



Breech repositioning unresponsive to Webster technique: coexistence of oligohydramnios

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Abstract

Objective: The purpose of this report is to describe the results of a pregnant woman demonstrating breech fetal presentation who was managed with Webster technique in the presence of oligohydramnios.

Clinical Features: A 23-year-old primigravida woman sought chiropractic care for the management of breech presentation and bilateral sacroiliac arthralgia at 34 weeks' gestation.

Intervention and Outcome: Sacral manipulation and abdominal effleurage (Webster Technique) was used to address breech presentation and sacroiliac arthralgia for a total of 7 treatments over a 3 1/2-week duration. The patient's sacroiliac pain reduced from 8/10 to 3/10. However, breech presentation was unchanged at each treatment. At a scheduled prenatal surveillance during the 37th week of gestation, the midwife detected vaginal bleeding and reduced fundal height, which resulted in hospitalization, diagnosis of oligohydramnios, and an emergency cesarean delivery.

Conclusion: For this particular patient, the breech presentation was not corrected using the Webster technique. Clinicians who use the Webster technique to manage breech fetal presentation should be aware of undiagnosed comorbidities as a complicating factor in clinical presentation. Screening for previously undiagnosed comorbidities, such as oligohydramnios, must be considered.

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Introduction

Breech presentation is a form of fetal malpresentation where the fetus presents feet first or buttock first toward the cervix, which may block the birth canal

during vaginal delivery. Approximately 3% to 5% of all pregnancies reach full term presenting with breech presentation.¹⁻⁶ The Webster technique is a chiropractic procedure that is believed to relieve the musculoskeletal cause of intrauterine constraint, with the goal of repositioning breech presentation to cephalic presentation.⁷⁻⁹ The Webster technique is thought to promote cephalic presentation by treating sacroiliac joint dysfunction with sacral manipulation and lower abdominal tenderness, nodules, or adhesions with

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light effleurage therapy.^{7,10} This technique was developed in 1978 and is taught in several chiropractic colleges and postgraduate chiropractic programs.⁷ Although much of the popularity of the Webster technique is due to anecdotal reports,^{7,10-12} a review of the current literature failed to identify any studies evaluating the efficacy of this technique.

Breech presentation may be the result of various causes, is a complicating factor for vaginal delivery, and may place the fetus at undue risk of morbidity or mortality.¹³ A deficiency of amniotic fluid is known as *oligohydramnios*, and breech presentation may be a sign of this disorder.¹⁴ Early identification of oligohydramnios is important because this condition is associated with increased fetal morbidity and mortality.^{15,16}

Much is unknown about the efficacy of the Webster technique for addressing breech presentation. Although there have been many statements made in the lay literature, at present, no clinical trials have been published about this technique in the indexed biomedical literature. Therefore, the purpose of this report is to describe the case of a woman treated with the Webster technique for the management breech presentation.

Case report

A 23-year-old primigravida woman began prenatal care with a certified nurse-midwife during the 10th week of gestation. The woman attended all prenatal appointments and was diagnosed with breech presentation, via ultrasonography, at a routine prenatal evaluation during the 34th week of gestation. Consent for publication of clinical information was provided by the patient.

The patient was referred to a doctor of chiropractic (DC) by her midwife for co-management in the 34th week of gestation to encourage cephalic presentation using the Webster technique. The patient's health history was unremarkable, other than her current diagnosis of breech presentation and sacroiliac pain. The DC's initial physical examination supported the presence of breech presentation via Leopold maneuvers, which use abdominal palpation to determine fetal presentation.¹⁷ The patient reported a history of "dull and achy" bilateral sacroiliac pain of insidious onset during the 20th week of gestation. The patient rated her "average pain intensity over the past 24 hours" as 8/10 on an 11-point pain intensity numerical rating scale. Physical examination produced sacroiliac joint pain upon side-lying iliac compression test, bilateral supine

thigh thrust tests, and bilateral prone sacral thrust tests. Following the initial physical examination, continued breech presentation was confirmed; and the patient was also diagnosed with bilateral sacroiliac arthralgia, which was informed by a clinical prediction rule on sacroiliac joint pain.^{18,19} These same physical examination procedures were used to assess fetal presentation and sacroiliac arthralgia at each subsequent visit.

The patient underwent 7 treatments with the DC at a frequency of 2 visits per week over a 3 1/2-week period, which represented the 34th to 37th week of gestation. The Webster technique was used at each treatment visit. Drop-assisted sacral manipulation was performed with the patient lying in the prone position, while accommodating for abdominal distention. Following sacral manipulation, the patient was positioned supine; and light effleurage was performed to an area of mild tenderness near the location of the round ligament on the contralateral side of sacroiliac dysfunction (Fig 1). The patient tolerated all treatments well and reported no adverse events.

