



## BREECH PRESENTATION AND MATERNAL,FOETAL OUTCOME

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**ABSTRACT**

**Introduction;** Breech is the most common form of malpresentation.It is defined as when foetus occupies a longitudinal lie with pelvic extremity at the pelvic brim and head at the fundus of uterus[1].It is the most common non vertex presentation in 3-4% of pregnancies all over the world.Its incidence is 3-4% at term,22% upto 28 weeks,7% at 32 weeks.There is higher incidence of breech in earlier weeks.Prematurity is the most common cause of breech presentation.

**Aims;** 1.To find out the incidence of breech delivery in Nellore maternity hospital  
2.To assess the maternal and foetal outcome in breech deliveries  
3.To assess the most favourable route of delivery in breech.

**Materials and methods;** The present study is conducted in the Department of obstetrics and Gynaecology in Nellore ACSR medical college and hospital for 1year from May 2016 to April 2017.All the pregnant women with breech presentation at term in antenatal wards and with breech presentation in labour room are included.Both booked and unbooked cases in primigravidae and multigravidae are studied.Demographic data like age,parity,gestational age,aetiological factors of breech,mode of delivery and neonatal outcome like prematurity,congenital anomalies,IUGR have been noted.

**Results;**The incidence of breech is 2.3% in pregnancies attending Nellore ACSR medical college maternity block.50% are in the age group of 21-25years 3% are between 31-35years.primis accounted for 46.4% Multis accounted for 53.6%.Unbooked cases are 56.7%,Booked cases are 43.2%.Common aetiological factors of breech presentation are Multiparity(54%),Extended legs(41%) prematurity(31.6%).Majority of cases are delivered by caesarean section(71.0%).Associated maternal complications are severe anaemia (9.2%) ,Hypertension (9.2%),oligohydromnios(5.1%),IUGR(5.1%).Congenital malformations are 7% most of them are unbooked cases.Anencephaly(2%),immobility of joints(2%),hydrocephalus(1%),sacral meningocele(1%).Uterine anomalies are (7%) of which septate uterus is most common(3%).Neonatal outcome is good in breech delivery by caesarean section.Most of them are between 2.5kg-3.0kg.

**Conclusion;** Breech delivery is a high risk pregnancy with adverse foetal outcomes during pregnancy and labour.Multiparity,prematurity are most common aetiological factors.caesarean section is the most common mode of delivery with minimal foetal loss with good Apgar score.Caesarean section can reduce the perinatal mortality and morbidity compared to vaginal birth for term breech pregnancy.Mode of delivery should be based on case and obstetricians skill.

**KEYWORDS :** Breech presentation, Aetiological factors, Congenital anomalies, Foetal out come, Maternal outcome mode of delivery.

**INTRODUCTION**

Breech is the most common form of malpresentation.It is defined as when foetus occupies a longitudinal lie with pelvic extremity at the pelvic brim and head at the fundus of uterus<sup>[1]</sup>.It is the common non vertex presentation in 3%-4% of pregnancies all over the world[2].Percentage of breech presentation and deliveries decreases with advancing gestational age,from 22% of births prior to 28weeks to 7% of births at 32weeks to 1-3% of birth at term<sup>[2]</sup>.Incidence decreases towards term due to spontaneous version<sup>[1]</sup>.

There are several risk factors which predisposes to breech presentation.They are divided into Maternal and foetal factors.Maternal factors are Multiparity,placenta previa, polyhydromnios,uterine anomalies and cornual implantation of placenta<sup>[4]</sup>.Foetal factors are prematurity,extended legs,multiple pregnancy,congenital abnormalities such as hydrocephaly, anencephaly,short cord<sup>[5]</sup>.Perinatal mortality is increased 3-4 fold with breech presentation irrespective of mode of delivery<sup>[6]</sup>.

