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Original Research Article

Analysis on Obstetrics Outcome of Breech Presentation after 34 Weeks of Period of Gestation of Pregnancy: An Observational Study

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Abstract

Background: After 34 weeks, breech presentation frequently leads to a high rate of cesarean section (about 65%–96%), since this is the recommended approach to reduce neonatal morbidity and mortality when compared to vaginal breech delivery, especially in preterm or complex cases. The purpose of this study is to assess the delivery route, mother outcomes, and perinatal outcomes in cases of singleton breech presentation that occur after 34 weeks of gestation. Results of breech presentation following 34 weeks of pregnancy.

Method: The Department of Obstetrics and Gynecology at Madhubani Medical College and Hospital in Madhubani, Bihar, conducted a prospective observational study between January and December of 2025. A total of 225 cases of breech presentation after 34 weeks were included in this study. When appropriate, an external cephalic version was performed. Data on the mode of delivery, maternal outcomes, and neonatal outcomes were gathered and analyzed while these patients were monitored until delivery.

Result: Breech presentation at term was 3.24% (154 cases out of 4745 deliveries); primigravida women made up 45.3% of these cases, while multigravida women made up 54.7%. A considerable percentage of instances, or 71 out of 225 (31.5%) women, showed spontaneous cephalic version. With a success rate of 59%, the external cephalic version was effective in 17 out of 29 cases. 147 cases (65%) of breech presentations were delivered via cesarean section, while the remaining 78 cases (35%) were delivered vaginally, including six cases of assisted breech deliveries.

Conclusion: Even in the late third trimester, a considerable proportion of breech fetuses undergo spontaneous version. An efficient method for lowering the incidence of cesarean deliveries in singleton pregnancies with breech presentation is external cephalic version.

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

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Introduction

Three to four percent of mothers who are expecting breech infants at term seek advice on the safest delivery method. Based on extensive multicenter trials, medical professionals recommended elective cesarean sections for decades. On the other hand, a number of national guidelines and expert comments highlight the safety of vaginal breech deliveries while emphasizing the significance of careful patient counseling and rigorous patient selection [1,2]. For vaginal breech deliveries, a number of exclusion criteria were put in place (such as post-term pregnancies and delivery induction), which frequently have an impact on clinical management based only on individual expert opinion and low level evidence [3–6]. Approximately 40% of pregnancies go past the anticipated due date. On its own, a "post-term pregnancy" increases the likelihood of an elective or cesarean section following the start of labor. After a patient reaches her due date, birth inductions are typically advised; nevertheless, this procedure also raises the likelihood of a cesarean section [7, 8]. Numerous studies have linked high body mass index (BMI), diabetes, caesarean sections, and post-term pregnancies. Many medical professionals advise elective cesarean sections on the day after the due date, especially for breech deliveries. With nearly 30 million cesarean sections performed worldwide

in 2015 [9] and the associated strain on the healthcare system, this clinical decision-making automatism is not only harmful but also devoid of comprehensive evidence. For example, the Term Breech Trial revealed no correlation between post-term pregnancy and newborn morbidity and mortality [6]. Furthermore, the PREMODA study did not look into this specific problem; the results showed a low perinatal morbidity when consensus criteria were adhered to, which only suggest a vaginal breech trial of labor for patients whose gestational age at birth is fewer than 39 weeks [10].

Material and Methods

This prospective observational study was conducted at Department of Obstetrics and Gynaecology, Madhubani Medical College and Hospital, Madhubani, Bihar from January 2025 to December 2025. In the early third trimester, every patient who visited the hospital's antenatal OPD was examined for breech presentation.

The study included 225 individuals who had a breech singleton pregnancy that was verified by ultrasonography at 34 weeks or more of gestation.

Sonography was used at 34 weeks to confirm the presentation. Every week, the OPD reviewed these patients. In eligible breech women, external cephalic version was carried out at 36–37 weeks. Maternal and neonatal outcomes, as well as the method of delivery, were monitored for these individuals until the moment of birth. Microsoft Excel was used to analyze the collected data at the conclusion of the study. Before being included in the trial, the patients gave their signed and informed consent.

Result

The majority of participants in this study were between the ages of 21 and 30. Of the 225 cases, 93 cases (41%) were between the ages of 26 and 30, and 107 cases (47.5%) were between the ages of 21 and 25. 102 of the 225 cases were primigravida women, and 123 involved multigravida women. At 34 weeks of gestation, breech presentation was confirmed in 225 cases. Eight instances had a history of breech presentation during a prior pregnancy, according to the data that was available. Nine patients were found to have uterine and placental abnormalities, including four cases of placenta previa, four cases of subseptate uterus, and one case of bicornuate uterus. Spontaneous cephalic version occurred in 71 out of 225 instances (31.5%), or almost one in three cases. After determining the procedure's suitability, 29 (13%) instances underwent an attempt at external cephalic version (ECV). ECV had a 59% success rate in 17 cases.

Table 1: Route of delivery and period of gestation

Period of gestation	Vaginal		Caesarean		Total
	Vertex	Breech	Elective	Emergency	21
Preterm	Nil	04	05	12	204
Term	72	02	90	40	225
Total	72	06	95	52	21

Of the 225 patients, 204 cases were born at term and 21 cases were preterm (table 1). 147 cases (65%) had cesarean deliveries, while 78 cases (35%) had vaginal deliveries (95% CI: 29–41).

Six assisted breech deliveries—two term and four preterm—were delivered vaginally. In our investigation, there were no reports of preterm births with cephalic presentation. One instance of intrauterine fetal death occurred during a vaginally assisted breech birth.

