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Original Research Article

Breech Vaginal Delivery: Its relevance in 21st century Obstetrics

Authors: Dr. (Col) Santhanam Sampath[1] (Assoc. Prof.) & LtCol Amarinder Singh[2]

(Asst. Prof.)

Department of Obstetrics & Gynaecology, Command Hospital, Chandimandir[1&2]
Corresponding Author: Dr. Santhanam Sampath

Abstract

Background & Methods: The aim of the study is to assess safety of Breech Vaginal Delivery in comparison with planned Caesaean birth. The fetal parameters noted were estimated fetal weight, actual weight after delivery, type of breech, perinatal morbidity, maternal complications, NICU admission, and neonatal neurological outcomes.

Results: There was no difference in Neonatal outcomes between breech vaginal delivery and caesaean delivery groups. Maternal outcomes were worse in caesaean delivery group. All 18 cases of PPH were found in those with pregnancy-induced hypertensive disorders while 75% of SSI was found in those with obesity and diabetes, all in caesaean delivery group.

Conclusion: Attempting vaginal delivery in well-selected and informed patients of breech presentation is a reasonable option at Centers equipped with optimal infrastructure to handle obstetrical emergencies. Conducting caesarean delivery in all cases of term breech presentation is not only unreasonable but may not even reduce the rate of perinatal morbidity or improve long-term neurological outcomes while increasing the risk of maternal complications at the same time.

Keywords: Experience, Breech, Vaginal & Delivery.

Study Design: Observational Study.

Introduction

Breech presentation is defined as a fetus in a longitudinal lie with the buttocks or feet closest to the cervix. This occurs in 3-4% of all deliveries[1]. The percentage of breech deliveries decreases with advancing gestational age from 22-25% of births prior to 28 weeks' gestation to 7-15% of births at 32 weeks' gestation to 3-4% of births at term.

Predisposing factors for breech presentation include prematurity, uterine malformations or fibroids, polyhydramnios, placenta previa, fetal abnormalities (e.g., CNS malformations, neck masses, aneuploidy), and multiple gestations. Fetal abnormalities are observed in 17% of preterm breech deliveries and in 9% of term breech deliveries[2].

Since the middle of the 20th century, the rate of caesarean sections (CS) for breech presentations has been rising [3]. In order to solve the long-standing question, "What is the safest delivery mode for a breech presenting fetus?" the Term Breech Trial (TBT) was eagerly awaited. However, the rate of CS for breech presentation had already topped 83% by the time

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the TBT was released in 20002. For many, the TBT confirmed that CS was, in fact, the safest method of birth for breech presenting fetuses, despite criticism of the validity of the TBT findings due to issues with recruitment, randomization, labor management procedures, and the skill level of attending practitioners involved. Since then, a number of studies have demonstrated that breech babies, regardless of delivery mode, had a much lower risk of newborn mortality and little to no difference in long-term developmental outcomes, making the TBT's findings a statistical outlier[4]. Some women still express a preference and seek support for a vaginal birth, despite the fact that the CS rate for breech presentation varies from 69% to 100% depending on the country of birth. Gaining insight into women's experiences with breech presentation and delivery may help clinicians better assist and engage with women who want to give birth outside of the now-standard care (CS). In order to identify possible practice changes, this paper attempts to incorporate the most recent information on women's experiences with breech birth decision making that was gathered through a thorough literature search [5–6].

Material and Methods

Examination of every breech birth, whether planned or emergency, 51 breech deliveries made vaginally and 378 caesarean deliveries were among the data taken from the labor room and operating room registry. However, the inclusion criteria eliminated cases of multiple gestations, POG less than 36 weeks, and fetuses with congenital abnormalities, while including singleton breech from 36–42 weeks POG. Following the aforementioned criteria, a total of 252 breech caesarean delivery cases and 33 vaginal breech delivery cases were examined and compared for maternal and perinatal morbidity and death. Age, POG at termination, antenatal co-morbidities, cervical dilatation at presentation, length of labor, genital trauma, and various postpartum problems such as postpartum hemorrhage and overall hospital stay were among the maternal data recorded in both groups.

Strict guidelines were established to permit vaginal birth. When 1. Patients provided written agreement for breech vaginal birth, it was permitted. 2. The breech was either complete or frank. 3. There was no hyperextension of the fetal neck. 4. There was no feto-pelvic disproportion, as the patient either arrived in labor or labor was advancing clinically. 5. Fetal weight less than 3500 g. At our centers, following women were enrolled in planned CS group. 1. Individuals who failed to provide written consent for breech vaginal birth 2. Any breech that is not complete or frank 3. Possible hyperextension of the fetal neck 4. Earlier CS 5. A number of co-morbidities 6. Foetal weight estimate: ≥3500 gm 7. Additional obstetrical indications, include cord prolapse and placenta praevia/accreta/abruption. During the intrapartum phase, we used continuous electronic fetal monitoring (EFM). Only when there were no good contractions was oxytocin and regulated amniotomy used to induce uterine activity; otherwise, natural labor was permitted. Every patient had a partogram, which an obstetrician kept a careful eye on. Any breech in labor was always communicated to the OT and pediatric departments. The patient was taken for emergency CS if there was any abnormality on the EFM or if there was even the remotest suspicion of prolonged labor, such as no cervical dilatation for more than two hours despite adequate uterine activity, passive second stage lasting more than 90 minutes, or active second stage lasting more than 60 minutes. Since it was against the institutional procedure, no patient was administered epidural anesthesia, or ECV. Although it

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is not part of the protocol, one second gravida patient with pregnancy cholestasis and breech presentations was induced on maternal request. The obstetrician performed all deliveries, and the pediatrician attended to the newborns.

