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THE STUDY OF MATERNAL AND FETAL OUTCOME IN THE BREECH PRESENTATION

Medical Science

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KEYWORDS

INTRODUCTION:

In developing countries like India, breech presentation is the most common malpresentation. At term, breech presentation persists in approximately 3 to 5 percent of singleton deliveries. The percentage of breech deliveries decreases with advancing gestational age from 22-25% of births prior to 28 weeks' gestation to 7-15% of births at 32 weeks' gestation to 3-4% of births at term. [1] Vaginal delivery of breech presentation at term is associated with higher perinatal morbidity and mortality as compared to vertex presentation. In order to decrease fetal adverse outcome, rate of delivery by caesarean section is increased in recent time. Breech presentation is the 3rd important indication which has led to higher caesarean section rates in recent times all over the world[2] It's been observed that for the fetus weighing more than 2500 grams there is no difference in the perinatal mortality or morbidity between those delivered by abdominal or vaginal route. Although, there are recent reports that assign a higher relative risk of death to those delivered vaginally. Thus owing to the above said fetal complications and high perinatal mortality and morbidity, abdominal route of delivering the baby (LSCS) is preferred.

Aims & Objectives:

- **Aim:** An observational study of feto-maternal outcome of breech presentation at department of Obstetrics and Gynecology, P.D.U.Medical college Rajkot
- **Objectives:** To assess incidence and etiology of breech delivery, To know the feto-maternal outcome of breech delivery depending on the mode of delivery.

MATERIALS AND METHOD:

- This is an observational study of randomized 100 cases of pregnant ladies in labour with breech presentation at or after 28 completed weeks, attending Department of Obstetrics and Gynecology, P.D.U. Medical College, Rajkot during period of 1 year from January 2018 to December 2018.
- **Inclusion Criteria:** All patients with breech presentation with more than 28 weeks of gestation. All primigravida or multigravida with singleton breech presentation.
- **Exclusion Criteria:** All pregnancy with less than 28 weeks of gestation. All pregnancy with twin pregnancy.

Method Of Study:

- Each patient was asked a detailed history and careful general examination & systemic examinations were carried out in all patients including height & weight. The Per-abdominal examination included measurement of fundal height, abdominal girth, presentation, position, engagement of presenting part, location of fetal heart sound & uterine contractions. Per vaginal examination was done to determine consistency, position, effacement and dilatation of cervix, presence if bag of membranes, presenting part & its station and adequacy of the pelvis.
- Routine investigations like Hemoglobin & Urine for albumin, sugar &microscopy were done in all patients. Ultrasound examination was done for most of the patients. Patient underwent ultra-sound examination to confirm single fetus, presentation, type of breech, amniotic fluid volume, location of placenta, estimated fetal weight, any obvious congenital anomaly & position of the fetal spine.
- Fetal heart rate & uterine contractions were closely monitored. Vaginal examination was done after the rupture of membranes to confirm the previous pelvic examination findings and to assess the progress of labor.

Selection criteria for vaginal trial of labour:

- Frank or Complete breech at term or near term
- Proper demonstration of pelvic dimensions
- Estimated fetal weight of 2500-3500 grams
- No hyperextension of the fetal head and
- No history of uterine scar.

Selection criteria for cesarean section

- Footling presentation
- Fetopelvic disproportion
- Fetal distress
- Uterine anomaly
- Primi gravida
- Estimated baby weight more than 3.5 kg.
- All new born were immediately taken care of by the attending Paediatrician.
- The babies were examined for any marks of injury or congenital anomalies. The APGAR score at 1 minute, 5 minutes & 10 minutes were noted, signs of prematurity were looked for in low birth weight babies of patients whose LMP was not known or was doubtful. In case of neonatal death, the cause of death was determined.
- Maternal and fetal outcomes were observed in patients delivered vaginally and by caesarean section and the differences were noted and data was analyzed.

OBSERVTIONS AND RESULTS

This is a study of randomized 100 cases of pregnant females in labour presented with breech presentation at or after 28 completed weeks. Maternal and Perinatal outcome was studied in breech presentation including those delivered vaginally by breech and those delivered abdominally by breech. In present study, incidence of emergency cases (53 %) was more than booked cases (47 %). Incidence of breech was more in primi gravida (47%) patients as compared to 2nd gravida (32 %) and 3rd or more gravida (21%). According to Samina Jadoon et al, 13% cases were primigravida and 87% cases were multigravida. [3]