Discussion regarding vaginal delivery is based on Zatuchini Andros scoring which includes Gravida,previous successful breech delivery, gestational age,estimated foetal weight,cervical dilatation and station of breech. {Table 1}

**Table 1<sup>[7]</sup>: Zatuchini-Andros prognostic scoring index**

Factor	Point score		
	0	1	2
Parity	Gravida 1	Multipara	
Gestational age(weeks)	39	38	39
Estimated weight(b)	81	7-81	71
Previous breech	None	1	2 or more
Dilatation	2cm	3cm	4cm or more
Station	-3 or more	-2	-1 or lower

Score less than 4 indicates poor outcome.

On the other hand through planned caesarean delivery,atleast at term, reduces the risk of increased perinatal mortality and morbidity compared to vaginal birth.But maternal morbidity is high in caesarean section[2].Hence judicious decision regarding mode of delivery is vital.

**AIMS AND OBJECTIVES:**

- To find out the incidence of breech delivery in Nellore ACSR Medical college Maternity block
- To assess the maternal and foetal outcome in breech deliveries
- To assess the most favourable route of delivery in breech.

**MATERIALS AND METHODS**

The present prospective study is conducted in the Department of obstetrics and Gynaecology Nellore ACSR Medical college,Nellore .This is a study for 1year from May 2016 to April 2017.Both booked and unbooked cases in primigravidae and multigravidae are studied.All the pregnant women with breech presentation at term in antenatal wards and women with breech in labour room are included.

Demographic data like age,parity,gestational age,aetiological factors of breech,mode of delivery are noted.

On admission case history is recorded.Her age,menstrual history and previous obstetrical history is taken.History of any significance,of any operative intervention inquired into and any drug intake is recorded.

Duration of gestation is recorded from the last menstrual period date,ultrasonography is used routinely in all patients for gestational age,estimated foetal weight,type of breech,amount of liquor and placental localization.Prematurity regardless to the period of gestation

is considered when the weight of baby is less than 2kg at the time of birth. Associated Maternal factors in breech presentation such as preeclampsia, antepartum haemorrhage, hydromnios and medical diseases such as severe anaemia, diabetes which endangers the life of foetus are recorded.

The neonates are assessed by clinical examination, birth weight, Apgar score at 1min and 5min of birth and any congenital anomaly are noted.

**RESULTS:** The present study conducted on breech presentation to find out the labour outcome in breech deliveries and various factors affecting it.

There are total 4255 deliveries in this hospital in study period from May 2016 to April 2017. The incidence of breech deliveries came to be 2.3%.

Year	Total Number of Deliveries	Total number of breech deliveries	Gross incidence of breech deliveries(%)
May 2016 to April 2017	4255	98	2.3%

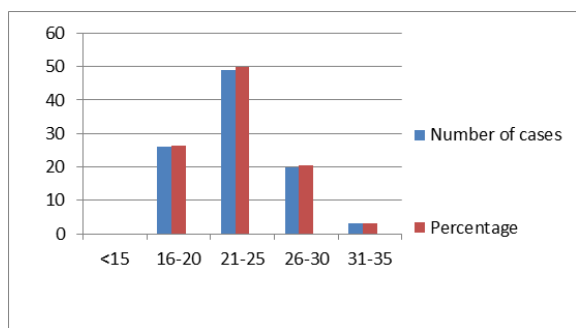
incidence of breech deliveries came to be 2.3%.

**Table 2: Incidence of breech deliveries**

In the present study out of 98 cases, 42 cases (43.2%) are booked cases and 56 cases (56.7%) are unbooked cases. Incidence of breech presentation is maximum (50%) in the age group of 21-25 years (Table 3) {Graph 1} while its incidence is minimum in the age group of 31-35 years. Out of 98 cases, 53 are multigravidae and 45 are primigravidae (Table 4). Hence this concludes that incidence of breech presentation is more in multigravidae as compared to primigravida.

Age group	Number of cases	Percentage
<15		0
16-20	26	26.5
21-25	49	50
26-30	20	20.4
31-35	3	3.1

**Table 3: The incidence of breech deliveries in relation to age of mother**



**Graph 1: incidence of breech deliveries in relation to age of mother.**

Parity	Number of cases	Percentage
Primigravidae	45	46.4
Multigravidae	53	53.6
Total	98	100

**Table 4: Reveals the incidence of breech presentation in relation to gravidity**

In the present series out of 98 breech deliveries, 13.2% are between the gestational age of 28-33 weeks and 18.3% are between gestational age of 33-36 weeks (Table 5). Incidence of full term is 67.3%. By this it is concluded that prematurity is associated with considerably high incidence of breech presentation. Extended variety of breech is present in 40 cases, flexed breech present in 56 cases, footling variety in 2 cases (Table 6).