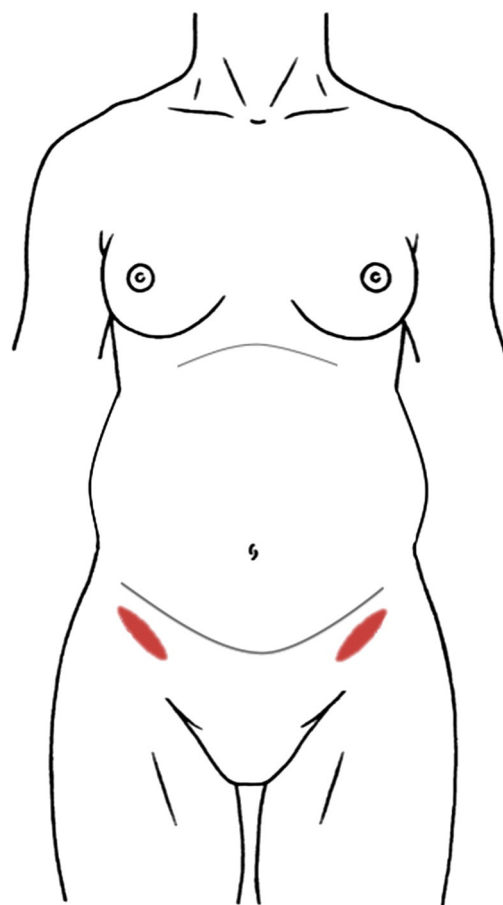


Fig 1. Locations of lower abdominal effleurage therapy. Effleurage therapy was applied to the areas indicated in red on the contralateral side of sacroiliac dysfunction.

The DC confirmed breech presentation via Leopold maneuvers at each chiropractic visit. Breech presentation remained unresponsive throughout the 3 1/2-week treatment duration. The patient's sacroiliac pain intensity was rated 8/10 at the initial examination with the DC and was reduced to 3/10 at each of the 6 remaining visits. The midwife maintained a standard prenatal care schedule, and previous prenatal visits failed to demonstrate abnormalities other than breech presentation.

The patient attended a routine prenatal follow-up evaluation with her midwife during the 37th week of gestation. At this visit, the midwife palpated a 2-cm reduction of fundal height compared with the previous 34-week evaluation and discovered vaginal bleeding upon pelvic examination. The midwife considered the pregnancy to be of high risk and referred the patient to the local hospital for immediate ultrasonography. Continued breech presentation was confirmed, and an amniotic fluid index of 3 cm was measured. An amniotic fluid index of 5 cm or less is pathognomonic of oligohydramnios.^{20,21} The presence of oligohydramnios prompted the decision to perform an immediate cesarean delivery, and the child was successfully delivered via cesarean birth at 37 weeks' gestation. The patient contacted the DC 3 days after giving birth and explained that the cesarean delivery was without perinatal complications. A 1-year follow-up was also performed; and the patient reported a complete recovery from surgery, resolution of her sacroiliac pain, and no significant pediatric complications.

Discussion

Clinicians using the Webster technique to manage breech presentation should stay mindful of comorbidities that may complicate the clinical presentation. In this case, oligohydramnios was an underlying pathology that may have inhibited the fetus from assuming cephalic presentation. Doctors of chiropractic using the Webster technique should associate persistent breech presentation with an increased probability of undiagnosed comorbidity and embrace co-management with other health care providers to screen for pathology.

Several abnormalities may influence fetal malpresentation, including intrauterine constraint, pre-eclampsia, umbilical cord prolapse, placenta previa, hydrocephalus, premature rupture of maternal membranes, fetal renal abnormalities, placental abnormal-

ities, polyhydramnios, and oligohydramnios.²²⁻²⁴ Prenatal diagnosis of oligohydramnios is clinically important because this condition is also associated with increased fetal morbidity and mortality.^{15,16} Once diagnosed, oligohydramnios should prompt intensive fetal biophysical surveillance and is commonly managed with maternal hydration and bed rest.^{14,25} Prenatal detection of oligohydramnios should also prompt a thorough maternal examination for complicating comorbidities such as diabetes or hypertension.²⁵ In the case reported here, oligohydramnios may have impaired fetal mobility and prevented the fetus from assuming a cephalic presentation.¹⁴

When breech presentation persists to full term and cesarean delivery is performed instead of vaginal births, outcomes are improved; and the relative risk of neonatal death or serious morbidity is reduced by 33%.^{2,13} These reductions in morbidity and mortality come at the expense of slightly increased maternal morbidity.¹³ Although women demonstrating breech presentation at full term have been shown to prefer vaginal deliveries,²⁶ it is important to emphasize that patients must be fully informed of the potential risks and benefits surrounding both vaginal and cesarean delivery methods.