Incidence was higher in females coming from rural areas (71%) as compared to urban areas (29%). Most of the patients fall in the group of 21-25 years with an incidence of 57%, this age group represents an in general reproductive age group of our country. Out of 100 cases, 77% were frank breech, 19% were complete breech and 4% were footling breech. Out of 100 breech deliveries, 68% deliveries were done by LSCS and 32% deliveries were done by vaginal route, compared to Hannah et al which had 71.6% and Kimbrecy et al which had 79% and Min su et al which had 70.02%.[4,5,6] Maximum babies with breech presentation were in birth weight group 2.1 TO 2.5 Kg with incidence of 37% followed by group of 2.5 to 3 Kg with incidence of 28%. Apgar score was low in 6 babies, out of which 5 babies had weight less than 1.5 kg, and 1 baby had weight between 1.5-2.0 kg. All babies with low Apgar scores were shifted to ICU. All the six babies were shifted to NICU. Out of which 3 babies died, 2 because of birth asphyxia (birth weight < 1500 gm) and 1 because of prematurity (birth weight between 1500 – 2000 gm). Rest 3 babies on recovery were shifted to mother's bedside. It was observed that the perinatal outcome was more unsatisfactory when the birth weight was 1.5-2 kg.

DISCUSSION:

- Study was carried out of randomized 100 cases of pregnant ladies in labour with breech presentation at or after 28 completed weeks, attending Department of Obstetrics and Gynecology, P.D.U. Medical College, Rajkot during period of 1 year from January 2018 to December 2018.
- Detailed analysis of data from various study was done and results were compared as shown in Table 1

Table 1: Incidence As Per Parity [4,7,8]

Authors	Primi Gravida	Multi Gravida
Igwegbe et al	38.5	61.5
Singh A et al	40.4	59.6
Bushra Rauf et al	24.1	75.9
Present Study	47	53

Present study correlated well with other studies which too showed higher incidence of breech presentation in Multigravida than in primigravidae. This is probably because of relative low tone of uterine musculature in multigravida favouring malrotation and subsequent breech presentation.

Table 2: Incidence As Per Age

Age in years	Singh A et al	Igwegbe et al	Present Study
Up to 20	15.2 %	19.6 %	7.0 %
21 to 25	47.4 %	46.2 %	57.0 %
26 to 30	16.6 %	27.3 %	32.0%
> 31	20.8 %	6.9 %	4.0 %

Table 3: Incidence As Per Type Of Breech

Type of breech	Rani U et al	Shalini G	Razak AH	Present Study
Extended	49 %	46 %	67 %	77 %
Complete	27 %	48 %	32 %	19 %
Footling	24 %	06 %	01 %	04 %

Present study correlates with the study done by other authors; incidence of breech is higher among the age group of 21-25 years, as in India the age group of women who conceive fall in this group. As evident from Table 3, present study correlates with previous studies by other authors, it favors incidence of extended (frank) breech more than complete breech with a rate of 77% and 19% respectively. [5,6,8,9] This is most probably because of a favorable engaging diameter in extended breech (bistrochanteric) and less space occupied by the narrow lower pole.

Table 4: Distribution Of Study Group As Per Mode Of Delivery

Authors	Vaginal (%)	LSCS (%)
Abasiatai et al	69.3	30.7
Bushra et al	55.8	44.2
Goffinet et al	22.2	77.8
Singh A et al	42.6	57.4
Present Study	32	68

A positive correlation was observed with previous studies by other authors, that in majority of the studies, caesarean section was more common as a mode of delivery than vaginal route, in breech presentation; but the incidence should not be that low as observed in a few studies depicted in Table 4.[8,11-16]

Table 5: Distribution of study group as per weight

Weight in grams	Percent
<1.5kg	10
1501 to 2000	14
2001 to 2500	37
2501 to 3000	28
3001 to 3500	10
More than 3500	01

CONCLUSION

The perinatal morbidity and mortality rate have played a huge role in changing the plan -how to deliver a breech baby. But an important fact is presence of experienced obstetrician.Vigorous intrapartum monitoring and proper technique of breech delivery have been established as the most important determinant for successful outcome in vaginal breech delivery without compromising feto-maternal well-being and curtailing the caesarean section rate.

Maternal factors associated with increased risk of breech presentation include nulliparity, grand multiparity, contracted pelvis, high maternal age and uterine anomalies including fibroma. Pregnancy complications include fetal growth retardation, fetal malformations, contracted pelvis, polyhydramnios, oligohydramnios, placenta praevia, and short umbilical cord. The most common cause for fetal morbidity and mortality is asphyxia, which undoubtedly is produced when there is delay in delivery of the after coming head of the breech. The other causes that increase the fetal mortality and morbidity are intracranial hemorrhage due to tentorial tears, subdural hemorrhages, occipital osteodiastasis (separation of the squamous and lateral part of the occipital bone).

