Original Article

Assessment Of Perinatal Outcome Of Breech Presentation At A Tertiary Care Hospital, Quetta

Safia Bibi, Khanda Gul, Fozia Mohammad Bukhsh, Palwasha Gul

ABSTRACT:

Objective: To review the mode of delivery and perinatal outcome in breech presentation in a tertiary care hospital.

Study Design and Setting: Retrospective Analytical Study. Department of Obstetrics and Gynecology Unit-4, Bolan Medical Complex Hospital, Quetta, from 1st January 2012 to 31st December, 2016.

Methodology: This retrospective analytical study included review of clinical records of all patients who delivered either vaginally or via caesarean section with breech presentation.

Results: During the study period, 806 patients presented with breech (2.4%). Vaginal breech delivery was carried out in 71.8% patients and caesarean section was done in 28.2% patients. In vaginal breech group 30.7% patients were primigravida and 69.3% patients were multigravida. In caesarean section group 50.3% patients were primigravida and 49.7% were multigravida. Most common birth weight was between 2.5-3.5 kg in both group. Most common indication for cesarean section was breech with previous one LSCS.

Conclusion: Like all vaginal births, vaginal breech delivery is not only beneficial in the chance of having a vaginal birth in future but also prevents from the complications of caesarean delivery.

Key Words: Breech presentation, caesarean section, primigravida, vaginal breech delivery.

INTRODUCTION:

Breech presentation is defined as the fetal buttocks presenting in the birth canal. It is classified as frank breech (45-50%), complete breech (10-15%) and footling breech (35-45%). Prematurity is commonly associated with breech, 33% at 24 weeks. It drops to 3-5% at term (37-40 weeks.) Predisposing factors include high parity, uterine anomalies, pelvic tumors, polyhydramnios, oligohydramnios, fetal anomalies, macrosomia, multiple pregnancy, placenta previa, absolute cephalopelvic disproportion, and previous breech. Often no cause is found too.[1]

The optimal route of delivery for breech infants has been the subject of much controversy. There is a vast difference in the mode of delivery between private and public hospitals. In United States over 90% of primigravidas are delivered by caesarean section. Initially it was thought that caesarean in breech fetus improves maternal and fetal outcome but now it's evident that caesarean does not prevent all infant morbidity and mortality because it usually arises by the same problems that caused the breech presentation in the first place. Rather caesarean places mother at risk of anesthesia, short and long term complications of surgery and makes her a high risk pregnancy in future, especially in developing countries.[2]

Two considerations, not strictly medical, are made in decision making of mode of delivery. Firstly, the skill of vaginal breech birth is not universally available neither an effort is made to teach it, plus those having the skill are either aging or not part of delivery team due to seniority. Secondly, the medico-legal consequences prohibit many from attempting the vaginal breech birth.[3]

Though many factors are taken into account, including conclusions from medical literature, community and national standards, the specifics of each individual case, the patient's wishes and skill of the operator in delivering a breech fetus, but it should also be considered that as being in developing world the complications of anesthesia, surgery, lack of antenatal, home deliveries with a scar, morbidly adherent placenta and its consequences, lack of neonatal care and fear of limited family does not make it a first choice.[4]

METHODOLOGY:

This retrospective study was conducted in the department of Obstetrics & Gynaecology unit-IV, Bolan Medical Complex Hospital, Quetta from 1st Jan 2012 to 31st Dec 2016. The study group included all patients with breech presentation among the 33,396 patients who delivered in the department during the study period. Patients with singleton pregnancy with breech presentation and patients with twin pregnancy having first twin breech presentation were included

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in the study. Patients with compound presentation and those delivered before 28 weeks were excluded from the study. Clinical records of patients were obtained from the labor ward and operation theater registers as well as from the case files. Data was collected, including the age, parity, gestational age, mode of delivery, perinatal outcome, birth weight, fetal anomalies, and indication of caesarean section. Results were calculated in terms of percentages and frequency.

