COMPARISON OF MODE OF DELIVERY IN UNDIAGNOSED BREECH PRESENTATION IN LABOUR

Rukhsana Karim[1], Sadaqat Jabeen[2]

ABSTRACT

***Objective**: To compare vaginal delivery and cesarean section in terms of neonatal morbidity and mortality in undiagnosed breech presented in labour.*

***Methodology**: This comparative study was conducted at Department of Obstetrics and Gynaecology, Lady Reading Hospital Peshawar from January to December 2011. Total of 119 undiagnosed breeches admitted in labour ward were included in the study. Apart from the demographic details neonatal outcome including Apgar score, intrapartum fetal death and neonatal intensive care unit admission were recorded on a semi structured proforma and analyzed by Chi square test using SPSS v. 17.*

***Results:** The mean age of the women delivered vaginally was 27.91±6.37 years while the mean age of those that underwent cesarean section was 23.88±3.32 years. The overall mean age of the sample was 27.03±6.06 years. The mean gestational age of the fetuses in both the groups was between 37-40 weeks. Out of 93 breeches which were delivered vaginally, 12(12.9%) neonates were having Apgar score <7.While those delivered by cesarean section only 2(2.1%) neonates were having low Apgar score (p-value=0.511). Two(2.1%) neonates were admitted in neonatal intensive care unit in the vaginally delivered group, while among in the cesarean section group there was no neonatal intensive care unit admission(p value=0.462).There was no intrapartum death in both the groups.*

***Conclusion**: Undiagnosed, uncomplicated breeches presenting in labour can be safely delivered vaginally, but large randomized study is needed to decide about the best mode of delivery.*

***Key Words**: Undiagnosed, Uncomplicated, Breech, Vaginal delivery, Cesarean section.*

This article may be cited as: Karim R, Jabeen S. Comparison of mode of delivery in undiagnosed breech presentation in labour. J Postgrad Med Inst 2013; 27(2):170-3.

INTRODUCTION

The incidence of breech presentation varies with the gestational age, at term it is about 3-4%[1,2]. The management of fetus presenting by the breech has been an area of great controversy. There are some risk factors associated with breech presentation, which are contraindications for vaginal delivery e.g., placenta previa[3].

The largest Canadian randomized controlled trial, "term breech trial", compared planned vaginal delivery versus planned elective cesarean section for uncomplicated term breech. It has shown that the risk of combined outcome of perinatal mortality, neonatal mortality or serious neonatal mortality with planned caesarean section compared with planned vaginal birth was 1.6% vs. 3.3% (RR=0.49, P=<0.02). The sub-analysis of this trial has shown that the benefit of delivery by caesarean section became even more significant in countries with low perinatal mortality rate ,but were not as significant in countries with a higher perinatal mortality rate. In this study there was no difference between the 2 groups regarding maternal mortality or serious early maternal morbidity[4].

More recently an observational prospective study has shown that if strict criteria are met before and during labour, planned vaginal delivery can be safely offered to significant number of fetuses with breech presentation at term[5]. The neonatal morbidity and mortality was not significantly different from the planned cesarean section group. Even in the term breech trial 10% of woman assigned to deliver by cesarean section went into labour and delivered vaginally with good perinatal outcome. Although it is a grade "A" recommendation to deliver all uncomplicated

[1,2]Department of Obstetrics and Gynecology, Lady Reading Hospital Peshawar - Pakistan

Address for Correspondence:
DR. Rukhsana Karim
Department of Obstetrics and Gynecology,
Lady Reading Hospital Peshawar - Pakistan
E-mail: drrukhsanakarim@hotmail.com

Date Received: August 2, 2012
Date Revised: October 14, 2012
Date Accepted: October 25, 2012

breech at term by planned cesarean section[6]. But in our set up because of poor antenatal checkup, most of the patients present for the 1st time in the labour ward with breech presentation[7].This study was thus conducted to compare vaginal delivery and cesarean section in terms of neonatal morbidity and mortality in undiagnosed breech presented in labour.

METHODOLOGY

This comparative study carried out at Department of Obstetrics and Gynaecology, Lady Reading Hospital Peshawar from 1st January 2011 to 31st December 2011. Data was collected from labour ward registers and charts. Total of 148 undiagnosed breech presentations were admitted in our labour ward during this time period , out of which 29 were having complicated breech presentation and were excluded from the study, so total number of patients left behind were 119.

All patients having full term (37-42 weeks), singleton, flexed or extended breech presentation with clinically estimated average size baby (2.5-3.8kg) and with clinically adequate pelvis, presenting for the 1st time in labour were included in the study. While patients having multiple pregnancy, preterm labour, fetuses with congenital anomalies and complicated breech presentation [previous cesarean section, macrosomic fetus (>4kg), footling breech, premature rupture of the membrane] were excluded from the study.

