Original Article

Outcome of Breech Presentation Beyond 28 Weeks Gestation in a Tertiary Care Hospital

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Abstract

Objective: To study the frequency and outcome of singleton breech pregnancy beyond 28 weeks of gestation in a tertiary care hospital.

Study Design: Descriptive Case series.

Place and Duration of Study: Gynae / Obs. Department of Military Hospital (MH), Rawalpindi from Jan 2009 till June 2009.

Methodology: One hundred and nine patients with singleton breech presentation after 28 weeks of pregnancy were recruited from the antenatal clinic of Military Hospital, Rawalpindi. Their pregnancy outcomes were recorded in a specially designed proforma. Mode of delivery and neonatal outcome in terms of neonatal weight and APGAR score, were recorded.

Results: Frequency of breech presentation was found to be 2.1%. Primigravidas were 27.8% and second gravidas were 22.9%. Postdated pregnancies were 4.6%, 50.4% were at term and 36.7% were between 30-36 weeks of pregnancy. A total of 59.6% emergency caesarean section were performed, while 12.8% were elective cesarean sections and vaginal delivery occurred in 27.50% patients. Birth weight in 60.6% neonates varied from 3.0 – 3.4 kg, 2.8% had weight greater than 3.5kg and 4.6% had a very low birth weight of 1.5 – 1.9kg.The mean birth weight turned out to be 2.61kg. APGAR score was normal in 83% neonates who were mostly delivered by caesarean section. APGAR score of 5/10 – 7/10 was observed in 11% (who were admitted in NICU), while 6 % neonates had very low APGAR score of 2/10 – 4/10.

Conclusion: Elective cesarean section remains the preferred mode of delivery in breech presentations, as it carries less neonatal morbidity and mortality. Vaginal delivery was carried out mostly in patients who presented in advanced labour. It was observed that fetal outcome was better in elective cesarean section patients.

***Key Words:** Breech, outcome, neonatal weight, APGAR score.*

Introduction

Breech presentation complicates 3-4% of all term pregnancies and a higher proportion of preterm deliveries. It occurs in 20% of pregnancies at 28 wks.[1] The incidence of caesarean section for breech presentation has increased markedly in the last twenty years, more so with the publication of Term Breech Trial.[2-3] The normally formed active fetus adopts the position of best fit in a normal uterine space.[4,5] Persistent breech presentation may be associated with abnormalities of the baby, amniotic fluid volume, the placental localization or the uterine abnormality. Although it may apparently be just by chance. There is a higher perinatal morbidity and mortality with breech presentation due to congenital abnormalities as well. Moreover, caesarean section has become the normal mode of delivery for breech presentation.[6] The mode of delivery in breech pregnancy has been a subject of great critical debate all over the world. There is a continued criticism against the Term Breech Trial, but some authors still advocate the attempt for vaginal breech delivery in carefully selected population.[7]

The aim of our study was to carry out the audit of frequency of breech pregnancies in our hospital, their mode of delivery and neonatal outcome in terms of neonatal weight and APGAR score.

Methodology

A six months descriptive observational study was conducted in Gynae / Obst Department of MH, Rawalpindi, from Jan 2009 till June 2009. The patients were recruited from Antenatal Clinic. Their antenatal record and progress were recorded on a specially designed proforma. This proforma included details about the patient's profile, obstetric history, estimated date of delivery, anomaly scan report, present gestational age, type of breech, presenting complaints and recent investigations. Patient's obstetric examination including, height, weight, vital signs, abdominal and vaginal findings, were also recorded. Mode of delivery, baby's APGAR score and birth weight were entered later, after which the proforma was considered complete for the study.

A total of 109 patients were included in this study. All these patients were carrying a singleton pregnancy with breech presentation after 28 weeks. Patients with multiple pregnancies, gross congenital anomalies, breech with any other obstetrical complications like previous caesarean sections, Antepartum Haemorrhage, Premature rupture of membranes (PROM), gestational age of less than 28 weeks and those undergoing termination of pregnancy for intrauterine deaths and fetal abnormalities e.g. hydrocephaly were excluded from the study.

Patients in labour and considered appropriate for trial of vaginal breech delivery were transfered to labor room. They were mostly in spontaneous advanced labour. Their labour was monitored by senior postgraduate trainees and delivery was conducted in the presence of consultant gynecologist. The paediatrician was always present at the time of delivery and operation theatre staff was informed before hand to be prepared for possible emergency caesarean section.

Gestational age and mode of delivery of all the patients were noted. Neonate's birth weight and APGAR score at birth and after five minutes were recorded. All babies were assessed by the paediatrician, at the time of birth.

Results

Total deliveries conducted during this period were 5097. Amongst these, 3097 (60.8%) were vaginal deliveries and 2000 (39.2%) were caesarean sections.

