

**Maternal and Fetal Complications in Pregnant Women with Breech Presentation at Tertiary Care Centre: A Retrospective Study**Uma Wankhede<sup>1</sup>, Shubhangi Waghmode<sup>2\*</sup>, Karthik KM<sup>3</sup>, Anushree Kanago<sup>3</sup><sup>1</sup>Professor, Department of OBGY, PAH Government Medical College, Baramati, Maharashtra<sup>2</sup>Assistant Professor, Department of OBGY, PAH Government Medical College, Baramati, Maharashtra<sup>3</sup>Senior Resident, Department of OBGY, PAH Government Medical College, Baramati, Maharashtra

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**Abstract:**

Breech presentation denotes the foetus in vertical line, podalic pole (pelvic pole) presenting the denominator as the sacrum. Breech deliveries have always been topical issues in obstetrics because of the very high perinatal mortality and morbidity. The present study aims to study maternal and foetal complications in pregnant women with breech presentation at tertiary care centre. The present hospital based retrospective study carried out at Department of OBGY, PAH Government Medical College, Baramati. The study population was singleton pregnant women who delivered in the hospital during July 2023 to September 2023. Patients with multiple pregnancy, congenital anomaly and not willing to participate were excluded. The statistical software namely SPSS 22.0 used for the analysis of the data. The prevalence of breech presentation was 6.26%. The maternal complications found among 9 (9.28%) patients and 9.28% foetal complications. IUD was observed among 3.09% and low birth weight among 18.56%.

**Keywords:** Maternal, Foetal, Breech Presentation, Complications.

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**Introduction**

Breech presentation denotes the foetus in vertical line, podalic pole (pelvic pole) presenting the denominator as the sacrum. The incidence of breech presentation is 3-5% at term. It is highest at about 15% in preterm deliveries. Many foetuses undergo spontaneous version as pregnancy advances. [1-3]

There are three types of breeches, complete breech (flexion of foetal hips and knees), incomplete breech (extension of one or both hips, including floating) frank breech (flexion of hips and extension at the knee). [4]

The etiology for breech presentation includes maternal factors like multiparity, lax abdominal wall, polyhydramnios, contracted pelvis, uterine anomalies, and fibroid in the uterus, idiopathic. Fetal factors include multiple gestation, fetal anomalies like hydrocephaly, anencephaly, prematurity, IVFD and placental factors like fundal location, placenta praevia. [5-9]

The main risks of vaginal of vaginal delivery includes occlusion of the umbilical cord, delivery of body with entrapment of the foetal head, head hyperextension (associated with spinal cord injury or brain injury) possibly leading to death and trauma to foetal limbs. The incidence of cord

prolapse is more in breech presentation as compared to vertex presentation. [10-11] A 2015 coherence review comparing planned caesarean with planned vaginal delivery term breech trial observed a reduced risk of perinatal or neonatal death. [12] A meta-analysis further supported the findings showing two-fold to fivefold higher risk of perinatal mortality and mortality in planned vaginal delivery as compared to planned caesarean delivery. [13]

External cephalic version (ECV) is an old method for converting breech to cephalic presentation. Considering complications (like non assuring fetal heart rate tracing, placental abruption, onset of labour, rarely premature rupture of membranes and fetal death) of ECV elective caesarean is found to be much safer. ECV is advised to only selected cases with expert hands. So ECV is almost obsolete in modern obstetrics. [14] In the present study none of the patients underwent external cephalic version.

The present study was conducted to study maternal and fetal complications in pregnant women with breech presentation at tertiary care centre. Objectives of this study were to study prevalence of breech presentation in singleton pregnant women;

and to study maternal and fetal complications with breech presentation.

### Methodology:

The present hospital based retrospective study carried out at Department of OBGY, PAH Government Medical College, Baramati. The study was conducted after obtaining clearance from the Ethical Committee of the institute. The study population was singleton pregnant women who delivered in the hospital during July 2023 to September 2023. A total of 1549 pregnant women delivered during study period. Patients with singleton pregnancy delivered in hospital were included in the study. Patients with multiple pregnancy, congenital anomaly and not willing to participate were excluded.

Every case was thoroughly examined. The number of visits, type of prenatal care, and duration of menstruation were among the many questions asked of each patient. Every single patient underwent a comprehensive systemic and general physical examination. Foetal presentation, engagement, uterine contractions, fundal height, and abdominal girth were all parts of the per-abdominal examination. At the per-vaginal exam, the cervix's position, effacement, and dilatation

were recorded. Additionally, the presenting part, station, and adequate pelvis were noted, as was the presence of a bag of membrane. Standard tests were conducted, including haemoglobin, urine sugar, and urine albumin. The women who were assigned to the caesarean section group had obstetric indications such as foetopelvic disproportion, hyper extension of the foetal head, footling presentation, or associated medical complications.

Patients and attendants were involved in discussing the delivery plan. Individuals who agreed to try a vaginal birth were the ones who got the trial. Following data collection, analysis was carried out and the results were displayed in tables using simple descriptive statistics. The data was shown as a percentage and a numerical value. Subsequently, the analysed data was compared with other studies and discussed. The statistical software namely SPSS 22.0 was used for the analysis of the data. Results are presented using percentages.

