ORIGINAL RESEARCH PAPER

Obstetrics & Gynaecology

A STUDY OF MATERNAL & PERINATAL OUTCOME OF BREECH PRESENTATIONS.

KEY WORDS: breech, maternal &fetal outcomes, cesarean section, normal delivery

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ABSTRACT

The aim of this study is to learn and tabulate the maternal and perinatal outcomes of various breech presentation in normal vaginal as well as cesarean deliveries, this study was carried DEPT.OF OBSTERTRICS &GYNECOLOGY at GOVERNMENTMEDICAL COLLEGE PALI, over a course of 6 months. There were 5540 deliveries over this period and total 180 were breech deliveries , this study supports stronger correlation between breech and multi parity , premature ,polyhydraminos, placenta previa, prenatal complications and perinatal morbidity and mortality in relation to breech deliveries . Both prenatal morbidity and mortality increased. Vaginal breech birth is associated with increased prenatal morbidity and death when compared to abdominal delivery. Therefore, when the stakes are this high, one must compare the dangers of a cesarean section on the mother against the risks of a vaginal delivery on the kid in order to make a wise choice.

INTRODUCTION

The term "breech presentation" describes a longitudinally-lying fetus whose buttocks or lower extremities enter the pelvis first. There are three different types of breech presentation: frank, full, and incomplete. The fetus is in a frank breech position when both hips are flexed, and the legs are straight with the feet close to the fetal face. The fetus is seated with both hips flexed and both legs in a tucked position when it is completely breech. The incomplete breech, sometimes referred to as a footling or double footling breech when both legs are extended, can have any combination of one or both hips extended.

The fetus displays 'bottom down' in a breech situation. There are three primary varieties ,depending on how
the legs are positioned:

- Complete (flexed) breech: means that both legs are bend at the hips and knees ,giving the impression that the fetus is sitting "cross-legged."
- Frank breech :both legs are stretched at the knee and flexed at the hip. The most typical breech presentation is this one.
- Footling breech :is when one or both legs are extended at the hips, showing only the foot.
- At 28 weeks of gestation, 20% of fetus are breech. Most of these spontaneously change to a cephalic
- presentation (head down),and only 3% of them are breech at term.

Etiology

Clinical factors that may alter the uterine cavity's vertical polarity or impact fetal motility include those that are connected to breech presentation. The most frequent conditions connected to a breech presentation are prematurity, multiple gestations, aneuploidies, congenital malformations, Mullerian anomalies, uterine leiomyoma, and placental polarity as in placenta previa. Additionally, breech presentation at term is more likely to occur again in subsequent pregnancies if it has previously occurred

Epidemilogy

Of all term pregnancies, 3% to 4% have breech presentations. With less advanced gestational age, breech presentations occur more frequently. 7%of fetuses are breech at 32weeks, while 25% are breech at 28 weeks or fewer.

In particular, the recurrence rate after one breech delivery was approximately 10% for the subsequent pregnancy and 27% for the third pregnancy. Some have also claimed that prior cesarean birth doubles the likelihood of breech presentation.

History and Physical Exam

When performing the Leopold maneuvers during the physical examination, the palpation of a firm, round, movable structure at the fundus and the inability to palpate either the engaged breech in the same place or a presenting component in the lower abdomen superior to the pubic bone may arouse suspicion of a breech presentation.

A cervical exam may reveal findings such as the absence of a palpable presenting part, the palpation of a lower extremity—typically the foot—or ,in the case of an engaged breech pregnancy, the soft tissue of the fetal buttocks. If the patient has been in labor, caution is advised because the fetal buttocks 'soft tissue could be mistaken for the fetal vertex's caput.

Any of these abnormalities ought to prompt suspicion, and an ultrasound ought to be carried out.

Evaluation

- Leopold movements combined with a cervical exam can be used to diagnose a breech presentation during an abdominal examination. The diagnosis should be supported by ultrasound.
- The fetal lie and presenting part should be seen and recorded during ultrasonography. If breech presentation is determined to be the case, detailed information, such as the precise type of breech, the degree of fetal head flexion, the estimated fetal weight, the volume of amniotic fluid, the location of the placenta, and a study of the fetal anatomy (if not already done), should be recorded.

