International Journal Dental and Medical Sciences Research
Volume 5, Issue 3, May-June 2023 pp: 678-680 www.ijdmsrjournal.com ISSN: 2582-6018

Maternal and Perinatal outcome of singleton breech pregnancy based on mode of delivery

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Date of Submission: 11-06-2023 Date of Acceptance: 24-06-2023

ABSTRACT

Introduction: The aim of this study is to assess the incidence, maternal and perinatal outcome based on mode of delivery in singleton breech deliveries in rural medical colleges.

Method: The prospective observational study was conducted in the department of Obstetrics unit of RIMS, Adilabad from May 2022 to May 2023 . All patients admitted to the labour room with a singleton fetus in breech were included in the present study. Patients who came in the active stage of labour were only allowed vaginal delivery . Patients were studied for their parity, gestational age, pervaginal examination to confirm presentation, assess the pelvis, rule out any fetopelvic disproportion and bishop score. Maternal and neonatal outcome was compared between the patients who delivered vaginally with those who delivered by C-section.

Results: out of 200 breech pregnancies 52% were in the age group of 20 to 25 years more than 90% among LSCS crossed 36 wks of gestation whereas in vaginal deliveries it is only 43.75%. Among LSCS deliveries more than 90% had no complications whereas only 29.5% were without any complications in breech delivered vaginally. Others had some complications such as NICU admissions , preterm, IUGR, RDS, stillbirths. Vaginal, cervical or perineal tears were noted in few mothers who delivered vaginally.

conclusion: though C-section for breech presentation is not recommended universally, it can improve the perinatal outcome as compared to vaginal breech delivery for term breech pregnancy.

Key words: Breech presentations , vaginal breech delivery, C-Section , maternal and perinatal outcome , mode of delivery,

I. INTRODUCTION:

Breech is the most common malpresentation with 3-4% of all pregnancies at term. The mode of delivery in breech presentation has been a controversial topic .Vaginal delivery of breech was the norm until the late 1950's . The publication of TBT(Term Breech Trial) by Hannah ye al(2000) is likely to place the planned vaginal breech delivery in the place of history . In places where planned vaginal delivery is a common practice, where strict criteria are met before and during labour, planned vaginal delivery of singleton fetus in breech presentation remains a safe option that can be offered .

The fetal mortality in breech deliveries as such shows wide variation. After correcting the mortality rates for the prematurity and fetal anomalies, the breech delivery itself imposes a significant mortality and morbidity later to the foetuses. The most common prominent cause for fetal morbidity and mortality is asphyxia, which undoubtedly is produced when there is delay in delivery of after coming head.

The other causes that increase the fetal mortality and morbidity are intracranial haemorrhage due to tentorial tears, subdural haemorrhages, occipital osteodiastasis, all of these occurs mainly during the assisted breech delivery, or there is no time for the head to undergo moulding.

Prolapse of the cord, which also increases the morbidity, commonly occurs in the footling type of breech presentation after rupture of membranes, which has to be anticipated.

Thus owing to the above mentioned fetal complications, breech presentation without other complications are often taken for LSCS mainly to improve the fetal outcome.

Thus ,the decision for elective caesarean section in breech presentation without other complications has been found to decrease the fetal morbidity and mortality but increases the maternal morbidity equivalent to the morbidity associated with caesarean section.

The assisted breech vaginal delivery increases the fetal morbidity and mortality but does not increase the maternal morbidity significantly.

AIM:
The aim of this study is to assess the risk of fetal and maternal morbidity and perinatal mortality associated with vaginal delivery against elective C section in breech presentation as reported in observational studies .

II. MATERIAL & METHOD:

Inclusion criteria-singleton breech pregnancies
Exclusion criteria-1)Multiple pregnancies
2)Congenital anomalies
Method- Name ,age, registration number, address of patients are noted, detailed obstetric history is elicited, details of scan reports, clinical examination findings are scrutinised . In this study patients who are admitted in the active stage of labour were only allowed vaginal delivery. A per abdominal examination to assess the presentation, gestational age, per vaginal examination to confirm the presentation, assess the pelvis ,rule out any feto pelvic disproportion and assess bishop score.
When vaginal delivery was decided, assisted breech delivery was conducted with Burn Marshall's technique for delivery of after coming head.