Result

Table No. 1: Comparison of Maternal Age, POG in Weeks, and Baby Weight between the Two Groups

S. No.	Parameter	Group 1	Group 2	P Value
1	Age	27.21±5.2	25.21±3.6	0.69
2	POG (Weeks)	36.8±0.8	36.21±3.7	0.041
3	Baby Weight (Kg)	2.6±2.9	3.1±1.7	0.038

Table No. 2: Comparison of Type of Breech Presentation

S. No.	Parameter	Group 1		Group 2	
		No.	%	No.	%
1	Complete	23	71	128	51
2	Frank	10	29	109	44
3	Footling	00	00	15	06
	Total	33		252	

Table No. 3: Association of Operative Complications with Maternal Co-Morbidities

S. No.	Parameter	Group 1		Group 2	
		No.	%	No.	%
1	DM	08	25	64	25
2	Hypothyroidism	04	12.5	34	12.6
3	Obesity	06	18	36	14.2
4	PIH	06	18	30	12

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Table No. 4: Neonatal Outcomes

S. No.	Parameter	Gp 1	Gp 2	P value
1.	APGAR at 5 min	09	09	.013347
2.	Birth injury	00	00	
3.	NICU admission	04	22	
4.	Abnormal neurological findings at 1 yr	00	00	

The chi-square statistic is 6.1225. The *p*-value is .013347. The result is significant at $p < .05$.

Table No. 5: Maternal outcomes

S No	Parameter	Gp1	Gp 2	P value
1.	Postpartum hemorrhage	00	18	.000145
2.	SSI	00	10	
3.	UTI	01	05	
4.	ICU admission	00	02	

The chi-square statistic is 14.4407. The *p*-value is .000145. The result is significant at $p < .05$.

All 18 cases of PPH were found in those with pregnancy-induced hypertensive disorders while 75% of SSI was in those with diabetes and obesity.

Discussion

Planned CS has been consistently supported, especially since Hannah's TBT, the number of term breech vaginal births performed during the past 20 years has decreased. Although TBT follow-up studies have shown similar maternal and fetal outcomes for both vaginal and caesarean delivery groups, this trend regrettably persists in many places, proving that planned cesarean sections do not always lower perinatal morbidity or neuro-developmental delay in children [7]. Additionally, our data showed that out of the 285 term singleton breech presentations, 252 (89%) were cesarean deliveries and just 30 (11%) were vaginal deliveries. Of these, 29 (97%) had presented in either latent or active labor, and only one (3%) was induced at the mother's request for cholestasis. This supports Basnet's findings from their Institute, which showed 434/528 (82.2%) caesarean deliveries compared to 94/528 (17.8%) vaginal deliveries [8]. In contrast to our study, where only 8 (26%) of the 21 (70%) interested participants were unplanned and scheduled for vaginal trial only if they went into spontaneous labor by 42 weeks, and just one (3%) was induced, Basnet et al. had 78.6% unplanned deliveries compared to 21.4% planned deliveries.

The participants' mental preparedness and flexibility were found to be important determinants of the birthing experience. The subjects showed differences in self-efficacy, coping strategy use, openness, flexibility, and the need for control. This is similar to previous research that focused on the part that women's personal characteristics played during labor, where their coping strategies and postpartum thoughts were influenced by their resilience and vulnerability [9]. According to Drichel's [10] idea of "negative capacity," some women were less resilient, but their seeming fragility was not limited to sensitivity to injury; it also showed up as an openness to receiving care, understanding, and support. It may be simpler to accept assistance

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when one feels safe in vulnerability, which may help one relinquish control and give in to the birth process.

Some of the women in our study felt pressured to select an upright breech birth, while others were not given the option to choose their birth mode. This supports the results of earlier research [11]. Research has demonstrated that a woman's active participation in the birth process has a greater impact on her birth experience than the actual delivery method, highlighting the importance of joint decision-making.

Two individuals with histories in healthcare had significant knowledge and experience, which either increased their confidence in giving birth or made them more anxious because they were acutely aware of the hazards. This dichotomy frequently resulted in a complicated emotional interaction. On the other hand, those with less experience were more vulnerable to outside influences. This somewhat reflects the findings of Thompson's [12] study, highlighting the influence of partners, family members, and medical experts in influencing choices regarding delivery techniques. However, unlike Thompson's study, our participants did not report that their partners had an impact on their choice of delivery method [13–14].

According to our data, the newborns who could be followed up on had no long-term neurological disorders and no serious neonatal difficulties at birth. This was due to the fact that the majority of our patients who underwent breech vaginal birth were bearing babies of average size, had spontaneous labor, were under close observation, and made good progress. In addition to preventing surgical and anesthetic difficulties, planning a vaginal delivery for the right individuals will significantly reduce the global rate of cesarean deliveries.

Conclusion

Attempting vaginal delivery in well-selected and informed patients of breech presentation is a reasonable option at Centers equipped with optimal infrastructure to handle obstetrical emergencies. Conducting caesarean delivery in all cases of term breech presentation is not only unreasonable but may not even reduce the rate of perinatal morbidity or improve long-term neurological follow-up while increasing the risk of maternal complications at the same time.

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