

## Trends of Breech Management & Feto - Maternal Outcome

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### ABSTRACT

**Introduction:** Breech presentation is a longitudinal lie of the fetus with caudal pole occupying the lower part of the uterus & cephalic pole in the uterine fundus. **Aim:** To find out the current trends in breech management in our hospital & the maternal and perinatal outcome in breech deliveries. **Methods:** This retrospective record base study was carried out in the MCH wing of Shree Kalyan Hospital, (Dist. Hospital, Sikar) from June 2017 till Dec 2017. The study population includes women with singleton breech presentation after 37 weeks of gestation. **Results:** In this study incidence of breech presentation was found to be 4.4%. In our study and 2/3rd of patient i.e. 65.78% were primigravda. 59.47% cases were delivered by caesarean section & 40.53% case were delivered vaginally. Out of 113 caesarean section babies 19.46% were between 2.5-3kg. 88% of perinatal morbidity whereas in vaginal breech deliveries prenatal morbidity was 5.55%. **Conclusion:** perinatal morbidity was 6 times more in vaginal breech deliveries as to caesarean breech deliveries.

**Keywords:** Breech, current trends, Fetomaternal outcome.

### INTRODUCTION:

Breech presentation is a longitudinal lie of the fetus with caudal pole occupying the lower part of the uterus & cephalic pole in the uterine fundus. Among all MAC presentations, breech presentation is the commonest & it accounts for 3-4% at-term pregnancy. Incidence is about 20% at 20 weeks of pregnancy & drop to about 50% at 34 weeks of pregnancy due to spontaneous correction.<sup>(1)</sup> Breech presentation may be caused by an underlying fetal or maternal abnormality such as prematurity, decreased amniotic fluid, polyhydramnios uterine & fetal anomalies & placenta previa<sup>(1)</sup> or related an otherwise benign variant such as cornual placental position, Pelvise tumour (myoma, ovarian, neoplasm), CPD, multiple pregnancy, Anencephaly, hydrocephaly & other fetal anomalies, UUFD & uterine relaxation associate with high parity.<sup>(2)</sup>

The management of breech deliveries have always been topical issues in obstetrics because of very high perinatal mortality & morbidity which are due to combination of trauma, birth asphyxia, prematurity & malformation. The term breech trial in 2000 found a significant difference in the serious short term neonatal morbidity (1% vs .45%) between term breach delivery by trial of labour & planned caesarean section cases<sup>(3)</sup>. A more recent review found more than 90% reduction in perinatal mortality and neonatal morbidity in planned caesarean section.<sup>(4)</sup> In contrast numerous trials conducted in high resource settings showed a similar outcome of vaginal breech birth v/s planned caesarean section when patients were selected by stringent-criteria, e.g. an obstetric conjugate of more then 12cm or an estimated fetal weight of 2.5 kg or more.<sup>(5-8)</sup> Also, skilled practiconers and delivery, an upright position were identified as favourable settings for the vaginal birth from breech presentation. Complication rates were reported to be similar to Cephelic deliveries.

Planned caesarean sections are increasing worldwide. Associated short & long term complications like haemorrhage, uterine rupture and abnormal placentation parallel these rising procedure numbers. Therefore, elective caesarean section without reasonable medical indication needs to be limited. Obstetricians require evidence based guidelines to recommend the most suitable delivery mode for every individual patient.

Advocates of be ECV believe that in absence of a complicated breech presentation and other contraindication to vaginal delivery a successful ECV leads to a more favourable presentation & reduces the incidence of breech deliveries, perinatal mortality and morbidity.<sup>(9)</sup> Moreover successful ECV later reverts to breech presentation. The recent use of ultrasound guidance in ECV has however improved it.

RCOG guidelines to revised in 2017 clearly states that planned vaginal delivery can be as safe equivalent to planned cephalic delivery taking into account the case selection of appropriate pregnancies and availability of skilled intrapartum care.<sup>(10)</sup>

Thus wide ranges of management policies have been in instituted with the aim of reducing perinatal mortality and morbidity and hence improve the quality of life of these infants later in life. External cephalic version is one of such policy.

**Aim:** To find out the current trends in breech management in our hospital & the maternal and perinatal outcome in breech deliveries.

**Methods:**

This retrospective record base study was carried out in the MCH wing of Shree Kalyan Hospital, (Dist. Hospital, Sikar) from June 2017 till Dec 2017. The study population includes women with singleton breech presentation after 37 weeks of gestation. The hospital records were studied for demographic data, age, parity, gestational age at birth, mode of delivery, indication of caesarean section, birth weight, Apgar score, admission to NICU & neonatal morbidity were noted. The maternal and fetal outcome were studied & analyzed.

**Statistical analysis:** All the information was recorded on a performa. The collected data was entered in Microsoft Excel and then was analysed and statistically evaluated using Epi info software. ‘P ’value less than 0.05 was considered statistically significant.

**Results:**

Total Number of deliveries in the study period was 4268. Total number of breech deliveries after 37 weeks of gestation was 190.

In this study incidence of breech presentation was found to be 4.4%

**Table 1: Incidence of breech delivery according to age of the patient.(n=190)**

Age distribution	No. of cases	Percentage
18-22 yr	80	42.1 ≈ 42%
23-27 yr	84	44.21 ≈ 44%
28-32 yr	21	11.0 ≈ 11%
33-37 yr	03	1.57 ≈ 2%
38 & above	02	1.08 ≈ 1%

In the table 1 we found that 42% of cases were between 18-22 yrs of age, 44.2% were in age group of 23-27yrs, 11% cases between 28-32 yrs of age as compared to 1.57% between 33-

37yrs of age & 1% Above 38yrs of age.