Vaginal birth was achieved in 72 of the 88 women who had switched to cephalic presentation, either on their own or with external cephalic version. Table 2 shows the delivery path.

Table 2: Route of delivery and parity

Parity	Vaginal		Caesarean		Total
	Vertex	Breech	Elective	Emergency	
Primigravida	23	02(01*)	44	33	102
Multigravida	49	04	51	19	123
Total	72	06	95	52	225

Of the 147 cases of cesarean delivery, 95 (64.5%) were voluntary, and the remaining 52 (35.5%) were emergency. Those who continued to present breech at term were the most frequent reason for cesarean delivery. Table 3 shows the indications for cesarean delivery.

Table 3: Indications of caesarean delivery

Indications	No. of cases
Emergency caesarean delivery	
Breech in labor	27
Breech with reversed diastolic flow	01
Placenta previa with APH	02
Fetal distress	03
Failed induction	05
Post cesarean in labor	07
Severe preeclampsia	01
HELLP	01
Dystocia of labour	03
Deep transverse arrest	02
Elective caesarean delivery	
Breechat term	66
Post-cesarean	25
Severe Preeclampsia	02
Placenta previa	02

Out of 225 cases, 48 (21.3%) newborns weighed less than 2500 grams at delivery. Three of them had very low birth weights (less than 1500 grams), while three had extremely low birth weights (less than 1000 grams). LBW newborns made up four of the six babies born with assisted breech delivery. Just eight infants weighed more than 3500 grams at delivery. Ten of the 22 babies who were referred to the NICU for various fetal indications had APGARs five minutes after delivery (table 4).

Table 4: Indications of NICU admission

Indications	Vertex	Vacuum	Breech	Caesarean	Total
Respiratory distress	2	2	Nil	5	9
RH negative iso-immunised	Nil	Nil	Nil	2	2
LBW	Nil	Nil	Nil	3	3
Preterm	Nil	Nil	1	7	8

Discussion

In our study, a significant number of cases of breech at 34weeks (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 Lester et al (31.5% vs. 5%).[13] In the present study, out of 29 attempted external cephalic versions, 17 were successful and 12 were unsuccessful. The success rate of external cephalic version in the present study was 59%. The accordance with most of the related studies in literature. [14,15]

There was no procedure related complication observed which required immediate intervention.

Vaginal delivery could be achieved in 78 out of 225 cases (35%) in our study (95% CI: 29 - 41). Out of the 78 vaginal deliveries, six (7.8%) were assisted breech deliveries and three (3.8%) were instrumental deliveries. Remaining 147 cases underwent cesarean delivery. In the present study, the commonest indication for elective cesarean breech presentation which was unfit or unwilling for external cephalic version. 22 cases of planned cesarean section were in women with previous one caesarean section and 3 cases had history of previous two caesarean sections. Two cases each were having placenta previa and severe preeclampsia requiring termination by abdominal route. The commonest indication for emergency caesarean delivery was in cases who presented in labour with breech presentation before the scheduled date of surgery. Other obstetric conditions included fetal distress, disorders of labour, antepartum haemorrhage, and severe preeclampsia. Six cases (2.66%) underwent assisted breech delivery. This includes a single case of intrauterine fetal demise which was reported at 39 weeks period of 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 caesarean delivery in our study was higher when compared to that of an Ethiopian study (65% vs. 17.4%)[16] but was significantly lower than a Portuguese study which reported cesarean rate of 95.1%.[17] However the cesarean rate was similar to many Indian studies.[11,12] 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 use of caesarean

section is widely being 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 who had presented in labour and remaining 17 cases went for caesarean delivery. Elective preterm caesarean section was done in five women due to maternal or fetal obstetric complications necessitating the surgery. Of these, two cases had developed severe preeclampsia, two cases had severe fetal growth restriction and the remaining one had placenta previa. No preterm vertex delivery was reported in the present study. That implied all the foetuses which underwent version either 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 late second trimester and the remaining cases had presented in second stage of labour.

The rate of low birth weight babies in our study was 21.3% which was similar to the overall prevalence in the hospital where the study was carried out. However, it was lower compared to reported prevalence in other Indian studies. [12,18]

The association of breech presentation with uterine anomalies has been reported in literature. In our study four women had subseptate uterus which were diagnosed intraoperatively during cesarean section. Bicornuate uterus was reported in one case. Eight cases out of 123 multigravida (6.50%) women had an earlier pregnancy with breech presentation. This was in contrast to the study published by Andrea Fonesca et al (73 out of 436 cases amounting to 16.74 %).[17]

Breech presentation is associated with poor fetal and maternal outcome irrespective of the route of delivery. 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 for respiratory distress soon after birth, three cases for management of low birth weight; eight cases for prematurity and two babies had history of antenatal Rh isoimmunisation. The most common causes for NICU admission in our study 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.[17]

There were no significant traumatic fetal injuries observed in the study. However, three cases of third degree perineal tear and two cases of post-partum hemorrhage were observed which were managed conservatively.

Conclusion

Regardless of the delivery method, breech presentation is the most prevalent malpresentation and is linked to a higher rate of death and morbidity. Even in the late third trimester, a considerable percentage of breech fetuses experience spontaneous version, according to our research. We believe that in certain circumstances, the external cephalic version—a rather safe and simple procedure—can be undertaken before a cesarean section.

Converting breech fetuses to cephalic presentation can lessen the complications associated with their delivery.

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