RESULTS:

There were 33,396 deliveries during the study period. Out of these 806 were breech deliveries. The incidence of breech delivery was 2.4%. Vaginal breech delivery was carried out in 579 (71.8%) patients and caesarean section was carried out in 227(28.2%) patients, emergency 180 (22.3%) and elective 47 (5.8%) as shown in Fig 1. In vaginal breech delivery group, there were 178 (30.7%) primigravida and 401 (69.3%) multigravida while 94(52.2%) patients were primigravida and 86(47.8%) were multigravida in emergency caesarean section group and elective cesarean section was carried out in 20 (42.6%) primigravidas and 27(57.4%) multigravida patients. Indications of elective cesarean were macrosomia (12) previous 1LSCS (10), more than one LSCS (6), patients wish (8), postdate (4), bicornuate uterus (2) bad obstetrical history (4) and one preterm with musculoskeletal dystrophy.The main indications of emergency caesarean section were previous 1 LSCS (27.2%), PROM (12.8%), fetal distress (8.9%) and patient's wish(8.3%) as shown in table-2. 866 babies were delivered both vaginally and through cesarean section. There were 60 sets of twins, in which 57 delivered vaginally and 3 by caesarean section. The presentations of twins who delivered vaginally were as breech-breech 33(57.9%), breech-vertex 24 (42.1%). Two case of breech -vertex presentation had complications, one came home delivery with body delivered and stuck head.The second twin was vertex and delivered vaginally while other was locked twin undiagnosed in hospital and caesarean section done. Most of the patients were non booked. Thirty fetuses had congenital abnormality which included, hydrocephalous (13), spinabifida (6), maningocele (5), anencephaly (3), hydrops fetalis (2) and umbilical hernia (1).The rate of congenital anomaly of fetus in this study was 3.5%. There were 89 perinatal deaths, out of which 66 patients had intrauterine fetal demise at admission, in which 54 delivered vaginally and 12 babies delivered by caesarean section. There were 16 stillbirths and seven NNDs in vaginal breech delivery group. NNDs were due to prematurity and 12 stillbirths had congenital anomaly, two were trial taken and 2 were twin delivery with body delivered and stuck head of first twin (fig-2).There were total 27 preterm babies. In vaginal delivery, 354 babies were male and 280 were female, one had ambiguous genitalia. While 127 babies were male and 104 were female in caesarean section group. Most of babies were between 2.5-3.5 kg in both groups. 86.1% babies in vaginal breech delivery and 81.7% in caesarean section group. 8.1% babies delivered vaginally were more than 3.5kg in our study and most of them were intrauterine deaths as shown in table-3.

DISCUSSION:

Incidence of Breech presentation has remained constant at 3-5% over the years. There has always been a debate about the mode of delivery and it will remain so as long as there

Table 1 Parity of the patients

Parity	Vaginal delivery no=579	Emergency C/S no=180	Elective C/S no=47
Para 0	178(30.7%)	94(52.2%)	20(42.6%)
P1-P2	173(29.9%)	48(26.7%)	13(27.6%)
P3-P4	92(15.9%)	15(8.3%)	7(14.9%)
=P5	136(23.5%)	23(12.7%)	7(14.9%)

Table 2 Indications of emergency LSCS

Indications	Number	Percentage%
Previous 1 LSCS	49	27.2
PROM	23	12.8
Fetal distress	16	8.9
Patient demand	15	8.3
Obstructed Labor	13	7.2
Macrosomia	13	7.2
Secondary arrest	10	5.5
B.O.H	8	4.4
APH	7	3.9
Footling breech	5	2.8
Contracted Pelvis	5	2.8
Severe Preeclampsia	4	2.2
Post Date	4	2.2
Twin pregnancy	3	1.7
IUGR	3	1.7
Eclampsia	2	1.1

Table 3 Weight of baby

Weight of baby	Vaginal delivery. no (%)	Caesarean Section. no (%)
<2.5kg	36 (5.7%)	1(0.4%)
2.5-3kg	254(39.9%)	41(17.8%)
3.1-3.5kg	294 (46.2%)	147(63.9%)
3.6-4kg	13 (2%)	28(12.2%)
>4kg	39 (6.1%)	13(5.7%)
Total	636	230

Fig: 1 Mode of Delivery

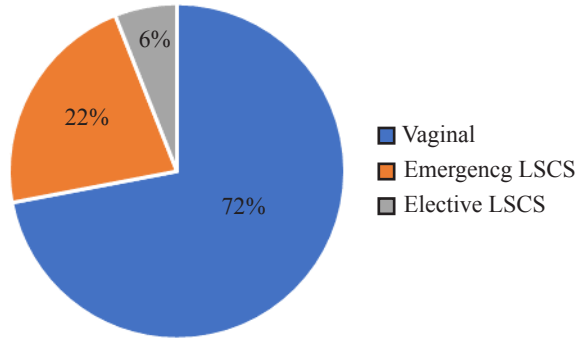
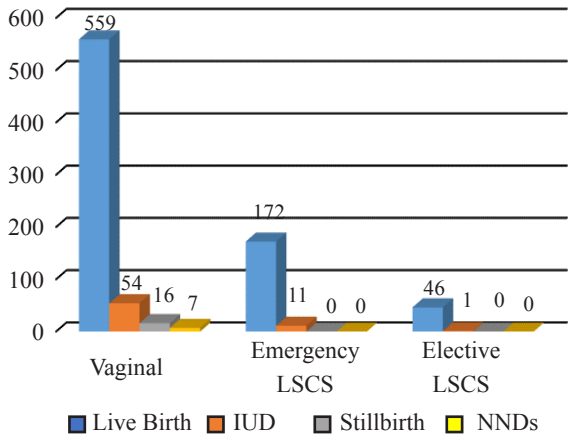