III. Results:

Maternal Age Distribution

Age (years)	Cases	%
<20 years	08	04%
21 to 25	104	52%
26 to 30	56	28%
31 to 35	28	14%
> 35 years	04	02%

In our study of 200 cases with breech presentation ,the age distribution is maximum in the age group of 26-30(52%),minimum in the age group above 35yrs.

Gestational Age & mode of delivery:

GA (weeks)	Mode of delivery			
	Vaginal Delivery		LSCS	
	No.	%	No	%
<32wks	24	37.5	4	2.94
33 to 36 wks	12	18.7	9	6.61
>36wks	28	43.75	123	90.4
Total	64	32.0	136	68.0

The table shows that majority of cases ie 90.4% in LSCS and 43.75% in vaginal delivery were more than 36 wk and least between 33-36wks

Neonatal morbidities:

Complications	NVD		LSCS	
	No	%	No	%
No complications	18	29.5	123	90.4
NICU Admissions (>7ds)	12	18.7	4	2.94
NICU Admissions (<7ds)	20	31.2	6	4.4
Preterm	26	40.6	13	9.55
IUGR	8	12.5	2	1.4
RDS	8	12.5	4	2.9
Dead	8	12.5	0	0

Out of 64 vaginal breech deliveries, only 18 had no complication ,8 were stillbirths,12 were admitted in SNCU for >7days,20 for <7 days,26 were born preterm,8 were IUGR,8 developed RDS.
Out of 136 LSCS,>90% were without any complication, SNCU admission were 7%,preterm

were 9.5%,1.4% were IUGR, 2.9% suffered with RDS and no stillbirths.

Maternal complications:

COMPLICATIONS	VD		LSCS	
	No	%	No	%
No complications	40	62.5	12	91.1
PROM	10	15.6	10	7.35
PPH	2	6.25	2	1.47
Vaginal Tear	3	4.68	0	0
Cervical Tear	2	1.47	0	0
Perineal Injury	7	10.9	0	0

Intrapartum and immediate postpartum complications such as vaginal tear, cervical tear and perineal injury were noted in vaginal delivery whereas PPH, PROM were noted in both the modes of delivery. Long Term complications in next prey could not be followed up .

IV. DISCUSSION:

The incidence LSCS is more in this study(68%) than vaginal deliveries (32%) in breech which is comparable to studies conducted by Tharin HJE sr al, 2011 (52%), Bin YS et al ,2016 (93%).

Perinatal death accounted for 12.5% in vaginal deliveries and none in LSCS, as compared to studies done by Abdessalami.s, 2017 and Vlemmix F et al.

Rate of NICU admission in vaginal breech deliveries accounted for about 57.1%, almost similar to studies conducted by Babovic et al , 2010 and Abdessalami.s, 2017.

5 min Apgar was <7 score in 12.5% of babies who delivered vaginally whereas almost all LSCS babies had >7 score ,as compared to Babovic et al study and Tharin HJE et al,2011.

Prematurity was the main cause of NICU admission and the majority of term babies delivered by caesarean did not have any delivery related complications.

R.J Pepper et al (1979) says the liberalised c-section in premature infants ,the survival rate in premature babies has increased up to 80%-98% depending on the fetal weight.

V. CONCLUSION :

In our study of 200 cases ,64 were delivered vaginally and 136 abdominally.
According to the given data, the relative risk of perinatal mortality, trauma at birth and Apgar at the fifth minute of life were higher in the vaginal delivery than in planned caesarean section of singleton breech.

Though c-section for breech for breech presentation is not universally recommended ,c section can reduce the perinatal mortality and morbidity in a rural health centre where proper antenatal surveillance is not followed by patients and present in labour with breech presentation.

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