MATERIALS AND METHODS

This cross-sectional study was carried out over the course of six months , from April 1 to September 30 ,2023, in the department of obstetrics and gynecology at BANGUR

HOSPITAL, govt medical college, Pali, Rajasthan. researching the incidence, causes ,types ,and outcomes for the mother and the baby of breech presentation.

RESULTS

There were 5540 deliveries over the time period indicated. 180 breech deliveries totaling 180 cases made up the study, of which 110 were full-term and 70 were preterm. Most of the women were between the ages of 21 and 25. In this study, the prevalence of breech delivery was 3.24%.Breech presentation occurred more frequently in multiparas (55.55%), compared to primiparas (44.44%). 52.7%of births were place vaginally, compared to 47.22 % who underwent cesarean sections.

CONCLUSION

The current investigation supports the stronger correlation between multiparty and breech presentation. Prematurity, oligohydramnios, polyhydramnios, placenta previa ,and foetopelvic disproportion are some of the aetiological variables linked to breech presentation.

There was an increase in perinatal morbidity and mortality . Compared to abdominal delivery, vaginal breech birth is linked to higher perinatal morbidity and mortality. Therefore, in order to make a decisive decision when the stakes are this high, one must weigh the risks of a caesarean section on the mother and the risks of a vaginal delivery on the child.

Background

Presenting The Breech

By definition, the sacrum is the common denominator and the foetal buttocks or podalic pole of the fetus is
the presenting component.

The majority of babies are delivered with a cephalic presentation, however about 3 to 4 % are discovered to be breech at the end of pregnancy. Breech presentation is far more frequent before the end of pregnancy; at 28 weeks and 32 weeks , respectively, 20 % and 15 % newborns are breech. Due to the fact that the majority of babies spontaneously flip to the cephalic presentation, the prevalence of breech presentation declines from 20% at 28 weeks of gestation to 3-4% at term. This appears to be an active process in which a normally formed and active infant adopts the posture that is the "best fit" in a typical intrauterine environment. It's possible that anomalies in the baby, amniotic fluid volume, placental location ,or uterus are linked to persistent breech presentation. It could be a result of a seemingly random event or anotherwise minor factor like cornual placental location. Due mostly to preterm, congenital abnormalities, birth hypoxia or trauma, breech presentation has a greater rate of perinatal mortality and morbidity than cephalic presentation.

In order to lessen the perinatal issues that can arise from breech presentation, caesarean sections have been recommended, and in many countries in Northern Europe and North America, they are now the standard method of delivery for breech babies. It has long been believed that breech babies delivered vaginally as opposed to through an elective cesarean section had higher neonatal morbidity and mortality rates. Retrospective investigations on the subject have produced different results, and there has been considerable discussion over this fact over the past few years

MATERIALS AND METHODS

180 breech presentation patients make up the clinical trial group being conducted right now. The Obstetrics
and Gynecology department carried out this cross-sectional investigation.

GOVERNMENT MEDICAL COLLEGE AND BANGUR HOSPITAL, PALI, (Rajasthan)

From April1, 2023, until September 30, 2023, a total of six months. Babies in this series are those who have reached 37 weeks of gestation or who weigh 2.5 kg or more in circumstances when a menstrual history is not known. Breech presentation was examined in terms of frequency, etiology, kinds, and evaluation of various influences on maternal and perinatal outcomes as well as delivery method. Following a thorough review of each patient's medical history and a clinical (general and systemic) examination, the size of the fetus and the pelvis were clinically assessed. The patient's prior obstetric history, associated obstetrical risk factors, the condition of the fetus, and the obstetrician's experience were all taken into account when deciding on the manner of delivery. Other considerations were the size of the baby, pelvic evaluation, previous obstetric history, and condition of the fetus. At term, cesarean sections were used to deliver primigravidae and multigravida with high risk characteristics. Both multigravidae without risk factors and primigravidae with an average-sized baby and a healthy pelvis were permitted to give birth vaginally under close supervision.

