Original Article

Perinatal Outcome of Vaginal Birth After Earlier Caeserian Section: Findings from Tertiary Care Teaching Hospital

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Abstract

Background: Vaginal Birth After Caesarean (VBAC) may be one of the strategies developed to control the rising rate of cesarean deliveries in our country. Analyzing outcome of previous caesarean pregnancies will provide an insight for reducing the caesarean rates and formulating protocols and policies for trial of labor.

Objective: To evaluate the perinatal outcome of vaginal birth after caesarean section (VBAC) in a tertiary care teaching hospital.

Materials and Methods: It was a cross sectional study carried out at the department of Obstetrics and Gynaecology, Ad-din Women's Medical College and Hospital, Dhaka, Bangladesh from January 2019 to December 2019. (Pregnant women who were admitted in the Department of Obstetrics and Gynaecology). Total 5098 patients were included in this study. Data were processed and analyzed by computer software SPSS (Statistical Package for Social Sciences) version 22.

Results Total number of deliveries during the study period was 5098. There were 4913 (96.4%) vaginal deliveries and only 185(3.6%) vaginal birth after caesarean section (VBAC). Feto-maternal outcome was better in VBAC patients.

Conclusion: The rate of caesarean section is increasing alarmingly now a days, this study tried of VBAC in appropriate group of patients. National policy and guidelines are necessary after large multicenter prospective studies.

Keywords: Vaginal, Birth after C/S, Perinatal outcome

Introduction

The term 'caesarean section' (CS) denotes the delivery of fetus, placenta and membranes through an incision in the abdominal and uterine walls[1]. Trial of labour (TOL) for vaginal birth after caesarean section (VBAC) is a well-established standard practice[2]. The success rates for VBAC range between 60%–80% after one previous lower segment caesarean incision[3]. Factors associated with successful vaginal birth in a trial of labour include age < 40 years, previous history of vaginal birth, non- recurrent indication for previous CS, strength of the previous scar associated obstetrical complicating factor/factors, pelvis adequate for fetus, number of previous CS, informed consent of the patient, available resources (anesthesia, blood transfusion, and theatre) for emergency CS, cervical effacement greater than 75% on admission, and cervical dilatation 4 cm or more on admission[2]. Trial of VBAC is not practice in case of previous classical or Inverted "T" shaped uterine incision, previous two or more lower segment CS, presence of other complications in pregnancy - Obstetric (pre-eclamsia, malpresentation, placenta-previa)or medical, resources limited for emergency caesarean delivery or patient refusal for VBAC-TOL.

There is a definite risk of uterine rupture in vaginal birth after cesarean delivery (VBAC) often leading to catastrophes which can be avoided by rapid diagnosis and prompt intervention. Evidence confirming the safety

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of VBAC within proper guidelines has been available for more than 10 years[4-6]. However, wide variations in VBAC rates still exist between hospitals and physicians. VBAC offers distinct advantages over a repeat CS since the operative morbidity and mortality are completely eliminated, the hospital stay is much shorter and expenses involved are much less[7]. The rate of cesarean section needs to be reduced and this can be achieved to a small extent by avoiding primary CS done without explicit indications and more importantly by resorting to a trial of vaginal delivery after previous CS which is safe for the fetus[7]. The purpose of this study was to evaluate perinatal outcome of vaginal birth after caesarean section (VBAC).

Materials and Methods

It was a cross sectional study carried out at the Department of Obstetrics and Gynaecology, Ad-din Women's Medical College and Hospital, Dhaka, Bangladesh from January 2019 to December 2019. Pregnant women who were admitted in the Department of Obstetrics and Gynaecology. All the cases were booked in the antenatal clinic and on regular antenatal check-up. Total 5098 samples were included in this study. Data were collected by using a preformed questionnaire. The purpose of the study was explained to all study population. Relevant history was taken, gestational age was determined by last menstrual period, previous antenatal records were collected, clinical examination was done in all the cases. All these collected information was recorded in a pre-designed data collection sheet. Data were processed and analyzed by computer software SPSS (Statistical Package for Social Sciences) version 22.

Results

Table I: Age distribution of the subjects (n= 5098)

Age	Frequency (n)	Percentage (%)	Mean±SD
≤ 20 Years	661	13.0	25.88±4.78
21 - 25 Years	2648	51.9	
26 - 30 Years	1326	26.0	
> 30 Years	463	9.1	

Table I describes the age distribution of pregnancy women with a mean age of 25.9±4.8 years more than 50% longing to young age groups of 21-25 years, followed by 26% from 26-30 years. However 13 year were so young as <20 years & 9 year older than 30 years (Table-I).