Informed consent was taken from all the patients at the time of admission. As our unit policy patients with uncomplicated breech in early labour especially primigravidas (as they do not have a previous trial of labour) underwent emergency cesarean section, extrapolating from the Royal College of Obstetrics and Gynecology (RCOG) recommendation that planned cesarean section is the recommended mode of delivery for term breech. While patients presenting in active/advanced (>4cm cervical dilatation) labour were allowed to deliver vaginally, by the most expert obstetrician available at the time of delivery in the labour ward. All the demographic and neonatal outcome details including age, parity, Apgar score, NICU admission, and weight of the newborn were entered in a pre designed proforma. Data was analyzed by Chi square test using SPSS v.17.

RESULTS

During this one year study, a total of 148 undiagnosed breech presentations were delivered. Twenty nine were complicated breech presentations, so were excluded from the study. Out of 119 uncomplicated breech presentation 93(78.15%) delivered vaginally and 26(21.8%) had cesarean section. The mean age of the women delivered vaginally was 27.91$\pm$6.37 years while the mean age of those that underwent cesarean section was 23.88$\pm$3.32 years. The overall mean age was 27.03$\pm$6.06 years. The mean gestational age of the fetuses in both the groups was between 37-40 weeks. In both the groups most of the patients (mothers) were in age range of 21-30 years (Table 1).

In the vaginally delivered group 42(45.16%) were primigravidas, 39(41.9%) were multigravidas and 12(12.9%) were grand multigravidas, while all the cases in the cesarean section group were primigravidas (Table 1). In vaginal breech delivery group 77(82.7%) neonates were having estimated birth weight between 3-

Table 1: Demographic details of the sample (n=119)

		Vaginally delivered group(n=93)	Cesarean section group(n=26)
Age	≤20	14(11.76%)	5(19.2%)
	21-30	76(63.86%)	21(80.76%)
	31-39	24(20.16%)	-
	≥40	5(4.2%)	-
Parity	Nullipara	42(45.16%)	26(100%)
	Multipara	39(41.9%)	-
	Grandmultipara	12(12.9%)	-
Gestational Age	37-40 weeks	98(82.3%)	20(76.9%)
	41-42 weeks	21(17.64%)	5(19.2%)

Table 2: Comparison of both the groups in terms of Neonatal outcome (n=119)

		Vaginally delivered group(n=93)	Cesarean section group(n=26)	P-value
Apgar score	<7	12(12.9%)	2(7.6%)	0.511
	≥7	81(87%)	24(92.3%)	
Neonatal Intensive Care Unit Admission	Yes	2(2.1%)	0	0.462
	No	91(97.8%)	0	
Intrapartum fetal death		0	0	0

3.5kg, and 16(17.2%) were between 2.5-<3kg.While in cesarean section group 23(88.4%) were in the range of 3-3.5kg, and 3 (11.5%) were in the range of 2.5-<3kg.

Twelve (12.9%) neonates that were delivered vaginally were with Apgar score <7, while in the cesarean section group, only 2(7.6%) neonates were having Apgar score <7 with a p-value = 0.511 (Table 2).

There were 2(2.1%) neonatal admissions in NICU in vaginally delivered group, while there was no NICU admission in the cesarean section group with a p-value=0.462. There was no intrapartum fetal death in both the groups (Table 2).

DISCUSSION

Breech is the commonest mal-presentation at term[7]. Although RCOG has recommended planned cesarean section for breech presentation at term[6] but there are no specific recommendations regarding mode of delivery in the undiagnosed breeches presenting for the 1st time in labour[8]. Internationally the incidence of undiagnosed breech is 9-33%[9] but in our study the incidence was 96.1% and similar results were reported by Zahoor S et al[7]. This high incidence of undiagnosed breeches shows poor antenatal care in our setup. Out of 119 uncomplicated and undiagnosed breech presentations, 93(78.15%) delivered vaginally, while 26(21.8%) had emergency cesarean section. Our results were consistent with those of Zahoor S et al, reporting 86.56% successful breech vaginal delivery and 13.5% emergency cesarean section rate[7]. Patients who delivered vaginally, all presented in advance/active labour (>4cm cervical dilatation). While those who had cesarean section all of them were primigravidas in early labour and underwent cesarean section extrapolating from RCOG recommendation that planned cesarean section is better than vaginal delivery.

Regarding Apgar score, in the vaginally delivered group 12(12.9%) neonates had Apgar score <7.While in the cesarean section group 2(7.6%) neonates delivered with Apgar score <7, with p value =0.511.Our results were consistent with the study conducted by AA Subande[10]. In their study low Apgar score <7 was present in 1.8% neonates in vaginally delivered breeches. While those delivered by cesarean section 0.73% neonates had Apgar score <7, with p value of 0.363. In a local study conducted by Nahid F there was no statistically significant difference in the neonatal Apgar score either delivered vaginally or by cesarean section[11]. Leung WC has also reported somewhat similar results with no statistically significant difference between the two groups[12].