Placenta placement and uterine abnormalities were routinely checked in cases of caesarean deliveries. The gestational age, 1- and 5-minute APGAR scores, congenital abnormalities, and birth traumas of newborns were also evaluated. The occurrence of postpartum hemorrhage (atonic or traumatic), cervical and vaginal rupture, any febrile morbidity, septicemia, calf muscle soreness, and the requirement for blood transfusion were all considered indicators of the maternal prognosis. Neonatal mortality and morbidity as well as maternal illness were documented during the observation of the mother and babies up until their release from the hospital. The outcome for the mother was accessed, and the reason for perinatal death was documented.

RESULT

This cross-sectional study was conducted in dept. of obstetrics and gynaecology of BANGUR HOSPITAL, government medical college, pali, rajasthan during a period of 6 months from april 01, 2023 to september 30, 2023.During given period there were 5540 deliveries. The study consisted of 180 cases of breech delivery out of them term deliveries were 110 and preterm constituted 70 cases.

Most of the patients belong to 21-25 years of age group.

Prevalence of breech delivery in this study was 3.24%

Breech presentation was more common in multipara having an incidence of 55.55%,while primiparas found in 44.44%. In 52.77% of deliveries, vaginal births took place, while 47.22%of deliveries required a caesarean section. Increased surgical interference was the cause of the rise in maternal morbidity associated with breech presentation. While wound infection and RTI in the form of cervicitis, urethritis, vaginitis, etc., were only observed in cases of abdominal route, cervical tear was the most common cause of maternal morbidity in vaginal route. When compared to deliveries made by the abdominal route, vaginal deliveries were found to have a greater incidence of perinatal mortality.

Breech Delivery Incidence:Table 1

S.NO	No. of breech deliveries	total no. of deliveries	percentage
1	total breech:180	5540	3.24
2	term breech:110		1.98
3	preterm breech:70		1.26

5540 deliveries were made over all during the research period. Out of which 3.24% of deliveries were breech.

Preterm and term breech birthrates were each 1.98% and 1.26%, respectively

Breech Delivery Incidence In Relation To Parity:Table 2

S.NO.	Parity	No. of cases	percentage
1	primigravida	80	44.44
2	multigravida	100	55.55
total		180	

Breech presentation was more frequent in multiparas (55.55%) than in primiparas (44.44%), as shown in the table 2.

Repartition Of Breech Cases Based On Booked And Unbooked Cases:Table 3

TYPE	booked cases	percentage	unbooked cases	percentage
primigravida	42	23.33	50	27.78
multigravida	26	14.44	62	34.44
total	68	37.78	112	62.22

In this series of 180 breech cases majority of cases were non-booked (62.22) and multigravida were (34.44).

Breech Distribution By Region Allocation:Table 4

Area	no. of cases	percentage
Rural	126	70
Urban	54	30
total	180	

70 % of the cases in this series came from rural areas.

Age-related Analysis Of Breech Presentation:Table 5

S.no.	age group(yrs)	no. of cases	percentage
1	16-20	35	19.44
2	21-25	87	48.33
3	26-30	47	26.11
4	31-35	7	3.88
5	>35	4	2.22
total		180	

According to the table 5 above, breech presentation occurs most frequently in women aged 21 to 25 (48.33%) and in those aged 26 to 30 (26.11%).

Analyzing The Relationship Between Baby Weight And Breech Presentation:Table 6

S.no	weight of baby (gms)	no. of cases	percentage
1	<1000	4	2.22
2	1000-1499	25	13.88
3	1500-1999	16	8.88
4	2000-2499	20	11.11
5	2500-2999	50	27.78
6	3000-3499	45	25
7	>3500	20	11.11
total		180	

Table 6 demonstrates that the weight range of 2500– 2999 gm has the highest prevalence of breech presentation at 27.78%, followed by the range of 300–3499 gm at 25%.

Type Breech & Parity:Table 7

S.no	type of breech	primi	%	multi	%
1	extended	33	44	42	38.18
2	complete	30	42.85	53	48.18
3	footling	6	8.57	14	12.72
4	compound	1	1.42	1	0.9
	total	70			

The table 7 demonstrates that complete breech and extended breech were both frequent in multiparas.

Distribution Of Breech By Route Of Delivery:Table 8

S.no	Route	no.ofcases	percentage
1	vaginal	95	52.77
2	abdominal	85	47.22
	total	180	

The preceding table demonstrates that 52.77% of deliveries were vaginal and 47.22% were abdominal.

