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Original Research Article

The Outcome of Breech Presentation After 34 Weeks of Period of Gestation of Pregnancy in NSCB Medical College Jabalpur Madhya Pradesh

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Abstract

Background: Management of breech presentation at term remains controversial in modern obstetrics. Currently, cesarean sections are routinely performed despite a lack of supporting data.

Aim and Objective: A study was conducted to evaluate the route of delivery, and the maternal and perinatal outcome in cases of singleton breech presentation beyond 34 weeks of period of gestation

Material and Method: A prospective observational study was carried out at NSCB medical college Jabalpur MP over one year. This study included 225 cases of breech presentation beyond 34 weeks. The external cephalic version was carried out in suitable cases. Data on the delivery method and maternal and neonatal outcomes were gathered and examined for this group of patients throughout their pregnancies.

Result: There were 154 incidences of breech presentation out of 4745 total births (3.24%), with 45.3 percent occurring in first-time mothers and 54.7 percent in those who had already given birth. Seventy-one out of 225 (31.5%) women experienced spontaneous cephalic versions. The external cephalic version had a 59% success rate, with 17 of 29 births going smoothly. Most breech births (65%) were accomplished through cesarean section, while 35% were born vaginally (including 6 assisted breech births).

Conclusion: Even in the late third trimester, a sizeable percentage of breech fetuses will undergo a spontaneous version. When a singleton pregnancy is diagnosed as being in a breech position, an external cephalic version can be used to avoid a cesarean section.

Keywords: Pregnancy, Breech Presentation, Version, Vaginal Birth.

Introduction

'Breech' derives from the word 'Britches,' meaning a cloth covering the loins and thighs. The incidence of the breech decreases gradually with increased gestational age. This has been attributed to the adaptation wherein the increased bulk

of buttocks can occupy the fundus, which is more spacious. The breach is reported to constitute about 3-4% of all singleton deliveries at term. [1]

A literature review suggests that perinatal mortality and morbidity are higher with breech than with a cephalic presentation, even in the hands of experienced obstetricians.[2] Once breach was considered to be advantageous as the midwives could pull the legs to expedite delivery to "once a breech, always a cesarean section" has seen a dramatic shift in the observed practice over the years, which reflect the changing evidence along with the changed attitude of the attendant birth professionals.

Breech delivery remains a major obstetric problem despite good antenatal care, better hospital facilities, and newer developments in obstetrics. [3] Management of breech presentation remains an area of great controversy.

In selected cases, Various options are assisted vaginal delivery, elective cesarean section, and external cephalic version. [4] Currently, cesarean section has become the preferred mode of delivery for breech presentation at term. The result of the breech trial has contributed to this quantum jump in the rate of cesarean delivery in the 21st century. Moreover, this upsurge has delivered a massive blow to the art of vaginal breech delivery, compounded by the medicolegal concerns associated with it. This has led the newer generation of obstetricians to be less qualified in conducting breech delivery and thus increased the chance of complications. Therefore, it was decided to do a prospective observational study and analyze the perinatal and maternal outcomes in cases of breech presentation beyond 34 weeks with the following objectives. The present study assessed the mode of delivery in cases of singleton pregnancy with breech presentation beyond 34 weeks, analyzed the perinatal outcome of singleton breech fetuses persisting beyond 34 weeks, and the role of external cephalic version in breech presentation.

Materials and Methods

This study was conducted at a tertiary care hospital in Jabalpur over 12 months, from January 2020 to December 2020. All the patients attending antenatal OPD at the hospital were screened for breech presentation in the early third trimester. Two hundred twenty-five patients with singleton pregnancy in breech presentation confirmed by ultrasonography at 34 weeks or more gestation period were enrolled in the study.

The presentation was confirmed with sonography at 34 weeks. These patients were reviewed weekly in the OPD. The external cephalic version was performed at 36-37 weeks in suitable women with breech. These patients were followed up till the time of delivery for the type of delivery and maternal and neonatal outcome.

Data so accumulated was analyzed at the end of the study using Microsoft Excel. Approval from the institutional ethical committee was taken before the initiation of the study. Written and informed consent was obtained from the patients before including in the study.

