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Original Research Article

Prospective study of maternal and perinatal outcome in breech presentation at GIMS, Kalaburagi

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ABSTRACT

Introduction: This is a prospective study of Maternal and Perinatal outcome done at GIMS Kalaburagi.
Materials and Methods: A Prospective observational study was conducted for period of 6 months in department of Obstetrics and Gynaecology at Gulbarga Institute of Medical Sciences, Kalaburagi. 100 cases were studied during this period. History was taken in detail, examination was done, Maternal and Perinatal outcome were studied.
Results: 100 cases were studied. The incidence of term Breech was 1.3%. Most common age group was 20-24yrs (61%). Majority of cases were Primigravida (6 3%). Majority were delivered by Caesarean section (92%), 8% delivered by assisted vaginal delivery. 63% had complicating factors. Incidence of referred cases was 37%. Uterine anomaly seen in 9%, Fetal anomaly seen in 1%. Perinatal mortality was 4%.
Conclusion: Breech delivery is associated with adverse fetal outcome during labour. Though caesarean section can reduce the perinatal mortality and morbidity compared to vaginal birth for term breech pregnancy, it is not universally accepted. Hence in selected cases of breech presentation, vaginal breech delivery should be attempted with patient's consent, availability of a skilled obstetrician.

1. Introduction

In breech presentation, the lie is longitudinal and the podalic pole presents at the pelvic brim. It is the commonest malpresentation.

Breech is the common non vertex presentation. The incidence is about 20% at 28th week and drops to 5% at 34th week and to 3–4% at term. Thus in 3 out of 4, spontaneous correction into vertex presentation occurs by 34th week. [1]

Term Breech Trial Collaborative Group by Hannah in 2000 has influenced current obstetrical thinking regarding vaginal delivery of the breech fetus. [2]

American College of Obstetricians and Gynaecologists (2001) resulted in an abrupt decline in the rate of attempted vaginal breech deliveries. Consequently, in 2001, The ACOG recommended caesarean delivery for term singleton breech. [3]

American College of Obstetricians and Gynaecologists (2012) currently recommends that "the decision regarding the mode of delivery should depend on the experience of the health care provider".

Breech presentation results from uterine anomalies, cornuofundal insertion of placenta, placenta previa, oligohydramnios, fetal growth restriction, prematurity, short umbilical cord, fetal anomalies like hydrocephalus.

Perinatal mortality in breech still remains 9–25% compared with 1–2% for non-breech deliveries. Perinatal death (excluding congenital abnormalities) is 3 to 5 times higher than the non-breech presentations.

Hence the present study is undertaken to know maternal and perinatal outcome.

2. Aims and Objectives

1. To know the incidence of term Breech at GIMS, Kalaburagi.

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2. To know Maternal and Perinatal outcome in term breech at GIMS in relation to mode of delivery.

3. Materials and Methods

A Prospective Observational study was conducted after Ethical Clearance from Institutional Ethical Committee in the Department of Obstetrics and Gynaecology at Gulbarga Institute of Medical Sciences Kalaburagi. Total of 100 cases were studied during 6 months period from July 2018 –to December 2018.

All Women with Breech presenting to Labour room or Out Patient Department were included in this study after written and informed consent. Detailed history like age group, parity, socioeconomic status, breech when diagnosed was taken, emphasis was given on any complicating factors like PIH, oligohydramnios, previous caesarean section, PROM, eclampsia, placenta previa.

Per abdomen examination was done, Per vaginal examination to know if patient was in labour was done, Routine investigations like Complete blood count, Blood grouping, HIV, HBSAG was sent, Ultrasound was done to know type of breech and if associated Fetal anomaly, Uterine anomaly. Non stress test/CTG was done on admission.

Vaginal delivery was done if Patient gave consent, patient presenting in active labour with frank or complete breech, without any complicating factors, with average size baby, without fetopelvic disproportion, without any uterine anomaly, with CTG/NST reactive.

3.1. Inclusion criteria

Patient in labour or without labour with singleton term breech presentation.

3.2. Exclusion criteria

1. Preterm breech.
2. Multiple pregnancy.
3. Intrauterine fetal demise.

3.3. Statistical analysis

1. Frequency charting.
2. Pivot tables.

4. Results

4.1. Number of Referred Cases

As GIMS is tertiary centre so 37% cases were referred ones. Most of the cases were referred from Shahpur 10%, followed by Aland and Sedam 4% each.