Gestational Age in weeks	Number of cases	Percentage
28-33	13	13.2
33-36	18	18.3
37-40	66	67.3
>40	1	1.2

**Table 5: Reveals the incidence of breech presentation in relation to gestational age.**

Variety of Breech	Number of cases	Percentage
Extended	40	40.8
Flexed	56	57.1
Footling	2	2.1

**Table 6: Reveals the incidence of type of breech presentation**

Multiparity, prematurity, extended legs are most common aetiological factors of breech presentation (Table 7). The incidence of twin pregnancy is 2%. Uterine anomalies account for 7.1% of factors. Among them Bicornuate uterus is 2%, septate uterus 3%, Arcuate uterus is 2%. Prematurity is the most common foetal complication. Cord around neck in 3 cases followed by difficulty during delivery of after coming head. Caesarean section done in 71% of cases, among them 55.6% (55) underwent emergency caesarean and 15.4% (15) underwent elective caesarean section, 16.4% underwent preterm vaginal delivery, 11.3% cases underwent assisted term breech delivery.

Aetiological factors	Number of Cases	Percentage
Multiparity	53	54
Prematurity	31	31.6
Extended legs	40	41
Multiple pregnancy	2	2.0
Hydrocephalus	1	1.0
Anencephaly	2	2.0
Hydromnios	4	4.0
Uterine Anomalies	7	7.1
Bicornuate	2	2.0
Septate	3	3.0
Arcuate	2	2.0
Oligohydromnios	5	5.1

**Table 7: Incidence of various aetiological factors in breech presentation.**

Mode of delivery	Number of cases	Percentage
Preterm vaginal Breech delivery	16	16.4
Assisted term breech Delivery	11	11.3
Caesarean section	70	71.0
Hysterotomy	1	1.0

**Table 8: Incidence of various mode of breech deliveries.**

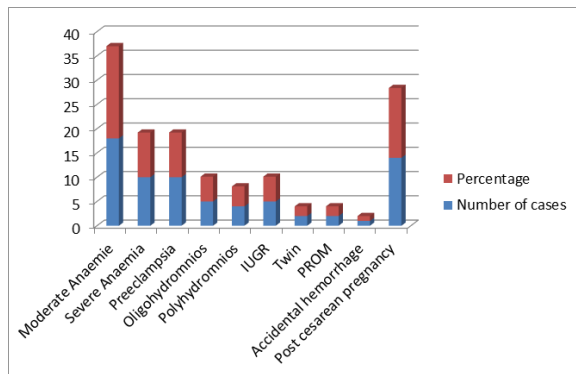
Complications	Number of cases
Prematurity	31
Cord prolapse	1
Difficulty during delivery of after coming head	2
Cord around neck	3
Still birth	2

**Table 9: Reveals the foetal complications during labour in breech deliveries:**

In this study most common maternal complications which endangers the life of fetus are 10 cases are preeclampsia, 10 cases are severe anaemia, 5 cases are oligohydromnios and 4 cases are polyhydromnios.

Complications	Number of Cases	Percentage
Moderate Anaemia	18	19
Severe Anaemia	10	9.2
Preeclampsia	10	9.2
Oligohydromnios	5	5.1
Polyhydromnios	4	4.1
IUGR	5	5.1
Twin	2	2.0
PROM	2	2.0
Accidental hemorrhage	1	1.0
Post cesarean pregnancy	14	14.4

**Table 10: Reveals incidence of associated maternal complications:**



**Graph 2: incidence of associated maternal complications.**

In the present study 7 breech babies are associated with congenital malformation out of which Anencephaly is most common malformation found (Table 11).