Etiology Of Breech Presentation :Table 9

S.no	factor assoc.	no. of cases	percentage
1	prematurity	51	28.33
2	extended legs	69	38.33
3	oligo	5	2.77
4	poly	15	8.33
5	PL. previa	8	4.44
6	fetopelvic disproportion	2	1.11
7	no evident cause	30	16.66
	total	180	

38.33% of breech presentations were caused by extended legs, while 28.33% were due to premature birth.

Breech Presentations Prenatal Complications:Table 10

S.no	complication	no.ofcases	percentage
1	PIH	18	10
2	post CS pregnancy	13	7.22
3	bad obs. history	16	8.88
4	abruption placenta	2	1.11
5	anemia	6	3.33
6	polyhydraminos	17	9.44
7	oligohydraminos	3	1.66
8	PL. previa	10	5.55

Pregnancy-induced hypertension and a poor obstetric history accounted for 10% and 8.88%, respectively, of all prenatal problems with breech presentation, according to the above table, which was followed by post-C S. pregnancy.

IUD Prevalence In Breech Presentations:Table 11

S.no	Parity	no. of cases	percentage
1	primigravida	7	7.60
2	multigravida	8	9.09
	total	15	

Table 11 :IUD are more seen in multipara 9.09% than primi 7.60%

Breech Presentation And The Need For A C-section Table 12

S.no	indications	no.ofcases	percentage
1	primi breech	46	54.11
2	post c-section breech	9	10.5
3	bad obs. history	8	9.4
4	fetopelvic disp.	2	2.35
5	fetal distress	8	9.4
6	PIH	6	7.05
7	PL. previa	6	7.05

According to the table 12 ,primi breech (54.11%) is the most frequent cause of cesarean sections, followed by post-cesarean breech (10.5%) and a poor obstetric history (9.4%).

Perinatal Morbidity Incidence According To Parity:Table 13

S.no	parity	no.of cases	percentage
1	primigravida	27	33.75
2	multigravida	23	23
	total	50	

Perinatal Mortality Rate According To Type Of Breech Presentation:Table 14

S.no	types of breech	total cases	morbid cases	percentage
1	complete	75	25	33.33
2	extended	83	19	22.89
3	footling	20	4	20
4	compound	2	2	100
	total	180	50	

Prevalence Of Breech Twin Presentations: Table 15

S.no	parity	twins	percentage
1	primi	5	6.25
2	multi	3	3
	total	8	

Twin incidence is higher in primi para (6.25%) Than multipara (3%) According to table 15.

In this collection of cases, the compound form of breech had the highest rate of prenatal morbidity(100%).

Neonatal Morbidity Associated With Breech Delivery: Table 16

S.no	type of morbidity	no. of cases	percentage
term 1	APGAR<7 at min	10	20
2	meconium aspiration	7	14
3	neonatal sepsis	6	12
preterm 1	APGAR<7 at 5 min	18	36
2	meconium aspiration	4	8
3	neonatal sepsis	5	10

CONCLUSION

The current investigation supports the hypothesis that multiparity and breech presentation are related. Prematurity, oligohydramnios, polyhydramnios, placenta previa, and foetopelvic disproportion are some of the aetiological variables linked to breech presentation. Breech presentation was associated with a variety of prenatal issues, including placenta previa, BOH, post-cesarean pregnancy, and abruptio placenta. The current study supports the increased prevalence of the principal consequences of cord prolapse, PROM, and postpartum head arrest in breech presentation during labor. The study reveals that breech presentation is associated with higher perinatal death and morbidity.

Because of extended labor-related infections and other issues including preterm, perinatal morbidity and mortality increased. Compared to abdominal delivery, vaginal breech birth is linked to higher perinatal morbidity and mortality. Cesarean sections have become more common practice in order to enhance perinatal outcomes.

However, compared to vaginal birth, maternal morbidity is higher during Caesarean sections. Due to
extended labor and increased
are still a common practice in our hospital and practically everyone is familiar with it. Inappropriately surgical involvement, maternal morbidity rose.

Although a lost art, breech vaginal births chosen patients can assist in lowering the primary caesarean section rates if this art is executed attentively. In order to come to a final conclusion, one must consider the risks of caesarean birth for the mother and the risks of vaginal delivery for the baby.

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