In our study 2(2.1%) neonates in the vaginally delivered group were admitted in the neonatal intensive care unit. While in the cesarean section group, there was no neonatal intensive care unit admission (p value=0.462). Nwosce EC et al in their study has reported that undiagnosed breeches were more likely to deliver vaginally (OR=1.68) with no excess neonatal morbidity and mortality[13]. In a study conducted by JG Thorpe Beeston 5.6% neonates were admitted in NICU in the vaginally delivered group. While those delivered by cesarean section 7% neonates were admitted in the NICU, which was statistically not significant[14]. Nahid F and Babay ZA in their studies have reported no statistically significant difference in the NICU admission in both the groups[11,15].

In our study there was no intrapartum death in both the groups either delivered vaginally or by cesarean section. Krebs L has reported 0.37% intrapartum deaths in the vaginally delivered breeches. While in the cesarean section group the intrapartum deaths were 0.26%, which was statistically not significant[16]. Nwosce EC et al has found no statistically significant difference in the intrapartum deaths between the two groups[13]. Similarly Babay ZA and Nahid F have also

reported that mode of delivery has no significant effect on the intrapartum deaths in undiagnosed breech presentation[11,15]. In a Swedish study the reported perinatal mortality was 0.05% in the neonates delivered by cesarean section. While in the vaginally delivered group the perinatal mortality was 0.09%, statistically not significant[17].

CONCLUSION

Although it is RCOG grade A recommendation to deliver all uncomplicated breech by planned cesarean section, but there are no specific recommendation regarding undiagnosed breech. Our study has shown that although there is no statistically significant difference in neonatal morbidity and mortality between breech vaginal delivery and emergency cesarean section. A large randomized control trial is needed to decide about the mode of delivery. Regular drills especially for the trainees are required to improve the skills of breech vaginal delivery.

REFERENCES

1. Westgren M, Edvall H, Nordtrom L, Svalenius E, Ranstam J. Spontaneous cephalic version of breech presentation in the last trimester. Br J Obstet Gynaecol 1985;92:19-22.
2. Alarab M, Regan C, O Conell MP, Keane DP, O'Herliby C, Foley ME. Singleton vaginal breech delivery at term still a safe option. Obstet Gynaecol 2004;103:407-12.
3. Krebs L. Breech at term. Early and late consequences of mode of delivery. Dan Med Bull 2005;52:234-52.
4. Hannah ME, Hannah WJ, Hewson SA, Hodnett ED, Saigal S, Willan AR. Planned caesarean section versus splanned vaginal birth for breech presentation at term: a randomized multicentre trial. Lancet 2000;356:1375-83.
5. Goffinet F, Carnyol M, Foidart JM, Alexander S, Uzan S, Subtil D, et al. Is planned vaginal delivery for breech presentation at term still an option? Results of an observational prospective survey in France and Belgium. Am J Obstet Gyncol 2006;194: 1002-11.
6. Royal college of Obtetricians and Gynaecologists. The management of breech presentation. London: RCOG Press;2006.
7. Zahoor S, Ruby N. Maternal and fetal outcome in undiagnosed and diagnosed singleton breech presentation at term. J Postgrad Med Inst 2008;22:113-7.
8. Bako AU, Andu LI. Undiagnosed breech in Zaria, Nigeria. J Obstet Gynaecol 2000;20: 148-50.
9. Cheng M, Hannah M. Breech delivery at term: a critical review of the literature. Obstet Gyncol 1993;82:605.
10. Sobande AA. Pregnancy outcome in singleton term breeches from a referral hospital in Saudi Arabia. West Afr J Med 2003;22:38-41.
11. Nahid F. Outcome of singleton term breech cases in the pretext of mode of delivery. J Pak Med Assoc 2000;50:81-5.
12. Leung WC, Pun TC, Wong WM. Undiagnosed breech revisited. Br J Obstet Gynaecol 1990;106:638-41.
13. Nwosu EC, Walkinshaw S, Chia P, Manasse PR, Atlay RD. Undiagnosed breech. Br J Obstet Gynaecol 1993;100:531-5.
14. Thorpe-Beeston JG, Banfield PJ, Saunders NJ. Outcome of breech delivery at term. BMJ 1992;305:746-7.
15. Babay ZA, Al-Nuaim LA, Addar MH, Abdulkarim AA. Undiagnosed term breech: management and outcome. Saudi Med J 2000;21:478-81.
16. Krebs L, Langhoff Roos J, Weber T. Breech at term-mode of delivery? A register based study. Acta Obstet Gynecol Scand 1995;74:702-6.
17. Lindqvist A, Norden-Lindeberg S, Hanson U. Perinatal mortality and route of delivery in term breech presentation. Br J Obstet Gynecol 1997;104:1288-91.

CONTRIBUTORS

RK conceived the idea, planned the study, did the data collection and drafted the manuscript. SJ supervised and approved the manuscript for final submission. Both the authors contributed significantly to the research that resulted in the submitted manuscript.