

CASE STUDY

Reduction of Labor and Delivery Time in a Pregnant Patient Undergoing Subluxation Centered Chiropractic Care

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Abstract

Objective: To describe the changes in labor and delivery duration for a pregnant patient that did not receive chiropractic care throughout her first pregnancy but did receive subluxation centered chiropractic care throughout her second pregnancy.

Clinical Features: A 28-year-old female presented to the chiropractor for wellness care. She stated that she would sometimes experience pain at the tip of her tailbone that started after she gave birth to her first child. When asked about her labor and delivery she stated that it was long and difficult. Her initial chiropractic examination took place approximately eleven months before the conception of her second child and she received regular chiropractic adjustments throughout the pregnancy all the way up until the birth of her second child.

Intervention and Outcome: The patient was cared for with Diversified Technique adjustments and was recommended, and used, a pelvic compression belt. She received 32 adjustments prior to the conception of her second child. She also received 19 adjustments after she became pregnant that took place all the way up until the birth of her second child. Her second birth experience was both shorter and easier than the first birth.

Conclusion: This case report provides supporting evidence that subluxation centered chiropractic care on pregnant patients can have beneficial effects on the birthing process. It is also important to note the lack of research on the topic of subluxation centered chiropractic care and its effect on labor and delivery. There is a need for more research on the matter.

Key Words: *vertebral subluxation, chiropractic, pregnancy, labor and delivery, diversified technique, adjustment*

Introduction

Since its inception in 1895, chiropractic has taken a significant interest in pregnant women and the growing life that they harbor within them. DD Palmer himself expressed the importance of chiropractic as it relates to pregnant women and child birth.¹ Since the days of DD, chiropractic has grown so much that 76% of all of the practicing chiropractors within the United States claim that they actively see pregnant patients within their practice. These chiropractors state that they are not

only seeing pregnant patients for musculoskeletal issues, but are seeing these patients for wellness care.^{2,3} A recent 2015 study that surveyed over 10,000 women, found that there was no difference in the rates and reasons for seeking complementary and alternative medicine (CAM), including chiropractic care, between pregnant and non-pregnant patients.⁴ Many of these women sought out CAM because these methods of treatment have had beneficial outcomes

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pertaining to pregnancy and birth outcomes.^{5,6} With this information it can be said that the use of chiropractic care extends well beyond the focus of pain reduction.⁷

Pregnant women seeking CAM and chiropractic care during pregnancy may be drawn towards the practices of traditional midwifery as to stay congruent with the desire for less medical intervention during natural bodily processes.⁸ It has been shown in the past that midwives and chiropractors have made efforts to cooperate so that the two professions can show the benefits of utilizing each other's techniques for the optimization of the pregnancy and birth processes.⁹ Midwives have encouraged the use of chiropractic in order to for their pregnant patients to have a more comfortable pregnancy and allow for an uncomplicated birth process.¹⁰

Case Report

A 28-year-old female presented for an initial chiropractic consultation for possible care. Her desire was to start seeing a chiropractor for wellness care and for tailbone pain. When asked about the tailbone pain she informed the doctor that after her first pregnancy she felt as though there was a shift in her pelvis. After the delivery of her firstborn, the patient experienced pain and discomfort at her tailbone any time she sat on a hard surface. The patient also mentioned that her pregnancy went great but her labor and delivery was very long and difficult and that she would like to receive chiropractic care before becoming pregnant with her next baby. The patient's first birth was home birth under the supervision and care of a certified professional midwife (CPM). There were no medications or interventions utilized during the labor and delivery.

The history and examination revealed that the patient was a competitive gymnast, between the ages of eight and sixteen years of age, and saw a handful of chiropractors throughout that time for wellness care. It was also found that the patient received no chiropractic care throughout her first pregnancy. The patient stated that when she sat down on hard surfaces the pain in her tailbone was a nine out of ten, with ten being the most severe pain possible. The patient had not felt pain in her tailbone before her first pregnancy and attributes her long and difficult labor and delivery as being the cause of the tailbone pain.

The initial consultation with the doctor focused on the pelvis. Using static and dynamic palpation, while the patient was prone and then again while the patient was seated, dyskinesia, edema and tenderness to digital palpation were found throughout the pelvis. After the examination, the chiropractor identified three subluxations present within the patient's pelvis.¹¹ The examination concluded that the right side of the patient's sacral base had shifted posterior (P-R), that the patient's right ilium shifted posterior and inferior and had moved externally (R PIEX) and that the patient's left ilium had moved anterior and superior while also moving internally (L ASIN).

During subsequent appointments the entire spine was examined in the same manner that the pelvis was examined, and subluxations were identified at T4, where the spinous process moved posterior and to the right (T4 PR), at C6, where

the spinous process moved posterior, to the right and the body was fixed in a right lateral flexion (C6 PRI) and at C3, where the spinous process moved posterior, to the left and the body was fixed in a left lateral flexion (C3 PLI).

The patient was informed of the examination findings and consented to begin care. The chiropractor utilized the Diversified Technique to adjust the patient.^{12,13} The chiropractor adjusted both ilia and the sacrum while the patient was in a side-lying position. T4 and C6 were adjusted while the patient was lying in the prone position and C3 was adjusted while the patient was lying supine.