**Table 2: Distribution according to parity (n=190)**

PARITY	NO. OF CASES	PERCENTAGE
G <sub>1</sub>	125	65.78%
G <sub>2</sub>	46	24.21%
G <sub>3</sub>	11	5.78%
G <sub>4</sub>	05	2.63%
G <sub>5</sub>	00	00
G <sub>6</sub>	03	1.5%

In our study and 2/3rd of patient i.e. 65.78% were primigravda & 1/4 i.e. about 24.21% were second gravida where as multigravida constitute only 10%.

**Table: 3 MODE OF DELIVERY**

Mode of Delivery	No. of Cases	Percentage%
LSCS	113	59.47
Vaginal Delivery	77	40.53

Table 3: shows that 59.47% cases were delivered by caesarean section & 40.53% case were delivered vaginally.

**Table 4: Distribution According To Birth Weight Caesarean Deliveries (n=113)**

BIRTH WEIGHT	NO OF CASES			%
	Male	Female	Total	
2.1-2.5kg	NIL	NIL	NIL	NIL
2.6-3kg	11	11	22	19.46%
3.1-3.5kg	39	27	66	58.40%
Above 3.5kg	11	14	25	13.26%

Table 4: shows that out of 113 caesarean section babies 19.46% were between 2.5-3kg, 58.40% were 3-3.5kg & 13.26% were above 3.5kg.

Out of 113 caesarean babies only one was shifted to nursery for observation.

Out of 113 caesarean babies 61 were male & 52 were female babies.

**Table5: Distribution of cases according to Birth weight in Vaginal Deliveries.**

Birth Weight in kg	No of cases			%
	Male	Female	Total	
Below 2	00	3	3	1.29%
2 - 2.5	16	18	34	46.78 %
2.5 – 3	16	20	36	46.75 %
3 – 3.5	03	01	04	05.18 %
3.5 & above	00	00	00	0.00%

Above table shows out of 77 cases of vaginal breech deliveries 1.29 % were below 2kg, 46.78% were between 2–2.5kg, 46.75% cases were 2.5-3 kg & only 5.18%, were between 3-3.5kg none was above 3.5kg. Out of 77 cases 35 were male & 42 female babies.

Out of 77 vaginal breech deliveries 5 were IUFD (6.49%) & 4 cases were shifted to nursery for poor Apgar score. (5.18)%.

We can also see that out 113 cases of caesarean breech deliveries only shifted to nursery for observation with poor Apgar score accounting for about. 88% of perinatal morbidity whereas

in vaginal breech deliveries prenatal morbidity was 5.55%.

We can also see in vaginal breech deliveries mostly birth weight was between 2kg -3 kg(93%) whereas in caesarean deliveries birth weight was more than 3.5 kg in 13.26% cases & between (3-3.5 kg) in about 58.40% cases. Only 19.46% cases birth weight was between 2.6-3 kg cases.

### **Discussion:**

In this study incidence of breech presentation was found to be 4.4%. This is comparable to incidence of 2.65%, in study by Ratna Panda & al<sup>(11)</sup> & 2.1% by Abha Singh et al.<sup>(12)</sup> The prevalence found in Nigerian Study (1.7%, 1.4% & 1.9%).<sup>(13)</sup>

In our study, 59.47% cases were delivered by caesarean section & 40.53% case were delivered vaginally. The perinatal morbidity was 6 times more in vaginal breech deliveries as to caesarean breech deliveries. In one Indian Study conducted at Bhuvneshwar in 2016-18 perinatal mortality was seen to be higher it babies delivered vaginally 63% as compared to 16% in cases deliver by caesarean section.<sup>(11)</sup> In one Australian study found that perinatal morbidity was higher in planned vaginal delivery compared to planned caesarean section for women eligible her vaginal birth. (1.6% v/s 0.4%)<sup>(14)</sup>

In another study conducted at Ethiopia risk of perinatal mortality in breech delivery was found to be higher in vaginal route (10.8%) as compared to caesarean section(1.7%).<sup>(15)</sup>

The findings suggest that even when breech delivery guidelines are applied vaginal breech delivery of singleton term pregnancy is still associated with higher incidence of maternal & perinatal morbidity. This finding doesn't discount the role of vaginal breech delivery in resource poor settings but emphasises the need for vigorous monitoring of labour, timely decision and adequate anticipation for neonatal resuscitation order to reduce these complications. The vaginal mode of delivery in breech presentation is a persistent & unevitable part of obstetric practice.

Emergency caesarean section in the active II stage of labour in a lady with breech with previous vaginal delivery is associated with great amount of maternal & neonatal morbidity.<sup>(16,17)</sup>

Infrequency of conduct of vaginal breech deliveries is resulting in deskilling of practising obstetrician.<sup>(18)</sup>

Both RCOG & ACOG recommend that the method of external cephalic version can be used as an option to decrease the caesarean delivery rate associated with breech presentation.<sup>(19)</sup>

Also External Cephalic version should be practised and promoted in resource limited settings as a means to convert breech to cephalic presentation and reduce the perinatal & maternal morbidities associated with Vaginal Breech delivery. Refresher courses for the management of breech birth should be organised for health personnel in order to minimize the risk brachial plexus injury.

### **Conclusion:**

In the present study it was clearly found that most of the cases of breech presentation were delivered by caesarean section. Though prenatal morbidity is more in cases delivered vaginally as compared to caesarean section but caesarean section doesn't totally eliminate the associated perinatal mortality & perinatal morbidity.

To conclude we can say perinatal morbidity was 6 times more in vaginal breech deliveries as to caesarean breech deliveries.

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