

Vaginal Birth after Cesarean after Zavanelli Maneuver: A Woman's Right to Choose

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How to cite this paper: Jenkins, N., Vulture, G. and Baum, J.D. (2024) Vaginal Birth after Cesarean after Zavanelli Maneuver: A Woman's Right to Choose. *Open Journal of Obstetrics and Gynecology*, 14, 1091-1095.

<https://doi.org/10.4236/ojog.2024.147088>

Received: June 22, 2024

Accepted: July 20, 2024

Published: July 23, 2024

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Abstract

Introduction: Vaginal birth after cesarean (VBAC) plays an essential role in lowering cesarean rates. Despite endorsement, trial of labor after cesarean (TOLAC) attempt rates remain low, in part due to fear of lawsuits. Zavanelli maneuver is a last resort procedure in the management of shoulder dystocia. We discuss a case of a woman determined to have a vaginal birth after her prior birth was complicated by shoulder dystocia requiring a Zavanelli maneuver. Her physicians were reluctant to allow her a TOLAC given her prior obstetric history. **Case:** A 34-year-old para 1 with prior cesarean delivery due to shoulder dystocia that required Zavanelli maneuver presents determined to pursue VBAC in her current pregnancy. She considered her delivery route options and addressed her modifiable risk factors. She consulted with multiple perinatologists who agreed that a TOLAC was reasonable, however she had to travel more than 70 miles (from Pennsylvania to New Jersey) to find an obstetrical practice and hospital willing to consider VBAC. She transferred care and the remainder of her prenatal course was uncomplicated. She went into labor at 41 weeks and had a successful VBAC without complication. In a thank you letter to her obstetrician, she described her birth experience as *euphoric*. **Conclusion:** This case illustrates how a woman's choice of delivery route may be impacted by fear of litigation. Local providers focused on her prior delivery instead of her overall improved risk profile. Delivery route decisions should be based on a thorough evaluation of all risk factors and individualized to meet the reproductive goals of each woman.

Keywords

Vaginal Birth after Cesarean, Zavanelli, Autonomy, Case Report

1. Introduction

In 2020, cesarean deliveries accounted for approximately 32% of births in the

United States [1]. The goal of Healthy People 2030 is to lower the cesarean delivery rate to 24% [2]. An important factor in achieving a lower cesarean rate is a trial of labor after cesarean (TOLAC) [3]. Vaginal birth after cesarean (VBAC) rates peaked in 1996 and, despite current goals and recommendations, have declined steadily to a current rate of 14.2% in 2020 [1]. Both medical and non-medical factors have contributed to the decline in offering women the opportunity to TOLAC in general. From 1994 to 1999, guidelines required physicians to be “immediately available” for repeat cesareans and, as recently as 2017, stated that facilities needed to be capable of providing immediate emergency care for delivery [4] [5]. Such policies and protocols may have evolved from a safety perspective but have largely served to disincentivize TOLAC. The patient seeking a TOLAC has become an unnecessary (and avoidable) risk for a provider when compared to scheduling and performing a repeat cesarean delivery. Nearly 40% of American College of Obstetrics and Gynecology (ACOG) fellows surveyed report having decreased their number of high-risk obstetric patients and their willingness to offer or perform VBAC deliveries in response to growing litigation rates [6]. This makes the prospect of finding a physician willing to participate in a VBAC much more challenging for women.

In an effort to objectively predict those in whom a successful VBAC is likely, VBAC prediction algorithms have evolved. These models help identify ideal candidates for successful TOLAC based on maternal age, BMI, race, history of a prior vaginal delivery, and indication for primary cesarean [7]. Common indications for cesareans such as non-reassuring fetal heart tracings or fetal malpresentation are associated with favorable VBAC success predictions [7]. Missing from these prediction calculations is a history of an adverse birth outcome (either maternal or fetal) leading to primary cesarean; for example, shoulder dystocia.

A shoulder dystocia is considered an obstetric emergency and is defined as the failure to deliver the fetal shoulders, requiring additional obstetrical maneuvers to achieve vaginal delivery [8]. In cases of dystocia unresponsive to first-line maneuvers, emergency rescue maneuvers may be performed, including the Zavanelli maneuver, where the physician manually replaces the delivered fetal head back into the uterus, and an emergent cesarean is performed [8]. This maneuver is associated with the highest rates of both maternal and fetal morbidity/mortality and is only considered in dire situations [8]. Performance of a Zavanelli maneuver indicates a dire situation occurring after delivery of the fetal head that requires heroic measures to prevent significant neurological injury or infant death due to prolonged hypoxia.

When presented with patients with poor obstetric histories, such as a prior cesarean delivery or fetal shoulder dystocia, physicians may be reluctant to allow a future vaginal delivery due, in part, to obstetric legal concerns. Litigation is common in Obstetrics and Gynecology as it is one of the most frequently sued specialties, with nearly 83% of providers having had a lawsuit filed against them at least once [9]. We present a case where a patient’s autonomy was curtailed by multiple physicians’ fear of lawsuits in her attempt to pursue a vaginal delivery

given her history of a prior fetal shoulder dystocia requiring the Zavanelli maneuver and cesarean delivery.