Total patients included in the study after fulfilling the inclusion and exclusion criteria were 109 (2.1%). Majority of these women were primigravidas (27.8%) and the second gravidas were (22.9%) as shown in Figure 1.

The patients who presented at term, that is beyond 37 weeks of pregnancy were 50.4%. Postdated, that is beyond the expected date of delivery were 4.6%, while 36.7% women were carrying pregnancies between 30-36 weeks gestation (Figure 2).

Caesarean sections were performed in 72.5% of the breech pregnancies, out of which 65 were emergency and 14 were elective. Caesarean sections were mostly performed in primigravidas and those carrying greater than 36 weeks of pregnancy. Thirty (27.50%) patients underwent vaginal delivery and these were mostly multigravidas, grand multigravidas, patients in advanced labour and preterm breech labours.

Figure 1. Parity and Percentage of Breech Presentation (n=109)

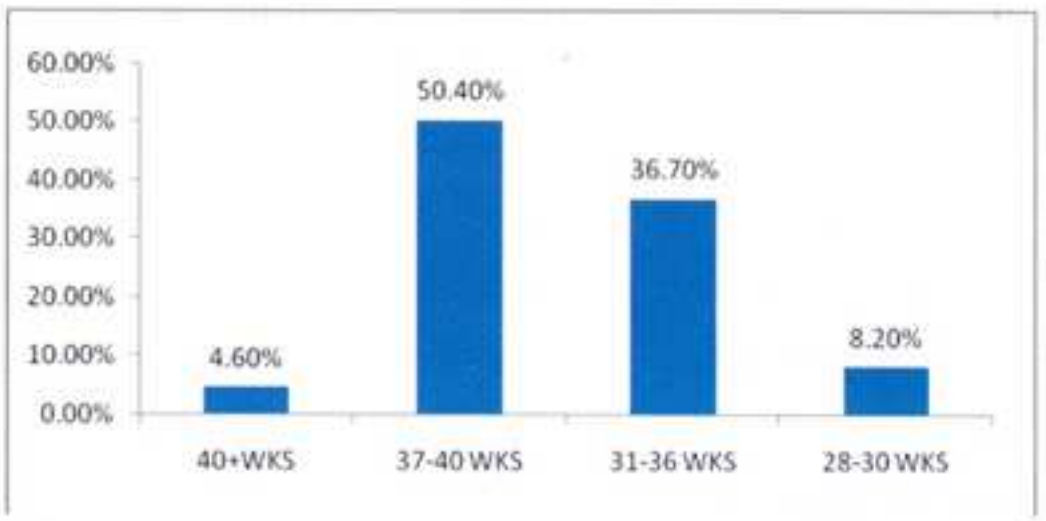

Figure 2. Gestational Age and Breech Presentation (n=109)

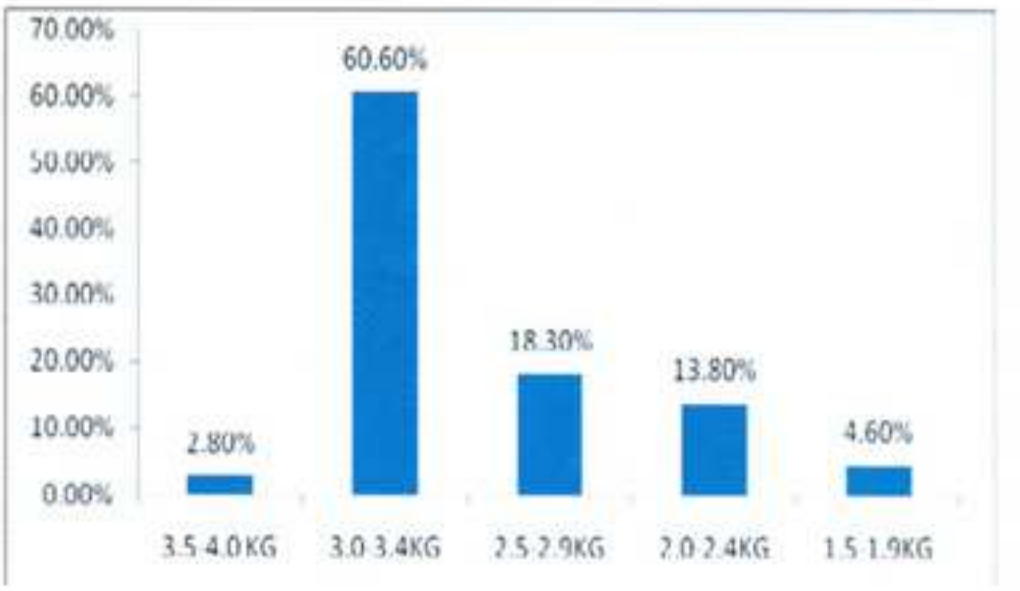

Figure 3. Birth Weight of Neonates (n=109)

In 60.6% neonates the birth weight was between 3.0–3.4 kg while 4.6% had very low birth weight from 1.5–1.9 kg. Only 2.8% neonates had birth weight greater than 3.5 kg (Figure 3). Good APGAR score of 8/10 - 10/10 after five minutes was found in 83%of neonates, most of whom were delivered by caesarean section while 11% neonates had scores of 5/10 at birth and 7/10 after five minutes, they were kept admitted in NICU, six of these were declared healthy and were discharged later. APGAR score of less than four was present in 6% neonates, who could not survive. The latter were preterm infants, mostly less than 34 weeks gestation and were delivered vaginally.