### Results

A total of 1549 pregnant women delivered during study period among which 97 women delivered with breech presentation. The prevalence of breech presentation was 6.26%.

**Table 1: Demographic profile among cases**

Demographic profile		No. of Patients (n=97)	Percentage
Age group (years)	18-20	03	03.10
	21-25	48	49.48
	26-30	44	45.36
	>30	02	02.06
Gravidity	Primi	44	45.36
	Multigravida	53	54.64
Gestational age	Preterm	11	11.34
	Term	86	88.66

The table no. 1 describes demographic profile of the patients. Most of the women were in age group 21 to 25 years i.e. 48 (49.48%). Majority of patients participating in the present study was found were multigravida (54.64%) with term gestational age (88.66%).

**Table 2: Distribution of patients based on type of delivery**

Type of delivery	Frequency	Percentage
Vaginal delivery	32	32.98
LSCS	65	67.02
Total	97	100

Out of 97 patients delivered in the hospital, majority were delivered by LSCS (67.02%) while vaginal delivery occurred in 32 (32.98%) patients.

**Table 3: Distribution of patients based on birth weight (n=97)**

Birth weight	Frequency	Percentage
<2.5	18	18.56
≥2.5	79	81.44
Total	97	100

Out of 97 neonates delivered, 79 neonates (81.44%) had birth weight more than 2.5 kg. (Table 3).

**Table 4: Distribution of patients based on complications (n=97)**

Complications	Frequency (n=97)	Percentage
Maternal complications	09	09.28
Fetal complications	09	09.28
IUD	03	03.09
LBW	18	18.56

The distribution according to complications observed maternal complications among 9 (9.28%) patients and 9.28% fetal complications. IUD was observed among 3.09% and low birth weight among 18.56%.

### Discussion

Breech deliveries have always been topical issues in obstetrics because of the very high perinatal mortality and morbidity. In the present study, a total of 1549 pregnant women delivered during study period among which 97 women delivered with breech presentation. The prevalence of breech presentation was 6.26%.

Siddharth Mehta et al [15] in a study on incidence of singleton breech delivery were 7.86%. Abha Singh et al [16] in a study observed incidence of breech presentation was 2.1 %. Temesgen Debero Mere et al (17) in a study observed prevalence of singleton breech deliveries in the hospital was 3.4%. This was higher than other previous studies where incidences were reported in the range of 2.4-4.7%. [18,19] However Assefa et al., [20] reported 5.3% as the incidence of breech delivery in their study. Kaul S et al [21] in a study from Gujrat also observed incidence of breech pregnancy was 3.6%. The high incidence of breech delivery in our study might be because the hospital is a tertiary care centre where the abnormal presentation cases are referred.

In was observed that, most of the women were in age group 21 to 25 years i.e. 48 (49.48%). Similar findings were seen in study by Kaul S et al [21] the incidence of breech pregnancy was highest (69.2%) in the age group of 20-25 years. A similar conclusion was drawn in study done by Panda R et al., [22] in which maximum (47.4%) occurrence of breech pregnancy was seen in the age group of 20-25 years and the incidence was 47.5% in the same age group as per study done by Singh A et al., [16].

In the present study, majority of patients participating in the present study was found were multigravida (54.64%) with term gestational age of 37-42 weeks (88.66%). Kaul S et al [21] also observed the similar findings most of cases (62.9%) delivered at more than 37 weeks of gestation. In the study done by Singh A et al, [16] 73.4% cases delivered between 37-42 weeks of gestation. Similarly, in the study done by Panda et al., [22] majority of cases (78.35%) delivered at more than 36 weeks of gestation. Out of 97 patients delivered

in the hospital, majority were delivered by LSCS (67.02%) while vaginal delivery occurred in 32 (32.98%) patients. Siddharth Mehta et al [15] in a study incidence of vaginal delivery was 13(18.57%). Abha Singh et al [[16] in a study observed 113 (42.6 %) women delivered vaginally. 54 (20.4 %) The lower incidence of vaginal delivery in our case might be due to the selection of cases as only term pregnancies were selected in our study. The present study shows, out of 97 neonates delivered, 79 neonates (81.44%) had birth weight more than 2.5 kg. Siddharth Mehta et al., [15] in a study observed 21.9% neonates with LBW, this finding which was like present. In contrast to present findings Kaul S et al., [21] 50.6% of babies were having birth weight of less than 2.5 kg.

The distribution according to complications observed maternal complications among 9 (9.28%) patients and 9.28% fetal complications. IUD was observed among 3.09% and low birth weight among 18.56%. Siddharth Mehta et al., [15] in a study observed maternal complications among 15% women with PPH the most. Abha Singh et al., [16] in a study observed incidence of overall neonatal morbidity was 3.4 %. There are few limitations of this study. The population size of study was very small. So, it is difficult to draw conclusions from a small population size.

### Conclusion

The present study concludes that prevalence of breech presentation was 6.26% with majority delivered by LSCS.

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