2. Case

A 34-year-old para 1 presented at 33 weeks gestational age in pursuit of VBAC. Her previous delivery had been complicated by a shoulder dystocia requiring the Zavanelli maneuver for the delivery of a macrosomic female infant weighing 4.4 kg. Despite this event, she strongly desired a vaginal delivery and wanted to avoid another cesarean unless absolutely necessary. The patient did her part by addressing her modifiable risk factors. She reduced her pre-pregnancy BMI from 39 kg/m² to 26 kg/m². She maintained a normal gestational weight gain of 25 pounds, a significant improvement from the 50-pound gain in her prior pregnancy. She had a normal gestational diabetes screen in contrast to her history of class A1 diabetes. In addition, the estimated fetal weight in the third trimester was in the 50th percentile versus the 95th percentile in her prior pregnancy. She consulted multiple perinatologists, who all agreed that TOLAC was reasonable. Despite her efforts, she could not find a local obstetrician willing to take on this risk. She traveled more than 70 miles across state lines to find an obstetrician willing to agree to her TOLAC request. At 41 weeks, she went into spontaneous labor and had an uncomplicated, successful VBAC of a healthy female infant weighing 3.6 kg. She was subsequently discharged on postpartum day 2 without any complications. With regard to newborn outcomes, the baby delivered via Zavanelli/cesarean was admitted to the Neonatal Intensive Care Unit (NICU) and stayed following discharge of the mother. In contrast, the baby delivered via VBAC was able to room in and both mother and baby were discharged home together. At her six-week postpartum visit, she reported that her vaginal delivery experience was “*euphoric*.” Her reproductive career was not complete, as she went on to have an additional successful VBAC approximately two years later.

3. Discussion

Currently, there are no recommendations to guide delivery route decisions for patients in a subsequent pregnancy with a history of delivery complicated by the Zavanelli Maneuver. In general, ACOG encourages pursuit of a VBAC clearly stating that a history of a shoulder dystocia should not be an indication for cesarean delivery [3] [8]. However, when delivery complications are encountered, both patients and providers alike may fear similar recurrence in subsequent deliveries. Unsuccessful TOLAC has a higher rate of complications when compared to VBAC or elective repeat cesarean delivery [3]. When looking at the recurrence of a shoulder dystocia, there are models that can help stratify patients into low and high risk groups, however regardless of risk category, shoulder dystocia remains neither predictable nor preventable [8]. In addition, the recurrence risk of a shoulder dystocia is reported to be anywhere from 1% - 16% [10]; but it is likely that the true incidence of recurrence may never be known because

patients and physicians often choose not to attempt a trial of labor given a patient's history. The perception is that it is "safer" to undergo a repeat cesarean delivery prior to labor in a subsequent pregnancy. The pressures and fear of litigation in the event of an unpredictable adverse obstetrical outcome appear to be a major influence on physician recommendations regarding delivery route in patients with a prior cesarean delivery.

This case highlights the impact that non-clinical factors, such as the fear of litigation, can negatively exert on obstetric decision-making and patient autonomy. This patient had a prior delivery that required emergent, last-resort maneuvers to facilitate delivery. Despite this harrowing experience, she was determined to pursue a vaginal delivery in her subsequent pregnancy. By VBAC prediction models and risk stratification models for shoulder dystocia, this patient was an excellent candidate for a successful VBAC. She did the work by reducing all four of her modifiable risk factors for a shoulder dystocia, but given her one non-modifiable risk factor of a severe prior shoulder dystocia, she struggled to find a provider willing to give her a chance to attempt a vaginal delivery. She consulted multiple perinatologists, also known as high risk obstetricians, who all agreed that she was a good candidate, but no local obstetrician was willing to allow a trial of labor.

The patient was not supported in her decision to pursue VBAC and she was forced to travel across state lines to find a provider willing to allow a trial of labor. The decision-making in this case was unilateral and resulted in a patient's reproductive wishes being minimized.

4. Conclusion

With regard to delivery route decisions, non-clinical factors, such as fear of litigation, may limit autonomy in patients with clear understanding of their clinical situation. Cases such as the one presented should highlight the consequences of denying a woman the right to choose.

Highlights

- Non-clinical factors, such as fear of litigation, may have a negative impact on delivery route decisions and women's choice in those who seek VBAC, especially after a delivery complicated by shoulder dystocia.
- Risk factors for shoulder dystocia may vary in each pregnancy. Improvement in the overall risk profile and reproductive goals should be considered when deciding on the best delivery route for current and future pregnancies.

Patient Perspective

Patient declined to participate.

Informed Consent

This patient has given consent for publication.

Conflicts of Interest

The authors declare they have no relevant conflicts of interest. A preprint prior version of this work has previously been published [Jenkins, N. *et al.*, 2023] [11].

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Abbreviations

VBAC	Vaginal Birth After Cesarean
TOLAC	Trial Of Labor After Cesarean