



A STUDY OF FETOMATERNAL OUTCOME IN VAGINAL BIRTH AFTER CESARIAN SECTION IN A TERTIARY CARE HOSPITAL

Obstetrics & Gynaecology

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ABSTRACT

AIM AND OBJECTIVE: To evaluate outcome of vaginal birth after c-section of patient admitted into tertiary hospital

- To find out the efficacy and safety of vaginal birth after cesarean section.
- To find out intrapartum maternal & fetal complications.
- To find out the incidence of emergency operative interference in the patients with previous cesarean section.
- To find out fetal outcomes like prematurity, perinatal mortality & morbidity.
- To find out maternal morbidity and mortality in the patients with previous cesarean section.

METHODOLOGY It is prospective, randomized, and observational study which involved interviewing all pregnant patients admitted in Gynaecology and Obstetric Department of B.J. MEDICAL COLLEGE AHMEDABAD from JUNE 2021 to NOVEMBER 2021.

RESULTS: Out of 520 delivery there were 60 cases of VBAC in which 88% of patients had normal vaginal delivery and majority belong to reproductive age group (50%). Out of 60 cases of VBAC, 5% patient developed serious complication. No any maternal mortality occurred. Out of 60 cases of VBAC, 90% neonate was healthy, 5 neonate required NICU admission and one perinatal mortality during delivery due to rupture

CONCLUSION: From the study, it could be concluded that if a mother fulfilled the criteria, VBAC could be attempted as it has a few maternal and fetal complications. If risk factors are identified, and proper antenatal care is given, VBAC could be successfully undertaken without grave maternal and fetal outcomes

KEYWORDS

INTRODUCTION

The cesarean delivery rate is increased dramatically from 5% to more than 31% in the last 35 years. Pregnancy with a prior history of cesarean section is very common in today's obstetric practice [1]. Because of the "once a cesarean always a cesarean" rule, cesarean birth rates rose [2]. The problem is that this strategy just can't be sustained much longer. Women who have had a previous C/S should be encouraged to undergo a planned vaginal delivery if they have no other reason to have one during this pregnancy [3]. Prior cesarean sections are extremely difficult to measure in terms of risk. The subsequent pregnancy may be associated with significant problems such as placenta praevia.

Perinatal mortality and premature birth are both linked to this condition. After one or more cesarean sections, 2.4% of the patients suffered complications such as uterine rupture and placenta accretion with concomitant hemorrhage [4]. Premature births, urinary incontinence, and other complications can develop throughout pregnancy, labor, and repeat cesarean sections [5]. Repeated cesarean sections raise the risk of bladder damage by three times [6]. A uterine rupture after a VBAC (vaginal birth after cesarean delivery) can be prevented if diagnosed and treated quickly. Women who have had a previous cesarean section are less likely to endure a trial of labor, which results from their own choice as much as the obstetricians'. This decision will be influenced by how a woman is advised. Maternal requests for caesarean sections have gained a lot of attention and notoriety in medical literature in recent years. When discussing a patient's request for an elective caesarean section with them, keep in mind that they have a right to be fully included in the decision-making process.

Because effective counseling and evaluation of women who have had previous caesarean sections has been regarded a major technique of decreasing the caesarean section rate, according to the latest publications, a trial of labor is not risk-free, and it should not be carried out carelessly. If there are no obstetric contraindications, most women who are ready to give it a try should be encouraged to do so, but under medical supervision, to lower the rate of caesarean delivery [7].

Scar dehiscence is far less common than previously assumed in LSCS, according to several research. There is a 75% success rate in childbirth following a prior caesarean surgery, and the uterine rupture risk is less than 1% [8]. The chance of uterine rupture increases by 0.24 percent when a woman goes through a trial of labor. Women who have already had a cesarean section once must switch to having their babies

delivered in a hospital rather than having another one performed at home [9].

The management of the circumstances described in the preceding section necessitates the education of the healthcare workforce. Accordingly, the department's policy on deciding which cases should be eligible for a trial of labor should undergo a thorough examination and revision. The purpose of this study is to determine the maternal and perinatal problems and mortality and morbidity in individuals who have had cesarean sections in the past.

The rationale of the study Mothers and children who have undergone cesarean sections are more likely to suffer from longterm complications. The maternal morbidity rate following cesarean section has been reported to be as high as 35.7%. Repeated cesarean sections in subsequent pregnancies resulted in a higher maternal death and morbidity rate because of a catastrophic consequence. A VBAC has obvious benefits to a repeat cesarean section. The surgical morbidity and mortality are fully removed, the hospital stay is substantially shorter, and the associated costs are far less expensive [10]. Cesarean section rates must be lowered. This may be done to a modest amount by avoiding primary cesarean procedures performed without specific indications and, more crucially, by trying vaginal birth after a previous cesarean section, which is safe for the fetus [11].