Congenital malformation	Number of cases	Percentage
HYdrocephalus with spinabifida	1	1.0
Anencephaly	2	2.0
Gastroschisis	1	1.0
Immobility of joints	2	2.0
Sacral Meningocele	1	1.0

**Table 11: Reveals incidence of associated congenital malformations.**

Perinatal outcome in terms of 1 and 5 min Apgar score. Among 11 assisted term breech deliveries 7 babies are with good Apgar. 56 term breech deliveries are by cesarean section of which 54 are with good Apgar score.

Good Apgar	PTVD	Caesarean (preterm)	Assisted term	Caesarean Section (term)
	11	9	7	54
Poor Apgar	4	1	4	2

**Table 12: Reveals the relation of Apgar score with mode of delivery.**

In relation to birth weight most of them are in between 2.5 -3.0kgs.

**Table 13: Incidence of birth weight**

Birth weight	Number of cases
<2.0kg	20
2-2.5kg	32
2.5-3.0kg	38
3.0-3.5kg	8

**DISCUSSION:**

The incidence of breech presentation is more in Multigravidae similar to studies by Sonali et al and Abha et al. In more than 50% of cases breech persisted from 33 weeks of gestation<sup>[3,8]</sup>. Most of breech presentation had an aetiological factors like oligohydromnios, uterine anomalies, prematurity unlike other studies which showed etiology in only 7-15% of breech presentation<sup>[9]</sup>.

Breech presentation may be a sign of fetal anomaly especially cardiovascular, central nervous system and musculo skeletal anomalies<sup>[10]</sup>. Hence it is necessary to look by ultrasound and during cesarean section for the presence of fetal anomalies, uterine anomalies and placental site. From this study we see that cesarean section is the preferred mode of delivery at our institute.

Vaginal breech delivery was previously the method of delivery for breech till Hannah et al proposed that to reduce perinatal mortality and morbidity, all breech should deliver abdominally<sup>[11]</sup>. In term breech, there is no difference in Maternal mortality and morbidity between the two methods of delivery<sup>[12]</sup>. Randomised Multicentric term breech trial by Hannah et al published in 2000 showed that a planned elective cesarean section reduces the risk of adverse perinatal outcomes compared to planned vaginal breech delivery. There was no difference in maternal morbidity and mortality. Consequently, in 2001, the ACOG recommended cesarean delivery for term singleton breech. Goffinet et al<sup>[14]</sup> in 2006 published a prospective multicentric study (PREMODA study) showed that perinatal outcome in planned vaginal breech delivery was not different from planned cesarean section provided patients were selected properly with skilled obstetricians. Similar experiences also been published by other investigators<sup>[15,16]</sup>

Some clinicians have recommended a policy of cesarean section for breech at term based on anecdotal experiences and medico legal concerns<sup>[12]</sup>. Others who are experienced with vaginal breech delivery have continued to recommend planned vaginal birth for selected cases but under guidance of skilled obstetrician<sup>[12]</sup>. External cephalic version for breech presentation, attempted from 36 weeks, is an alternative to reduce the incidence of breech at term and incidence of cesarean section<sup>[17,18]</sup>.

**CONCLUSION:**

Breech presentation is a high risk pregnancy with adverse foetal outcomes during pregnancy and labour. The maximum incidence of breech presentation is found in maternal age group 21-25 years, and incidence of breech is more in Multigravidae. Most of them are unbooked cases. The main aetiological factors of breech presentation are multiparity, prematurity, extended legs and uterine anomalies. The most common variety of breech presentation is flexed breech. Common complications are Anaemia, preeclampsia, premature rupture of membranes, cord accidents, intrapartum asphyxia.

Cesarean section is the mode of delivery of choice as it carries minimal fetal loss. Though cesarean section yields better perinatal outcome vaginal breech delivery should not become a dying art. So mode of delivery should be decided based on case and obstetrician skill. Associated maternal factors such as severe anaemia, preeclampsia increases the risk to foetus. Incidence of congenital anomalies such as hydrocephalus, anencephaly, gastroschisis, immobility of joints are high with breech presentation.

**Funding:** No funding sources

**Conflict of interest:** None declared

**Ethical approval:** approved by institutional ethics committee.

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