The Webster technique is commonly associated with the management of breech presentation^{7,9,27} but is taught as a technique to facilitate "neurobiomechanical function" by managing sacroiliac joint dysfunction.³³ Some consider it an alternative method for repositioning breech presentation into a cephalic presentation by relieving the cause of musculoskeletal intrauterine constraint.^{7-9,27}

The procedure uses pelvic manipulation and abdominal effleurage to relieve the musculoskeletal cause of intrauterine constraint, which theoretically allows the fetus to assume a cephalic presentation.⁹ When surveyed, DCs who specialize in pediatrics and use the Webster technique reported high success rates of resolution of breech presentation; however, these subjective data cannot be verified.⁷ Although several case reports exist,¹⁰⁻¹² the author found no clinical studies to establish the efficacy of the Webster technique for repositioning breech presentation.²⁷ To establish the safety and efficacy of the Webster technique for repositioning breech presentation, it is imperative that observed success rates be compared against rates of spontaneous resolution in a controlled scientific setting.

Most fetal malpresentations spontaneously revolve as pregnancy progresses (Fig 2).⁵ Observation of fetal lie has shown fetal malpresentation to decrease from

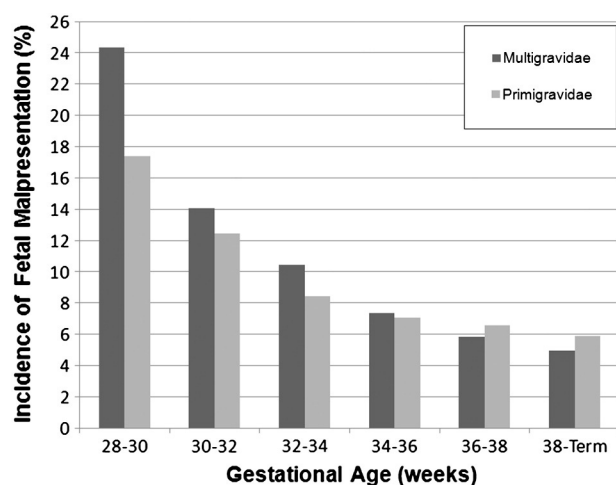


Fig 2. Incidence of fetal malpresentation by gestational age. Fetal malpresentation includes breech, transverse, and oblique fetal presentations. Figure derived by permission of Wiley-Blackwell from Fox and Chapman.⁵

21% at the beginning of the third trimester to 5% at full term,⁵ which is consistent with other reports.^{1-4,6} It has been demonstrated that 75% of fetal malpresentations at 28 to 30 weeks' gestation spontaneously reposition into a cephalic presentation by full term.⁵ In addition to the Webster technique, clinicians should acknowledge other management strategies for resolving breech presentation.

The external cephalic version (ECV) is a common method for repositioning breech presentation into cephalic presentation. It involves practitioners attempting to manually reposition the fetus through the woman's abdominal wall.²⁸ Evidence currently supports use of ECV to reduce the chance of fetal malpresentation and cesarean delivery at full term²⁸⁻³⁰ but not at preterm.⁶ The success rate of ECV have been shown to be approximately 68%, and adverse maternal and fetal outcomes from ECV are rare.^{29,31} A decision aid has also been developed to assist informed decision making when considering ECV.³²

Doctors of chiropractic using the Webster technique to manage breech presentation should consider the natural history of this condition and the efficacy of common methods of breech repositioning, and recognize that the clinical effectiveness of the Webster technique is yet to be established. Clinicians involved in the management of breech presentation should also encourage patients to maintain a standard prenatal care schedule in an attempt to screen for comorbid conditions that may complicate the clinical presentation. As this case points out, DCs using the Webster technique should be aware that oligohydramnios may contribute to breech presentation and

should consider co-management for etiological evaluation in situations of persistent breech presentation.

Limitations

As this was a single case report, the observed effects of this course of care may not be generalizable to other patients. The efficacy of the Webster technique remains unknown and must be compared with incidence of spontaneous resolution.

Conclusion

For this particular patient, the breech presentation was not corrected using the Webster technique. Clinicians who use the Webster technique to manage breech fetal presentation should be aware of the possibility of undiagnosed comorbidities as a complicating factor in clinical presentation. Screening for previously undiagnosed comorbidities, such as oligohydramnios, must be considered.

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