Patients hospitalized at CIVIL hospital were the focus of this investigation.

Various guidelines available on VBAC are;

- GREEN-TOP GUIDELINE (2015)
- RCOG GUIDELINE (summary of recommendations, 2015) (8)
- SOGC GUIDELINE

Criteria for offering TOLAC

- Informed and written consent before trial
- No fetal distress
- No CPD detected
- Interpregnancy interval more than or equal to 18 months
- No scar tenderness at the time of admission

AIM AND OBJECTIVE:

To evaluate outcome of vaginal birth after c-section of patient admitted into tertiary hospital:

- To find out the efficacy and safety of vaginal birth after cesarean section.

- ii. To find out intrapartum maternal & fetal complications.
- iii. To find out the incidence of emergency operative interference in the patients with previous cesarean section.
- iv. To find out fetal outcomes like prematurity, perinatal mortality & morbidity.
- v. To find out maternal morbidity and mortality in the patients with previous cesarean section.

Study place and period

This study was conducted in Department of Obstetrics and Gynecology, Civil Hospital, B. J. Medical College, Ahmedabad. The study was carried out between the periods of JUNE 2021 to NOVEMBER 2021.

METHOD AND MATERIALS

In this study, 60 women with previous Caesarean section were studied. This is a prospective observational study, carried out in tertiary health care setup.

Inclusion Criteria:

1. Patient having gestational age between 37 to 42 weeks with history of prior one LSCS
2. A single live intrauterine fetus
3. Cephalic Presentation
4. Patients having no other medical and obstetric complication

Exclusion Criteria:

1. Preterm pregnancy (less than 37 weeks)
2. Post term pregnancy (more than 42 weeks)
3. More than one caesarean section
4. Intrauterine death of Fetus
5. Previous classical C-section or any other uterine scar
6. Any medical comorbidities to the patient
7. Any other surgical complication to the patient
8. Uterine anomalies
9. Malpresentations
10. Malposition
11. Abnormally located placenta

RESULTS

Table 1 Distribution of cases based on age

AGE	Total no.	%
19-25	20	33.3
26-30	30	50
>/=31	10	16

In present study maximum number of cases were in group between 26-30 year which is main child bearing group, and maximum percentage of VBAC also occurred in same age group because increase in parity in this group

Table 2 Distribution of cases based on parity

Parity	No.	%
2 nd	34	51.5
3 rd	23	57.5
4 th	3	7.5

In the present study the chances of successful VBAC increases as parity increases, which may be due to favorable physiological changes which occur as parity increases

Table 3 Distribution of cases based on booked and unbooked patients

	No	%
Booked	48	80
Unbooked	12	20

Out of 60 cases, booked cases were 80% which shows that successful VBAC was more in booked cases which shows significant importance of Routine ANC.

Table 4 Distribution of cases based on interval between last pregnancy (LSCS) and this pregnancy

Interval(in years)	No. of cases	%
</=2	09	15
>2 to 4	37	61
>4 to 6	10	16
>6	04	8

In the present study maximum number of cases of VBAC was with interval with between 2-4 year which is usual interval between two

deliveries

Table 5 : Distribution of cases based on indication of previous C-section

Indication	No.	%
Malpresentation	16	26.6
Fetal distress	13	21.6
NPOL(Non progression of labour)	11	18.3
PROM	05	8.3
APH	04	6.6
PIH	04	6.6
Post date	03	5.0
Oligohydroamnios	02	3.3
Others	02	3.3

In present study rate of VBAC was higher as indication of previous CS were non recurrent cause like Malpresentation, fetal distress, PROM or NPOL

Table 6: Distribution of cases on mode of previous delivery in Para 2 or more cases

Mode of Delivery	No.	%
Only by C-section	12	20
First normal vaginal delivery then C-section	22	36
First C-section then VBAC	26	44

Table 6 shows that 20.0% of subjects had a previous history of caesarean section. 36.0% of subjects had first normal vaginal delivery, then caesarean section. 44.0% of subjects had first caesarean section than vaginal delivery

Table 7 : Distribution of cases based on delivery method during VBAC

Method	No	%
vaginal delivery	53	88
Ventouse assisted delivery	3	5
Forceps assisted delivery	1	2
Emergency laparotomy	3	5

In this study, 88% successful VBAC trial occurred. 3 cases required emergency laparotomy for uterine rupture and peripartum hysterectomy.

