



Research Article

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Success of VBAC in a Tertiary Hospital

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Abstract

Objectives: To assess success of vaginal birth after caesarean section and maternal-fetal outcome in such cases.

Methods: Prospective Observational study in a University teaching hospital at Varanasi. The study period was June 2015-December 2015, a total of 68 patients were included. Those women who had Caesarean sections in past and were found suitable for VBAC were included in the study admitted to the labour ward.

Results: 42(61.76%) of women had VBAC (Vaginal Birth After Caesarean section) and 26 (38.23%) had ERCS (Emergency Repeat Caesarean Section). Maximum number of women who had VBAC has LSCS (Lower Segment Caesarean Section) in the past for fetal distress (73.33%). ERCS (failed VBAC) was done maximally for fetal distress (53.84%), then for failure to progress (38.46%) and 7.6% for scar tenderness. Maternal complications were lower in the VBAC group: fever (9.5%), blood transfusion (7.1%); while ERCS group had wound infection (30.76%), blood transfusion (34.61%).

Conclusion: The study shows encouraging result for VBAC in a good set up to be followed to reduce Caesarean rate.

Keywords: Vaginal birth after caesarean section; lower segment caesarean section; Uterine rupture; Maternal morbidities

Introduction

Planned VBAC is appropriate for and may be offered to the majority of women with a singleton pregnancy of cephalic presentation at 37+0 weeks or beyond who have had a single previous lower segment caesarean delivery, with or without a history of previous vaginal birth [1].

VBAC (Vaginal Birth After Caesarean section) is a recommended after one Caesarean section, but preferably not after second Caesarean section as it increases maternal morbidity and mortality. VBAC conducted in an equipped set up reduces both maternal morbidity and mortality compared to LSCS (Lower Segment Caesarean Rate). Globally the rate of Caesarean section is rising and VBAC is a good approach to reduce the LSCS rate [2,3].

The rates of LSCS are rising all over the world and also in India. But being a low resource country patients are not able to afford without stretching their limits. Whilst vaginal delivery has less chances of infection, no need for General Anaesthesia or Spinal Anaesthesia, early ambulation and early discharge, better bonding and breastfeeding [4].

Success of VBAC is 72-75%. Women should be informed that planned VBAC is associated with an approximately 1 in 200

(0.5%) risk of uterine rupture. Women should be informed of the two- to three-fold increased risk of uterine rupture and around 1.5-fold increased risk of caesarean delivery in induced and/or augmented labour compared with spontaneous VBAC labour [1,5,6].

UK NHS hospitals have caesarean rate of approximately 25%, while in most American the rate is approximately 50%. This is usually due to women' expectations, cultural beliefs, birth plan, fear for baby with cerebral palsy etc [7].

There is a growing concern over the rising Caesarean rate across the international borders. Increased caesarean leads to gynaecological as well as obstetrical problems. Gynaecological: infertility, recurrent abortions, difficult hysterectomy due to bladder adhesions; Obstetrical: placenta praevia, placenta percreta, placenta praevia, peripartum hysterectomy, peripartum cystectomy and maternal death due to torrential blood loss [8].

Caesarean section leads to more maternal morbidity and mortality than normal delivery, although caesarean section may be safer than normal vaginal delivery for the baby. Sometimes the families are poor and can't afford caesarean. In primary health centers there may not be facilities available for fetal monitoring or anesthesia and there is lack of trained personnel.

We wanted to study maternal and fetal outcome in cases of vaginal birth after caesarean section in a tertiary health center of north India.

Methods

This prospective observational study was done at Sir Sunder Lal Hospital, Banaras Hindu University, Varanasi, India. This University teaching hospital is a tertiary referral centre for most of the Eastern Uttar Pradesh, Bihar, Jharkhand, parts of Odisha and MP states of India. The hospital is a referral center for high-risk pregnancy and critically ill obstetric cases. The per annum delivery rate is approximately 1,500 with a high caesarean rate of 52%.

The study period was June 2015-December 2015, a total of 68 patients were included. Those women who had Caesarean sections in past and were found suitable for VBAC were included in the study admitted to the labour ward.

Inclusion criteria

- a. Non-recurrent indication for previous LSCS
- b. Lower Segment Caesarean Section
- c. Adequate pelvis
- d. Cephalic presentation
- e. No Medical complications
- f. No Obstetrical complications

Exclusion criteria

- a. H/O Classical Caesarean
- b. H/O inverted T uterine incision
- c. H/O uterine rupture
- d. Contracted pelvis
- e. Twin gestation
- f. Macrosomia
- g. Shortened inter-delivery interval
- h. Medical complications
- i. Obstetrical complications

All participants were counseled adequately regarding the success,maternal and neonatal complication rate.RCOG guideline was followed “Women considering their options for birth after a single previous caesarean should be informed that, overall, the chances of successful planned VBAC are 72–76%. All women who have experienced a prior caesarean birth should be counseled about the maternal and perinatal risks and benefits of planned VBAC and ERCS when deciding the mode of birth”.