Caesarean section was done in 92% of cases. Most common indication was breech in latent labour 16%, severe PIH in 16%, prev LSCS and oligohydramnios in 11% each,

Table 1: Distribution of cases as per age

Age Group(in years)	Percentage
<20	1
20-24	61
25-29	31
30-35	7

Most of the cases belonged to 20-24 years 61%, followed by 25-29 years 31%. Of them most were Primigravida 63%, Multigravida 37%.

Table 2: Distribution of cases depending on complicating factors

Complications Details	Percentage
Total cases	63
Anemia	12
PIH	16
Oligohydramnios	11
Polyhydramnios	4
Post term	6
IUGR	2
Placenta Previa	1
Previous LSCS	10
Thyroid Disorder	2
Prelabour rupture of membranes	10
Obesity	2

Most of the cases 63% had complicating factors. Most common was PIH in 16%, followed by anemia 12%, oligohydramnios 11%, PROM in 10%, previous LSCS in 11%, post term 6%, polyhydramnios in 4%, IUGR, obesity, thyroid disorder in 2% each, placenta previa in 1% e. Few cases had more than one complicating factors.

Table 3: Distribution of cases depending on mode of delivery

Mode of Delivery	Percentage
Caesarean section	92%
Vaginal delivery	8%

Majority of cases 92% underwent caesarean section and 8% were delivered by assisted vaginal delivery.

Table 4: Distribution of cases depending on Indication for caesarean section

Indication	Percentage
PIH	16%
PROM	10%
Previous LSCS	11%
Oligohydramnios	11%
Latent labour	16%
Patient Request	9%
Footling	6%
Precious pregnancy	3%
Contracted Pelvis	2%
Fetal distress	2%
IUGR	2%
Placenta previa	1%
Obstructed labour	1%
Morbid obesity with hypothyroid	1%
BOH	1%

PROM in 10%, patient request in 9%, Footling presentation in 6%, precious pregnancy 3%, contracted pelvis, fetal distress, IUGR in 2% each, placenta previa, obstructed labour, obesity with hypothyroid and BOH in 1% each.

4.2. Intraoperative findings

Incidence of frank breech was 51%, complete breech 37% among the operated cases.

Intraoperatively Difficulty in breech extraction was seen in 3%, angle extension in 3%, dense adhesions and uterus couldn't be exteriorised in 6%, atonic PPH in 2%, angle haematoma in 1%.

Table 5: Uterine anomaly

Uterine Anomaly	Percentage
Arcuate	3
Bicornuate	4
Partial Septate	1
Unicornuate	1

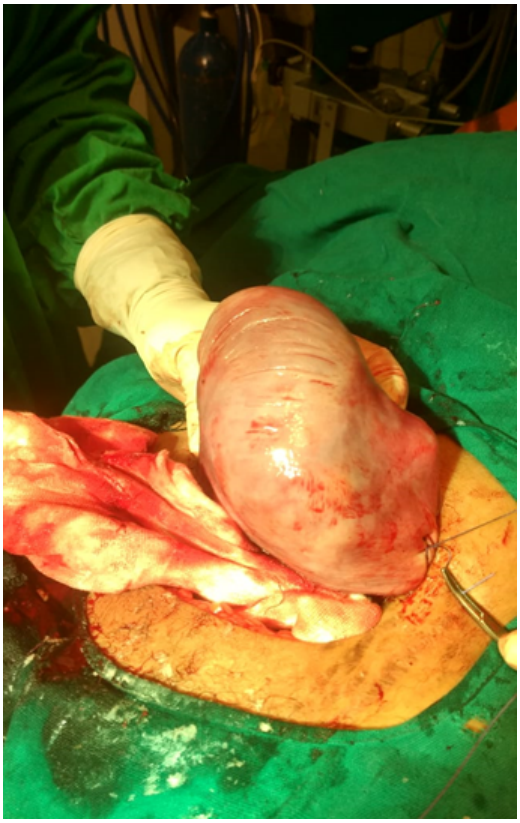

Fig. 1: Shows unicornuate uterus.

Uterine anomaly was seen in 9%, most common was Bicornuate uterus 4%, Arcuate in 3%, Partial Septate and Unicornuate uterus in 1% each.