At the second visit with the chiropractor it was recommended that the patient acquire and wear a pelvic compression belt for at least ten minutes a day. The pelvic compression belt was to be utilized to help increase lumbopelvic stability.¹⁴ Pelvic compression belts have been found to help with lumbopelvic stability from pregnancy related issues much like the patient was experiencing.¹⁵ The patient was compliant in wearing the pelvic compression belt ten minutes a day until she was physically unable to due to her second pregnancy.

The patient was evaluated and adjusted 32 times over an 11-month period, leading up the conception of her second child. After conception she was adjusted 19 times throughout her pregnancy up until the birth of her second child. According to the patient there was a 50% reduction in her tailbone pain up until the time she became pregnant. Throughout the pregnancy the goal of the chiropractor was to make sure that the pelvis was freely movable in order to allow for a more comfortable and expedited birth process.

The patient chose to have another home birth that was supervised by the same CPM that attended her first home birth. According to the midwife's who attended both births, the patient's labor and delivery times for her first child was 32 hours and 25 minutes combined. The patient's labor and delivery times for her second child was two hours and 45 minutes combined. There were no medications or interventions used in either labor or delivery.

Discussion

There are a few aspects that need to be discussed as pertaining to this particular case. Topics such as the role of the pelvis as it pertains to labor and delivery, stages of labor and delivery and expected lengths of labor in normal pregnancies are all very important to understand in order to grasp the significance of this particular case.

The pelvis during labor and delivery

As the baby begins to descend into the pelvic brim the spinopubic angle (angle made by the lowest lumbar and the sacral promontory) will widen to approximately 120 degrees and remain wide as long as the mother maintains proper birthing posture with her knees remaining above her ischial tuberosities and as long as her weight is centered directly above or in front of her ischial tuberosities.¹⁶ The pubic symphysis can separate up to 1.25 centimeters without causing damage.¹⁷ The sacrococcygeal joint will flatten to allow the baby's head to pass through the pelvis and the sacroiliac joints

can slide in either the transverse, coronal or sagittal plane, as needed, by as much as two to three centimeters to allow for easier passage of the baby during labor to prepare for delivery.¹⁸ As was found in the physical examination this patient presented with dyskinesia in the pelvis, which is to say that there was an abnormal or impaired movement of the pelvis. The patient's dyskinesia in the pelvis could have been a major inhibitor during her first labor and delivery causing the process to be more difficult and slower than it could have been with freely moveable joints in her pelvis.

Stages of labor

Generally speaking, there are four stages of labor and delivery: latent phase, active phase, second stage and third stage.¹⁹ The latent phase is the longest phase of labor and can last up to 20 to 24 hours.^{20,21} This phase concludes when the cervix has dilated up to four to five centimeters.²² During the active phase of labor there will be complete effacement of the cervix and you will have full dilation (commonly ten centimeters) of the cervix. This means that the baby's head engages, which means that the head has passed through the pelvis and is at a presentation ready to complete the labor and delivery process. The second stage of labor is when the mother is now engaged and ready to push. Contractions are intense, prolonged and close together. Second stage is complete when when, "all of the mechanisms of birth are accomplished: descent, flexion, internal rotation, birth of the head, restitution, external rotation, and birth of the shoulders and body of the fetus."¹⁹ The third stage of labor involves the birthing of the placenta and the complete physiological shift that must take place in order for the baby to adapt from life in the womb to life outside of the mother.²²

Lengths of labor in normal pregnancies

It is difficult to accurately measure the duration of the latent phase of labor due to its reliance on self-diagnosis from the pregnant patient and most women vary in their ability to recognize the signs that labor has begun.²³ However, it was established earlier that normal duration of the latent phase is anywhere from 20 to 24 hours. Our patient experienced 23 hours of latent phase labor during her first childbirth.

A 1996 research paper describes the outcomes of active phase and second stage labor times in 1473 low-risk pregnancy patients that were being cared for by certified nurse midwives.²⁴ The average duration of second active phase labor in nullipara patients (women who have never given birth) was 7.7 hours and the average duration of second stage labor in nullipara patients was 53 minutes. Our patient in this case study experienced an active labor that last 8.7 hours, an hour longer than the average, and second stage labor that lasted 33 minutes, 20 minutes less than the average. After being under subluxation centered chiropractic care the patient saw her latent phase labor time decrease from 23 hours to 1.5 hours. The 1996 study showed that the average duration of active phase labor in multipara patients (patients who had previously experienced child birth) was 5.7 hours and the average second stage labor lasted 17 minutes.

During the labor and delivery of her second child, our patient experienced an active phase of labor that last one-hour, 4.7

hours less than the average, and a second stage of labor that lasted ten minutes, seven minutes shorter than the average.

Conclusion

This case study shows the improvement and reduction of labor and delivery times while the patient is under subluxation centered chiropractic care. This should suggest that chiropractic care should be considered far more beneficial than just symptom-based practitioners. Though the subject matter of chiropractic care and pregnancy often intertwine within research, little research exists highlighting the effects that subluxation centered chiropractic care can have on the duration of labor and delivery times in pregnant patients. Further research is necessary to further explore these outcomes.

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