation with her second child/pregnancy. Her 1st child was delivered via caesarean. She had chief complaints of chronic migraine headaches, pregnancy-related neck and back pain and ultrasound confirmed placenta previa. She also had a desire for a vaginal birth. Following a total of six visits over a six-week time period consisting of Diversified and Drop Table Technique, the patient's presenting complaints were addressed and she had a successful VBAC. Edwards and Alcantara¹⁶ described the care of a 28-year-old woman presented for chiropractic care at 14 weeks gestation with a history of prior caesarean birth. She sought chiropractic care to improve her chances of a trial of labor and vaginal delivery for her current pregnancy. History

revealed the patient was diagnosed with migraine headaches, hypothyroidism and tachycardia. During care, the patient experienced visual field disturbances and neurological deficits in the face and upper extremities. The patient was cared for with Gonstead Technique, Thompson Drop, and Webster Technique. She attended care for a total of 33 visits of 7 months duration. The result was a successful trial of labor at approximately 40 weeks gestation.

In a case series, Phillips¹⁷ described a 34-year-old gravida 3 para 2 patient receiving chiropractic care at 29-weeks gestation due to immobility from the intensity of bilateral sciatica and LBP. The onset of labor was spontaneous and a successful vaginal birth after two previous caesarean deliveries (VBAC) was achieved without back pain or the need for obstetrical assistance. In 2008, Alcantara and Hamel¹⁸ described the chiropractic care of a 29-year-old gravid female with complaints of low back pain. The patient had surgical caesarean deliveries with her two previous births due to “failure to advance during labor and associated fetal distress.” With her 3rd pregnancy, the patient’s low back complaint was ameliorated with chiropractic care along with a successful vaginal birth.

With respect to the care of a woman with twins, we used the search terms “twins or multiple pregnancies.” Recently, Shtulman and Alcantara¹⁹ described the care of a 38-year-old female presenting for chiropractic consultation and possible care in her 30th week of gestation with twins in a footling breech presentation. According to the patient, she received no previous chiropractic care and experienced three previous singleton pregnancies without complication. She was cared 5 times over a two-week period using the Activator instrument with adjustments to the sacrum following the principles of the Webster Technique. Both fetuses turned to vertex, facilitating a successful vaginal birth without the use of medications.

Heagy and Wrubel²⁰ described the care of a 28-year-old pregnant patient with twins presenting for care with a medical diagnosis of a breech presentation by her obstetrician at 30 weeks gestation. Over a nine-day period, the patient was analyzed and adjusted using Gonstead and Webster technique. After 5 visits over three weeks, the patient’s obstetrician confirmed that the involved twin was in a cephalic lie position.

In the case reported, Network Spinal Analysis (NSA), developed by Dr. Donald Epstein, DC²¹, was the chiropractic technique utilized. The technique was originally a system of classifying, prioritizing, and adjusting vertebral subluxations. In recent years, NSA has evolved into an approach to wellness that applies low force touch contacts to cue the nervous system to develop new strategies for living and healing. Another objective of NSA care is to trigger two “healing” waves which, when they develop, help improve spinal and neural integrity, adaptability and significantly advance wellness and quality of life. Once the type of subluxation has been identified, a priority system of adjusting is initiated. This sequencing of adjustments is termed the Phasing system. Care is advanced through a series of Levels. For those familiar with the technique, Levels 1 and 2 were utilized with the care of this patient.

Despite the limited number of published cases in the care of patients with successful VBAC and/or twin pregnancies, we are of the opinion that literature does not truly reflect what occurs in chiropractic practice. With the documentation of the chiropractic care of similar patients, we collectively learn from such clinical scenarios and inform higher-level research designs. We encourage chiropractors to publish their experience in the care of such patients.

In closing, we must caution the reader on the lack of generalizability of the case reported due to the presence of bias based on a post-positivist research paradigm. Acknowledged confounders leading to bias in this case report include the lack of a control group, possible spontaneous fetal correction of the breech baby and the natural history of breeched babies (i.e., some auto-correct). However, from a constructivist perspective where a person’s perception creates their reality, one could argue that the success of this case report forms the basis for our generalization in caring for similar patients.

Conclusion

This case report provides supporting evidence on the benefits of chiropractic care for the pregnant woman desiring vaginal birth after caesarean. We encourage continued research in this field.

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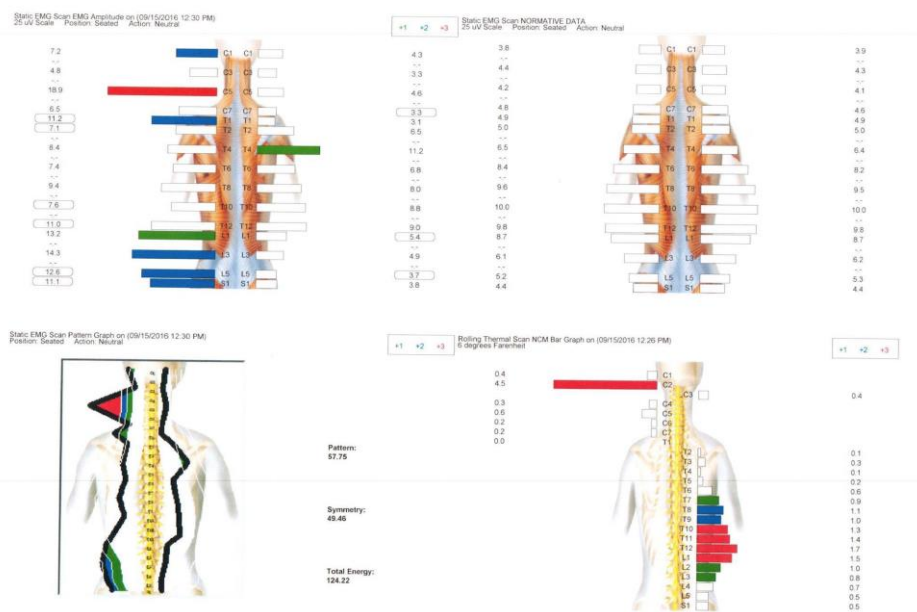


Figure 1. Surface EMG (left) and thermography (right) examination of the patient.