Discussion

Breech delivery is an obstetric challenge, considering the perinatal morbidity and mortality associated with it. The percentage of breech deliveries decreases with advancing gestational age from 22% prior to 28weeks to 7% at 32 weeks and 1-3% at term. Low APGAR scores especially at 1 min are more common with vaginal breech deliveries.[8] Prior to 2001, according to American College of Obstetricians and Gynaecologists (ACOG) Recommendation, approximately 50% of breech presentations were considered as candidates for vaginal deliveries but now cesarean section is considered a preferred mode of delivery in many centers

especially in primgravidas and in the presence of any other complication.[9]

In a Danish Study, the frequency of a breech delivery was 1.7 per year.[10] Their other results showed 45% elective caesarean sections, 34% emergency caesarean sections, and 21% successful vaginal deliveries. In vaginal deliveries there was 15 fold increased risk of low 5 min APGAR score or intrapartum death. In our study the frequency of breech presentation was higher that is 2.1%.

Shafaq Zahoor and Nasreen Ruby studied maternal and fetal outcome in diagnosed and undiagnosed singleton breech presentation at term.[11] They found a higher caesarean section rate in diagnosed breech presentation and higher vaginal breech delivery in undiagnosed breech presentation in labour. There was no statistical difference in short term neonatal outcome. This is quite consistent with our findings where mostly those patients who had delivered vaginally were either non booked or undiagnosed or who were in advanced labour. Infants who were delivered by caesarean section had better APGAR scores than those delivered vaginally.

In a study conducted at Hayatabad Medical Complex, Peshawar, elective LSCSs were performed in 75 cases, majority of whom were primigravidas. Emergency LSCS was performed in 39 cases. Route of delivery did not affect the perinatal outcome. This one year study showed the frequency of breech delivery to be 4.7%.[12] Their findings correlated with the results of our study. Patient selection, vigorous intrapartum monitoring and expertise of vaginal breech deliveries have been established as key factors for successful vaginal breech deliveries and also in curtailing the caesarean sections for breech deliveries.

A study conducted at Lady Willington Hospital, Lahore showed that breech presentation was associated with high degree of operative deliveries, with 72.9% delivered by caesarean section and with 15 pregnancy losses in their non-booked cases.[13]

Audit of breech pregnancies beyond 28 weeks was carried out at Mother and Child Health care Centre, Pakistan Institute of Medical Sciences, Islamabad which showed a significant association of breech presentation with congenital anomalies. But greater recourse to caesarean section beyond 34 weeks seemed to confer a survival advantage for the neonates.[14] Since perinatal outcome is generally better in infants born by caesarean section, there is now a lesser trend towards elective vaginal deliveries for breech presentations.

A study published by Zafar, Imtiaz and their colleagues showed incidence of breech presentation to be 5.3%. They also concluded that caesarean section group had fewer infants with low APGAR score than the group delivered vaginally. Emergency caesarean sections were 7.2% in primigravida and 6% in multiparas. Total elective caesarean sections were 19%.[15]

In Tampere Hospital, Finland, they found low APGAR score in planned vaginal breech delivery as compared to elective LSCS and vaginal delivery for cephalic presentation. Other neonatal outcome parameters were the same.[16] Therefore with proper selection of the patients in a centre that carries expertise and resources for vaginal breech delivery, trial of breech vaginal delivery can after all be carried out.[17]

All these studies were mostly consistent with the results of our study. Although operative delivery carries a greater maternal morbidity but it is still favoured as it is associated with lesser neonatal complications.[18] This trend towards less vaginal deliveries for breech presentation would lead to less number of health professionals with an expertise for vaginal breech delivery which needs to be guarded against, especially as many studies have now shown that in carefully selected patients

vaginal breech delivery carries similar perinatal results as operative delivery.[19]

Conclusion

There is a higher trend for elective caesarean sections in booked pregnancies with breech presentation near term in all patients, regardless of their parity. Vaginal deliveries are conducted only in labouring patients, booked or unbooked who come in spontaneous advanced labour and in preterm pregnancies. Primigravidas at term are delivered by caesarean section by choice. Neonatal morbidity and mortality is high in preterm babies and in vaginal deliveries.

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