Participants’ consent was obtained. Data collection was done on a proforma. Data obtained included age, parity, history of previous normal delivery or caesarean section (indication, was it

classical, infection after caesarean). Mode of delivery in current pregnancy, was the labour spontaneous, induced or augmented, episiotomy infection, Indication of Lower Segment Caesarean Section (LSCS), wound infection. Peroperative or preoperative diagnosis of uterine dehiscence or uterine rupture? Baby details eg weight and appgar score at birth was a also noted. Maternal satisfaction score, quality of life score and cost score was also noted.

Labour was monitored as per protocol. All participants were followed through delivery and for the postpartum period. Main outcome measure was outcome in the index pregnancy while secondary outcome measures were maternal and neonatal outcome.

Results

Total 68 patients were recruited and thoroughly counseled. They were included if they satisfied the inclusion criteria for VBAC trial. All patients had spontaneous onset of labour. The age range of the parturient was 19-27 years.

History of SVD (Spontaneous Vaginal Delivery) was present in only 12 pregnant mother, they had a normal delivery before LSCS (Lower Segment Caesarean Section). These women had successful VBAC in our study.

Table 1: Success of VBAC.

MOD*	Number (total 68)	Percentage (%)
VBAC**	42	61.76%
ERCS***	26	38.23%

*Mode of delivery

**Vaginal Birth after Caesarean section

***Emergency Repeat Caesarean Section

Table 2: Percentage of deliveries as per previous indication of LSCS 30 parturient had one previous LSCS.

Incidence	Number (total 30)	Percentage-100%
Fetal distress	22	73.33%
Mal presentation	5	16.66%
Placenta praevia	3	10%

42 (61.76%) of women had VBAC (Vaginal Birth after Caesarean section) and 26 (38.23%) had ERCS (Emergency Repeat Caesarean Section) (Table 1). Maximum number of women who had VBAC has LSCS (Lower Segment Caesarean Section) in the past for fetal distress (73.33%) (Table 2). ERCS (failed VBAC) was done maximally for fetal distress (53.84%), then for failure to progress (38.46%) and 7.6% for scar tenderness, (Table 3).

Table 3: Indications of ERCS (failed VBAC).

Incidence	Number (Total 30)	Percentage-100%
Fetal distress	14	53.84%
Failure to progress	10	38.46%
Scar tenderness	2	7.60%

Maternal complications were lower in the VBAC group: fever (9.5%), blood transfusion (7.1%); while ERCS group had wound infection (30.76%) and blood transfusion (34.61%), (Table 4).

Table 4: Maternal complications.

Complications	VBAC (n=42)	ERCS (n=26)
Gaped episiotomy	3 (7.1%)	0
Wound infection	0	8 (30.76%)
Hospital stay	2-3 days	8-10 days
Fever	4 (9.5%)	11(42.30%)
UTI	3 (7.1%)	14(53.84%)
Breast feeding problems	0	5 (19.23 %)
Blood transfusion	3 (7.1%)	9(34.61%)

There were 76.19% of babies in VBAC group who weighed 2.5-3.5 kg, while > 3.5 kg babies were 53.84% in the ERCS group, (Table 5). Babies born by ERCS who had Apgar <3 were 5/26 (19.23%) suggest that LSCS in certain cases of failure to progress may not give maternal or fetal outcome like Elective Caesarean section.

Table 5: Weight of the baby.

Weight	VBAC (n=42)	ERCS (n=26)
<2.5	6(14.28%)	2 (7.6%)
2.5-3.5	32(76.19 %)	10 (38.46 %)
> 3.5	4 (9.52%)	14 (53.84%)

There was no case of classical caesarean section in the past or history of sepsis in the previous pregnancy. Induction or augmentation of labour was not done in any case. There was no incidence of scar dehiscence or uterine rupture in our study.

The maternal satisfaction score was 6-8/10; quality of life score was 5-7/10. But, the cost score was 3-5/10 in our study. This suggests that most pregnant women are satisfied with our services but the cost of the treatment is a bit too much for them to bear (Table 6).

Table 6: Apgar score.

Apgar	VBAC (n=42)	ERCS (n=26)
<3	2(4.76 %)	5 (19.23%)
6-Apr	3(7.14%)	7 (26.92%)
>7	37(88.09%)	14 (53.84%)

Discussion and Conclusion

The success of VBAC is 61.76%, which is similar to other studies [9,10]. Maximum number of women who had VBAC has LSCS (Lower Segment Caesarean Section) in the past for fetal distress (73.33%), shows that VBAC is more successful in this kind of non-recurrent indication. Maternal complications were lower in the VBAC group, which also favors the notion of promoting VBAC in the antenatal plan if deemed suitable.

The above study shows that VBAC is lesser maternal morbidity than ERCS and hospital stay is also less. So, if VBAC is done a center which is well equipped with fetal monitoring, maternal monitoring and has the facility for emergency operation then it should be mode of delivery of choice.

With increasing Caesarean rate maternal long-term complications also increase. Therefore we should endeavor towards encouraging women to have VBAC while ensuring fetal and maternal safety.

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