Fig: 2 Perinatal Outcome



are different approaches in developed and developing countries, private and public hospitals, due to lack of skills or fear of litigation. Incidence in our study is 2.4% comparable to the incidences found by Karning RK[5] et al and Moodley et al [6] which were 2.92% and 2.4 % respectively. While the incidence is 6.7% in Zahoor S[7] and 4.7% in Rauf B[8] studies which is quite higher than ours.Tanau K[9] had a prevalence of 1.7%.

Over the last few years cesarean rate has been on the rise and breech presentation has become one of the indications. Hogberg U et al[10] reported a cesarean rate for breech rise from 28% in 1999 to 78% in 2010. There was a threefold increase. Sullivan EA et al[11] observed that vaginal breech birth dropped from 23.1% in 1991 to 3.7% in 2005. In our study vaginal deliveries were 71.8% and cesarean 28.2% comparable to 69.1% vaginal breech delivery and 30.9% cesarean section in Tanau K[9] study. The success rate of vaginal breech delivery is 65% in Waseem T[12] study and 74% in Naheed F[13].Vaginal breech delivery is a preferable mode of delivery in our setup. 30.7% primigravida and 69. 3% multigravida were delivered vaginally in our study.

The main indications in elective caesarean section were macrosomia, previous caesarean section, patient wish and postdate pregnancies. The indications of emergency caesarean section were previous caesarean section (27.2%), PROM (12.8%), fetal distress (8.9%) and patient wish (8.3%). Majority of the babies were having birth weight of 2.5-3.5 kg in both groups.8.1% babies delivered vaginally were more than 3.5kg.The operators skill and will has a role in the mode of delivery.[14]

The cesarean delivery increased in breech presentation because at a point of time it was believed that mode of delivery was the cause of good or bad neonatal outcome but now it's somewhat obvious that it's the associated conditions that cause unfavorable fetal outcome and not solely the breech itself. The risk factors associated with adverse perinatal outcome were IUGR, diabetes, epidural, oligohydramnios, congenital anomalies, nulliparity, macrosomia, and induction of labour.[15,16,17] Congenital anomalies in our breech babies were 3.5% and karing rk 3.13%. Bjellmo S et al[2] reported that the neonatal death and cerebral palsy was similar in breech cesarean delivery and cephalic vaginal delivery. Adjaoud S et al observed that there was higher risk of severe acidosis in vaginal breech delivery but no increase in the risk of asphyxia, NICU transfer or death. Lorthe E et al[18] dealt with preterm breech almost totally with cesarean section (99.6%).

Schrage R[19] stated that girls presented a little more than boys as breech. We had a different observation both in vaginal breech delivery and cesarean section. The male gender presented more as breech presentation.

External cephalic version (ECV) is an effective intervention that decreases need for cesarean section. Vaginal delivery was more likely when breech diagnosed before 38 weeks and ECV offered[20]. Induction of labour in breech presentation was feasible with vaginal breech delivery[21]. Louwen F et al[22] suggested that an upright position was associated with less duration of second stage of labour, maneuvers required, injuries, cesarean section rate compared to dorsal position. Franz M et al[23] recommends MR pelvimetry as a useful tool for prenatal assessment of female pelvis for selection of trial of labour in nullipara. Wildschut HI et al[24] had more success with breech delivery on all fours. The aim of these efforts is to make vaginal breech delivery as an option for the patients.

There are significant regional disparities, lack of consensus and recommendations on the preferential mode of delivery for breech presentation[25,26]. Vaginal breech delivery training may be customized by practice and support from experienced clinicians[27]. Vaginal breech delivery skill need to be propagated in trainees. Clinical guidelines needs to be made and applied.

CONCLUSION:

Like all vaginal births, vaginal breech delivery is not only beneficial in the chance of having a vaginal birth in future but also prevents from the complications of caesarean delivery.

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