Result

In the present study, the age of most of the participants clustered between 21-30 yrs. 93 cases out of 225 (41%) were in the age range of 26-30yrs and 107 cases (47.5%) were in the age range of 21-25 years. Of 225 patients, 102 were primigravida women, and 123 were multigravida women.

Table 1: Route of delivery and period of gestation

Period of gestation	Vaginal		Cesarean		Total
	Vertex	Breech	Elective	Emergency	
Preterm	Nil	4	5	12	21
Term	72	2	90	40	204
Total	72	6	95	52	225

A total of 225 cases were confirmed to have a breech presentation at 34 weeks period of gestation. The available data revealed that eight patients also had a history of breech presentation in their previous pregnancies. Uterine and placental anomalies were noted in nine cases, including four cases of placenta previa, four cases of subseptate uterus, and a single case of bicornuate uterus.

Seventy-one out of 225 (31.5%) cases underwent spontaneous cephalic version, which amounts to about one in every three patients. External cephalic version (ECV) was attempted in 29 (13%) cases after assessing suitability for the procedure. ECV was successful in 17 cases, with a success rate of 59%.

Of 225 patients, 21 cases underwent preterm delivery, and 204 were delivered at term (table 1). Seventy-eight cases (35%) had a vaginal delivery (95% CI: 29- 41), and 147 patients (65%) had a cesarean delivery. Vaginal birth included six cases of assisted breech deliveries (4 preterms and 2 terms). No preterm delivery was reported with a cephalic presentation in our study. There was one case of intrauterine fetal death who delivered vaginally as assisted breech delivery; out of the 88 women who had changed to cephalic presentation spontaneously or after external cephalic version, vaginal delivery was accomplished in 72 cases. The route of delivery has been illustrated in Table 2.

Table 2: Route of delivery and parity

Parity	Vaginal		Cesarean		Total
	Vertex	Breech	Elective	Emergency	
Primigravida	23	2	44	33	102
Multigravida	49	4	51	19	123
Total	72	6	95	52	225

Out of 147 cases of cesarean delivery, elective cesarean section was performed in 95 (64.5%) cases, and the remaining 52 (35.5%) cases underwent emergency cesarean delivery. Most 0 10 20 30 40 50 60 70 Primigravida Multigravida ≤20 21-25 26-30 >30 common cause for cesarean delivery was for those who persisted as a breech presentation at term. The indications for cesarean delivery are illustrated in Table 3.

Table 3: Indications of Cesarean delivery

Cesarean delivery	Indications	Frequency
Emergency cesarean delivery	Breech in labor	27
	Breech with reversed diastolic flow	1
	Placenta previa with APH	2
	Fetal distress	3
Elective cesarean delivery	Breech at term	66
	Post cesarean	25
	Severe Preeclampsia	2
	Placenta previa	2

Forty-eight (21.3%) babies out of 225 cases had low birth weight, i.e., less than 2500g. Out of them, three babies were very low birth weights babies.

Discussion

Most of the women in our study group were 20 old. Eleven out of 225 mothers had teenage pregnancies, of which eight underwent cesarean sections. Among them, five were primigravida, and six were multigravida women. Fourteen mothers were above the age of thirty, including nine primigravida ladies. The age range in which pregnant women are concentrated in our community could be attributed to early marriages and lack of family planning.

The breech presentation occurred in 3.24 percent of live births (154 out of 4745 deliveries), which is on par with the majority of studies in the literature review; in primigravida women, the rate was 45.3 percent, and in multigravida women, it was 54.7 percent. A study by James White has reported the incidence of primigravida as 48.8% and that by Shital Mehta et al. [3] as 39.27%. It is concluded from the above that incidence of breech presentation is higher in multigravida than primigravida women.

In our study, a significant number of cases of breech at 34 weeks (71 out of 225) underwent spontaneous version by the end of 37 weeks (31.5%). The rate of spontaneous version has been evaluated in very few studies. The reported rate in our study is significantly higher than that reported by Hibbard et al. (31.5% vs. 5%). [5]

In the present study, out of 29 attempted external cephalic versions, 17 were successful, and 12 were unsuccessful. In the current study, 59% of external cephalic versions were successful, in line with what the vast majority of literature on the topic has found. No severe complications connected to the operation occurred that needed emergency attention.