Table II: Vaginal birth after caesarean section (January to December 2019)

	Normal]y vaginal delivery (NVD)		Vaginal birth after caesarean section (VBAC)		Ruptured uterus	
	No.	%	No.	%	No.	%
January (n=459)	443	96.5	16	3.5	0	00
February (n=356)	351	98.6	15	1.4	0	00
March (n=439)	425	96.8	14	3.4	0	00
April (n=232)	220	94.8	12	5.2	0	00
May (n=403)	385	95.5	18	4.5	0	00
June (n=418)	400	95.6	18	4.4	0	00
July (n= 410)	394	96.1	16	3.9	0	00
August (n=455)	441	96.9	14	3.1	0	00
September (n=509)	496	97.4	12	2.3	1	8.3
October (n=472)	456	96.6	16	3.4	0	00
November (n=463)	446	96.3	17	3.7	0	00
December (n=473)	456	96.4	17	3.6	0	00
Total (5098)	4913	96.4	185	3.6	1	0.54

Table II describes the month specific prevalence of NVD & VBAC among these children, with only 1 ruptured uterus (Table-II) showing almost a similar tern in both normal & CS deliveries in every months.

Table III: Fetal outcome

Fetal outcome	No. of patients	Percentage (%)
Alive	5098	100
Still born	0	00
Neonatal death	0	00

Table-III show no fetal died among all these delivery cases (0%).

Discussion

Several studies are raising the issue that VBAC may not be as safe as originally thought[8,9] but reports are contradictory and these factors along with medico-legal concerns have led to decrease interest in obstetrician offering and women accepting trial for VBAC in various parts of the world[10]. It is well established that repeat CS increases the risk of maternal and perinatal morbidity, including bleeding, wound infection, postpartum thromboembolism, increased risk of blood transfusion, anesthetic complications.

This study shows majority of the respondents (77.9%) were 20-30 years of age with the range of 18-40 years and the mean age of 25.88±4.78 years this study consistent with findings of the study[7]. According to this study the age group was 20 to 30 years. This study was in similarity with the study[3] where no patient was below the age of 20 years.

Vaginal delivery is associated with lower maternal morbidity and mortality as against CS. The morbidity associated with successful vaginal birth is about one-fifth than the that of elective caesarean. Perinatal risk is more after a failed trial of labour compared to elective repeated CS without labour in other study[11,12]. Failed trials of labour, with subsequent CS involve almost twice the morbidity of elective section. This information is important for informed consent, counseling about VBAC and making decision about their choices of delivery after a previous CS. The adverse events include chorioamnionitis, postpartum endometritis, and uterine rupture may require hysterectomy, blood transfusion, perinatal and neonatal deaths and neonatal neurological impairment. Many of these adverse events seen in trial of labour (VBAC) are attributable to the failure of labour and the requirement for a repeated emergency CS. This study represents our observations for a period of 1 year. The selection of women for VBAC is mainly influenced by woman's desire and conditions favorable for vaginal delivery. In general, this institution offers a conservative approach both in the selection of women and in the management of their labor. Generally speaking women belonging to higher socioeconomic status were either not keen for VBAC or opted out of the study.

In this study a total of 5098 patients, among them 4913 had successful vaginal delivery (96.4), 185 (3.6%) patients under went VBAC 1(0.54%) was ruptured uterus but no need of hysterectomy due to emergency laparotomy and scar repair which is comparable Nepal, Pakistan and lower than in many others studies done in Western Country.[10,13,14] In the present study, suitable women were selected for VBAC during early pregnancy after a thorough assessment, and adhering to strict inclusion and exclusion criteria as mentioned earlier. This is in line with the fact that the history of a previous normal vaginal delivery is the single most important predictor for a successful VBAC.[15,16]

In this study only one case of scar dehiscence occurred. Now a days, there is a significant increase in primary CS for various indications, like fetal distress, caesarean delivery for matrenal request and many other non-recurrent indications thus increasing the rate of pregnant women with previous scarred uterus[17]. Vaginal Birth After Cesarean (VBAC) can be one of the strategies developed to control the rising rate of CS. It is a TOL in selected cases of previous CS in a well-equipped tertiary care hospital. In the present era of lower CS, the dictum now is once there is a CS, always it is mandatory hospital delivery in a well-equipped hospital. Rising rates of CS is a matter of great concern and trial of labor in previous CS is an attractive alternative[18]. Analyzing outcome of previous caesarean pregnancies will provide an insight for reducing the caesarean rates and formulating protocols and policies for trial of labor in previous CS deliveries. The most important event because of which obstetricians still hesitate to attempt planned VBAC is the uterine scar integrity. There is a definite risk of uterine rupture in vaginal birth after caesarean delivery often leading to catastrophies which can be avoided by early diagnosis and prompt intervention.

In this study good maternal and fetal outcomes were evident in successful VBAC group. This findings consistent with Pokhrel et al. study[10]. This findings were comparable to other studies done by Goel SS et al[19]. In the context of rising rate of primary CS, management of patient with previous CS with the appropriate mode of delivery is the challenge in obstetric practices. Regular and intensive antenatal surveillance, proper selection of patients, vigilant monitoring with competent technical

team and dedication on the part of healthcare giver can increase safety of VBAC. There is no doubt that trial of labor is safe if followed with great care but it is not risk free[19]. There were no serious complications like hysterectomy, emergency blood transfusion and visceral injury in patients with successful VBAC group.

Conclusion

The study suggests that successful VBAC is associated with better feto-maternal outcomes. Prior vaginal birth is a good predictor for the outcome of VBAC. Screening for this should preferably begin at antenatal booking itself to minimize the associated risks. Proper selection, appropriate timing and suitable methods of induction with close supervision by competent staff are the key factors to achieve greater degree of success.

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