Delivery of breech fetus where labor is supervised by experienced obstetrician and delivery is performed by or under guidance of experienced obstetrician definitely lowers maternal morbidity, perinatal morbidity and perinatal mortality. External cephalic version (ECV) is a safe alternative to vaginal breech delivery or cesarean delivery, reducing the cesarean delivery rate for breech by 50%.

ACOG (2016) recommends offering ECV to all women with a breech fetus near term. Adjuncts such as tocolysis, regional anesthesia, and acoustic stimulation when appropriate may improve ECV success rates.

In our study it has been observed that abdominal route of breech delivery is safer though it has its own disadvantages. Cesarean section reduces overall perinatal mortality. But it has also been observed that cesarean section has problems of more hospital stay, and chances of maternal morbidity like in our study wound gap & need of blood transfusion. There is still a place for vaginal breech delivery in selected cases of breech presentations more so in mutiparous women.

Therefore, it is concluded that the balanced decision about the mode of delivery on a case by case basis as well as conduct, training and regular drills of assisted breech delivery will go a long way to optimize the outcome of breech presentation like present study.[17]

REFERENCES

1. Hickok DE, Gordon DC, Milberg JA, Williams MA, Daling JR. The frequency of breech presentation by gestational age at birth: a large population-based study. Am J Obstet Gynecol. 1992 Mar. 166(3):851-2.
2. Studd J. Pioneers in obstetrics and gynaecology 1: William Smellie. The Diplomate.1994;1:153–4.
3. Samina Jadoon et al: Maternal and Neonatal Complications in Term Breech Delivered Vaginally, Journal of the College of Physicians and Surgeons Pakistan 2008, Vol. 18 (9): 555-558
4. Irion O, Hirsbrunner Almagbaly P, Morabia A. Planned vaginal delivery versus elective caesarean section: a study of 705 singleton term breech presentations. BJOG. Int J Obst Gynaecol. 1998;105(7):710-7.
5. Weiner CP. Vaginal breech delivery in the 1990s. Clin Obstet Gynecol. 1992;35(3):559-69.
6. Albrechtsen S, Rasmussen S, Dalaker K, Irgens LM. Perinatal mortality in breech presentation sibships. Obstet Gynecol. 1998;92(5):775-80.
7. Rauf B, Ayub T. Maternal and perinatal outcome in term singleton breech presentation. J Postgraduate Medical Institute (Peshawar-Pakistan). 2011 20;18(3).
8. Singh A, Mishra N, Dewangan R. Delivery in breech presentation: The decision making. J of Obstet Gynaecol India. 2012;62(4):4015.
9. Shalini VP. Outcome of labour in pregnancy with breech. NHL Med Col. 1999.
10. Abasiattai AM, Etuk SJ, Asuquo EE, Iklaki CO. Perinatal outcome following singleton vaginal breech delivery in the University of Calabar Teaching Hospital, Calabar: a 10-year review. Mary Slessor J Med. 2004;4(1):81-5.
11. Hannah ME, Hannah WJ. Planned caesarean section versus planned vaginal birth for breech presentation at birth: a Randomized multicentric trial. TBT collaborative group. Lancet. 2000; 356 (9239):1375- 83.
12. Gilbert WM, Hicks SM. Vaginal versus caesarean delivery for breech presentation in California: a population based study. Obstet Gynaecol. 2003;102(5):911-7.
13. Uotila J, Tuimala R, Kirkinen P. Good perinatal outcome in selective vaginal breech delivery at term. Acta Obstet Gynaecol Scand. 2005;84(6):578-83.
14. Bassaw B, Rampersad N, Roopnarinesingh S, Sirjusingh A. Correlation of fetal outcome with mode of delivery for breech presentation. J Obst Gynaecol. 2004;24(3):254-8.
15. Abasiattai AM, Etuk SJ, Asuquo EE, Iklaki CO. Perinatal outcome following singleton vaginal breech delivery in the University of Calabar Teaching Hospital, Calabar: a 10-year review. Mary Slessor J Med. 2004;4(1):81-5.
16. Goffinet F, Carayol M, Foidart JM, Alexander S, Uzan S, Subtil D, Bréart G. is planned vaginal breech delivery for breech presentation still an option?. Am J Obstet Gynaecol. 2006;194(4):1002-11.
17. Airao B, Sharma VM, Zala RA, Vasava V. Fetomaternal outcome in breech delivery. Int J Reprod Contracept Obstet Gynecol 2018;7:2480-5.