Table 8 Distribution of cases based on occurrence of maternal complication

Maternal complication	No.	%
No complication	54	90
Retained placenta	00	0
PPH	02	3.3
Third degree perineal tear	01	1.6
Uterine rupture	02	3.3
Peripartum hysterectomy	01	1.6

As per this study out of 60 patients, in 90% of VBAC no complication found (morbidity or mortality). In 2 cases uterine rupture occurred and in one case required peripartum hysterectomy.

Table 9: distribution of cases based on baby birth weight

Birth weight	No.	%
1.8 -2.4 kg	10	16
>2.4- 3.4 kg	48	80
>3.4 kg	02	4

During VBAC, 80% of babies delivered having birth weight between 2.4kg and 3.4 kg which is average baby weight.

Table 10 : Distribution of cases based on neonatal outcome

Out come	No.	%
Healty neonate	54	90
NICU admission	5	8.3
Perinatal mortality	1	1.6

As per this study, 5 patients admitted in NICU after VBAC were taken for observation due to Meconium stained liquor, grunting and poor

APGAR score. All neonates were discharged from the NICU. One perinatal mortality found due to uterine rupture.

DISCUSSION

After a first low transverse caesarean operation, a woman's option to attempt a VBAC or to elect a repeat caesarean section has various and complicated ramifications. Recent years have seen academics and physicians focus on the immediate safety issues of VBAC, including the danger of uterine rupture and its related risks of mother morbidity and possibly newborn morbidity. This observational cross-sectional study was conducted to find out fetomaternal outcome after VBAC in the department of Obstetrics and Gynecology, B.J. Medical College Hospital, Ahmedabad.

A total number of 60 obstetric cases were included in this study; the study period was six months. These cases had a history of one caesarean section for nonrecurrent causes. In this study age ranged from 18 to 34 years. The majority of subjects were found in the age group of 21-30 years.

Before VBAC, 36% of subjects had previous normal vaginal delivery followed by caesarean section and 44% subjects had only one delivery, which was caesarean section. This reflected that VBAC could be tried in the case of those who had the previous history only of the caesarean section followed by vaginal delivery. In the Kashif [12] study, 79 (79.0%) women who had VBAC had a history of prior vaginal delivery.

Fetal distress accounted for 21% of the cases, with 26%, 8.3% of those who required caesarean section owing to primi breech, and PROM. Breech presentation and fetal distress are related to a greater rate of successful VBAC in women who had previously undergone a caesarean section. A university in Toronto, Canada, has shown the same outcomes with this strategy [13].

Episiotomy was given in 45 (88%) cases, 03 cases (5%) underwent VBAC successfully with the aid of ventouse. 88% of cases had spontaneous onset of labour. In our study, 20% of women who had previously had a caesarean were normally delivered via vaginal birth. According to most research, following an LSCS, around 60% to 80% of women may give birth vaginally [14]. In our study, individuals who had previously undergone a caesarean section then VBAC were more likely to successfully deliver a baby vaginally.

According to the majority of published data, uterine rupture with LSCS is less than 3%. Patients who had a vaginal birth attempt fail had double the number of complications as those who had a successful vaginal delivery. Women who had previously undergone a C-section who attempted vaginal delivery but were unsuccessful had the highest rate of comorbidity [15].

Fetal weight is an important factor predicting the success of VBAC. In my study, 96% of the fetal weight was < 3.5 Kg, and in only 4% of cases, fetal weight was above 3.6 Kg. These results are comparable to a study carried out in West Africa, which showed that fetuses weighing > 3.5 Kg are less likely to have a successful vaginal delivery.

Regarding APGAR score, most 90% of the neonates had a score >7 at 1 min and 10 at 5 min. Only 1 neonate died after VBAC, but they died a few hours after referral in the neonatal ward. On admission, the mother of these one neonates was in prolonged 2 stages of labor with severe fetal bradycardia. The newborns were delivered with the aid of ventouse. For the late reporting of these two mothers, proper monitoring could not be possible. If she would come earlier, adequate monitoring of fetal well-being could be possible, she could undergo caesarean section earlier, and the baby could be saved. Previous studies reported that the incidence of fetal death was 0.02 -0.00 per 1000 VBAC [16]. This was due to uterine rupture and fetal hypoxia during labor.

The average length of hospital stay was about 48 hours after delivery for most 88% of the mothers. Only 5% stayed for >5 days (those who underwent caesarean section and peripartum hysterectomy).

CONCLUSION

From the study, it could be concluded that if a mother fulfilled the criteria, VBAC could be attempted as it has a few maternal and fetal complications. If risk factors are identified, and proper antenatal care is

given, VBAC could be successfully undertaken without grave maternal and fetal outcomes.

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