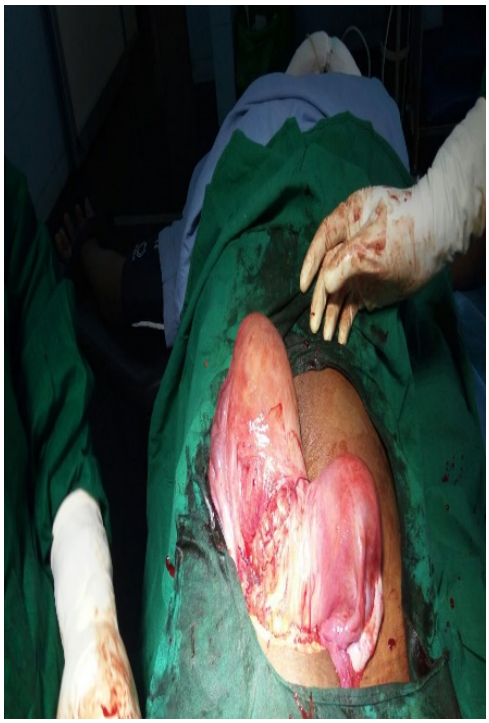

Fig. 2: Shows bicornuate uterus.

4.3. Postoperative period

Postoperative period was uneventful in majority of cases, average duration of stay in hospital was 7 days, except one case which had wound infection was discharged on POD-10.

Postoperative blood transfusion was done in 15% cases.

Table 6: Neonatal outcome

Weight in kg	Percentage
<2.5	19
2.5-3	60
3-3.5	15
3.5-4	6

Average birth weight was between 2.5-3 kg seen in 60%.

NICU admission was seen in 16%. Most common cause was fetal distress, tachypnoea.

Perinatal mortality was 4%, of which 2 were delivered vaginally (both cases there was delay in delivery of after coming head — severe birth asphyxia) and 2 underwent caesarean section (1 had fetal anomaly and other case was obstructed labour- referred case). Perinatal mortality in vaginal delivery was 25% as compared to caesarean section it was 2.1%.

Fetal anomaly was seen in 1% (fetal hydrocephalus).

5. Discussion

5.1. Incidence

Incidence of breech in our study was 1.3% as compared to Gilbert et al[4] 3%, Moodley et al[5] 2.4%, Karning RK et al[6] 2.9% and Kothapally et al[7] 1.4%.

5.2. Parity

In our study incidence of primigravida was 63% and 37% were multigravida which is comparable to Kothapally et al[7] 62% and 38% respectively. Sonali et al[8] 53% were primigravida.

5.3. Age group

61% of cases belonged to age group of 20-24 years followed by 31% of age group 25-30 years which is comparable with Kothapally et al[7] 74% and 20% respectively.

5.4. Mode of delivery

Most of the cases underwent caesarean section in our study incidence being 92% which is comparable to Sanjivini et al[9] 74% and Kothapally et al[7] 96%.

5.5. Indications of caesarean section

As most of the cases had Complicating factors, most underwent emergency Caesarean section. Of them common indication for Caesarean section was PIH 16%, Previous LSCS 11%, oligohydramnios 11% which is comparable to Kothapally et al[7] PIH 14% and oligohydramnios 13% and in Sonali et al[8] where PIH, post LSCS, BOH and FGR were most common indications.

5.6. Vaginal delivery

Assisted vaginal delivery in our study incidence was 8% which is comparable to Kothapally et al[7] 4%, and Moodley et al[5] 9.1%

5.7. Type of breech

Incidence of complete breech, frank and footling in present study was 37%, 51%, 11% respectively, similar to Karning RK et al[6] 36 .07%, 54.5%, 9.1% respectively.

5.8. Perinatal mortality

Incidence of perinatal mortality in present study was 4%, comparable to Karning RK et al[6] 2.46% and term Breech trial 0.3%.

5.9. Uterine anomaly

Incidence of uterine anomaly in present study was 9%, comparable to Karning RK et al[6] 9.8% and Kothapally et al[7] 28%.

5.10. Maternal complications

Maternal complications incidence in present study was 4%, compared to Karning RK et al[6] 5.8%, term breech trial 3.5% and Moodley et al[5] 4.72%, Rauf et al[10] 6%.

6. Conclusion

Based on present study, it can be concluded that the maternal short-term morbidity was less in vaginal delivery and little more in patients undergoing caesarean section. Perinatal mortality was higher in babies delivered vaginally. Hence in selected cases of breech presentation, vaginal breech delivery should be attempted with patient's consent, availability of a skilled obstetrician with intrapartum monitoring and in a double setup for emergency caesarean section.[11,12]

7. Source of funding

None.

8. Conflict of Interest

None.

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