Vaginal delivery could be achieved in 78 out of 225 cases 41). Out of the 78 vaginal deliveries, six (7.8%) were assisted breech deliveries, and three (3.8%) were instrumental deliveries. The remaining 147 cases underwent cesarean delivery.

In the present study, the commonest indication for elective cesarean section was a breech presentation unfit or unwilling for an external cephalic version. Twenty-two cases of planned cesarean section were in women with previous cesarean sections, and 3 patients had a history of the last two cesarean sections. Two cases were having placenta previa and severe preeclampsia requiring termination by abdominal route. The commonest indication for emergency cesarean delivery was in patients who presented in labor with a breech presentation before the scheduled surgery date.

Other obstetric conditions included fetal distress, labor disorders, antepartum hemorrhage, and severe preeclampsia. Six cases (2.66%) underwent assisted breech delivery. This consists of a single intrauterine fetal demise, reported at 39 weeks gestation in a nulliparous woman with no known prior comorbidities. The cause of IUFD was unexplained, and the patient underwent assisted breech delivery. The rate of cesarean delivery in our study was higher when compared to that of Ethiopian research (65% vs. 17.4%) [6]. Still, it was significantly lower than a Portuguese study which reported a cesarean rate of 95.1% [7]. However, the cesarean rate was similar to many Indian studies. [2, 3]

It is observed that there is a wide variation in the rate of vaginal breech deliveries depending on the standard of care and demography. However, liberal cesarean section use is widely practiced in modern obstetrics to reduce perinatal morbidity and mortality in breech presentation. In the present study, only 21 cases out of 225 (9.33%) underwent preterm delivery, of

which 4 patients underwent assisted breech delivery and had presented in labor. The remaining 17 cases went for cesarean delivery. Elective preterm cesarean section was done in five women due to maternal or fetal obstetric complications necessitating the surgery. Two cases had developed severe preeclampsia, two patients had severe fetal growth restriction, and the other had placenta previa. No preterm vertex delivery was reported in the present study. That implied all the fetuses who underwent the version spontaneously or by external cephalic version had delivered at term. A total of 6 (2.7%) out of 225 cases underwent assisted vaginal delivery, which included the single case of IUFD reported in our study. Another fetus had multiple congenital anomalies detected in the late second trimester, and the remaining cases had presented in the second stage of labor. The rate of low birth weight babies in our study was 21.3%, similar to the overall prevalence in the hospital where the study was conducted. However, it was lower compared to the reported prevalence in other Indian studies. [3, 8]

The association of breech presentation with uterine anomalies has been reported in the literature. In our study, four women had subseptate uterus which were diagnosed intraoperatively during cesarean section. A bicornuate uterus was reported in one case. Eight cases out of 123 multigravidas (6.50%) women had an earlier pregnancy with breech presentation. This was in contrast to the study by Andrea Fonesca et al. (73 out of 436 cases amounting to 16.74 %). [7] Breech presentation is associated with poor fetal and maternal outcomes irrespective of the delivery route.

In our study, ten babies had an APGAR score below 8 after five minutes of delivery. A total of 22 babies required NICU support after birth, which included nine cases of respiratory distress soon after birth, three patients for management of low birth weight; eight patients for prematurity, and two babies had a history of antenatal Rh isoimmunisation. Our study's most common causes for NICU admission were birth asphyxia and prematurity. This is similar to results reported by other studies by Shital Mehta et al. [3] and Andrea Fonesca et al. [7]. No significant traumatic fetal injuries were observed in the study. However, three cases of third-degree perineal tear and two cases of postpartum hemorrhage were monitored and managed conservatively.

Conclusion

The most prevalent malpresentation is breech presentation, which is linked to an increased risk of mortality and morbidity regardless of how the baby is delivered. Our research shows that even in the third trimester, a sizeable percentage of breech fetuses will undergo a spontaneous version. We believe that in some circumstances, an external cephalic version, a simple and low-risk alternative to cesarean section, should be attempted first. Converting a breech fetus to a cephalic presentation decreases the risk of complications during delivery.

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