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Research Article

Study of obstetric and fetal outcome of post caesarean pregnancy

Akanksha Nigam*, Rakesh Anand, Niyati Jain

Department of Obstetrics & Gynecology, SBKS Medical Institute and Research Centre, Pipariya, Waghodia, Vadodara-391760, Gujarat, India

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***Correspondence:**
Dr. Akanksha Nigam,
E-mail: medicoaku@gmail.com

ABSTRACT

Background: With the sky rocketing caesarean section rates an increasing number of women face the issue of mode of delivery in their current pregnancy. There are conflicting reports regarding the safety of a trial for Vaginal Birth After Caesarean delivery (VBAC) in terms of uterine rupture and concern about, maternal and perinatal morbidity. The purpose of this study was to evaluate the obstetric and fetal outcomes of patients presenting at term with a history of previous LSCS.
Methods: A one year prospective observational study was conducted where in all patients who had a term pregnancy with a history of prior LSCS were included in the study after obtaining their consent for participation. The obstetric and fetal outcomes of these patients in the present pregnancy were noted and tabulated. A descriptive analysis of these outcomes was carried out.
Results: 100 patients at term, with a history of previous LSCS were studied. Of these, trial for a VBAC was attempted by 50 patients of these 46% (23) had a successful VBAC. And remaining 54% went for emergency LSCS. 50% patients underwent an elective repeat caesarean deliver. Scar dehiscence was seen in 2.72% of the patients who opted for a trial for VBAC. Perinatal morbidity was higher in cases of repeat caesarean delivery than in those who had a successful VBAC (12.12% vs. 0 percent). Maternal complications were also higher in patients who had a repeat LSCS compared to those who had a successful VBAC.
Conclusions: With an increase in the proportion of patients with a history of previous LSCS, it is essential for health care institutions to have proper antenatal counseling regarding VBAC and a well-defined management protocol in place in an effort to increase the number of VBACs and bring down the overall caesarean rates. Patients with a history of prior vaginal delivery have an increased likelihood for a successful VBAC. A successful VBAC is associated with a lower perinatal and maternal morbidity than repeat caesarean delivery, and this is relevant for counseling women about their choices after a caesarean delivery.

Keywords: Previous LSCS, Post caesarean pregnancy, VBAC, Maternal outcomes, Fetal outcomes

INTRODUCTION

Incidence of primary caesarean section has increased multifold over the last 20 years. As a result, an increasing number of women face the issue of mode of delivery in their subsequent pregnancies.[1-3] Cragin's dictum of "once a caesarean always a caesarean" contributed to a 30-50% rise in caesarean rates in the United States, till the1980s.[4,5] A series of studies in the 1980s reported the relative safety of attempting Vaginal Birth After Caesarean delivery (VBAC).

Maternal mortality and serious morbidity are fortunately very rare, and for this reason estimates of their frequency are imprecise. A large meta-analysis showed maternal mortality of 2.8 per 10000 for women undergoing planned VBAC, and 2.4 per 10000 for women having an elective caesarean. Uterine dehiscence or ruptures occur in less than 2% of planned VBAC, the same proportion as

is seen among women who have routine repeat caesareans. Most of these are asymptomatic and of no clinical importance. Perinatal mortality and morbidity rates were similar with planned vaginal birth after caesarean and elective repeat caesarean section in these studies.[6]

The most important event because of which obstetricians still hesitate to attempt planned VBAC is the uterine scar integrity and hence the terminology "Trial of scar". Because repeat caesarean deliveries are performed largely to benefit the neonate, clinicians may often overlook maternal complications resulting in significant morbidity and mortality as a result of the repeat surgeries.[9] The choice of VBAC over planned repeat caesarean section, like virtually every other medical choice, involves the balancing of risks & benefits. One point is clear though, "once a caesarean, always a hospital delivery".[7]

The purpose of this study was to evaluate the obstetric and fetal outcome of labour in cases of previous caesarean section in our teaching hospital.

METHODS

It is the prospective observational study conducted in Dhiraj general hospital from July 2013 to August 2014 in which we included 100 term cases of previous caesarean section.

Inclusion criteria

1. All term (37 to 40 weeks) patients with a history of prior one LSCS were taken. Patients with no other medical and obstetric complication. Who came in the OPD and in emergency labour room?

Inclusion criteria for VBAC

- Informed and written consent was taken before VBAC trail.
- Inter pregnancy interval is more than 18 months.
- No CPD detected.
- Induction was not done in any case. Patients were allowed to go for spontaneous delivery.

2. Rest all other patients were taken for caesarean either elective or emergency.

Exclusion criteria

1. More than one caesarean section.
2. Previous vertical caesarean section or any other uterine surgery scar.
3. Any associated medical or surgical complication.
4. Uterine anomalies.
5. Abnormal placental localization.
6. Malpresentation and position.

During labour, the previous history was checked and complete examination.

RESULTS

In the present study 23% of patients delivered vaginally, either spontaneously or assisted. 77% patients required a repeat caesarean section, most of which were elective repeat caesarean sections**.**

Table 1: Outcome of present pregnancy.

Outcome of present pregnancy (n=100)	No. of cases	Percentage
Vaginal deliveries	23	23%
Repeat caesarean section	77	77%

In the present study, VBAC was tried in 50 cases, of which 46% (23) of patients had a successful VBAC. 54% (27) of patients who were given a trial for VBAC were posted for an emergency LSCS for various indications and hence had an unsuccessful VBAC.

The commonest indication for an emergency LSCS was fetal distress at followed by non-progress of labour in of the cases, and both these indications accounted for about 80% of the emergency caesareans.

Table 2: Emergency vs. elective LSCS.

Nature of LSCS	No. of cases	Percentage
Emergency	27	35.05%
Elective	50	64.9%
Total	77	100%

35.05% cases had an emergency LSCS and 64.9% cases were taken up for an elective LSCS, out of the repeat caesarean sections.

The commonest indication for an elective LSCS was unwillingness of the patient for a trial of VBAC inspite of being eligible and given an option for VBAC.

The commonest indication for an emergency LSCS was fetal distress at followed by non-progress of labour in of the cases, and both these indications accounted for about 80% of the emergency caesareans.

Table 3: Indication of emergency repeat CS.

Indication	No. of cases	Percentage
Fetal distress	17	62.9%
NPOL	5	18.5%
Failed induction	1	3.7%
Scar dehiscence	2	7.4%

The commonest indication for an emergency LSCS was fetal distress at 62.9% followed by non-progress of labour in 18.5% of the cases, and both these indications accounted for about 80% of the emergency caesareans.

Scar dehiscence was seen intra operatively during repeat CS in 7.4%.

Table 4: Perinatal morbidity and mortality.

	After VBAC (n=23)	%	After repeat CS (n=77)	%
Perinatal mortality	0	0	0	0
NICU admission	0	0	5	6.4%

In the present study, 6.4% of babies who were delivered by a repeat caesarean section required an NICU admission. Of these 80% of the babies were admitted for respiratory distress syndrome and remaining for birth asphyxia. They were discharged from the NICU subsequently healthy. There were no NICU admissions for babies born to the patients who had a successful VBAC.

There was no perinatal mortality seen in the present study.

Table 5: Complications after repeat caesarean section.

Complications	No. of cases	%
Puerperal pyrexia	2	5.4%
Need for blood transfusion	1	2.7%
Gaping of wound	2	5.4%

Out of 77 patients in whom repeat LSCS was performed, 5.4% (i.e. 2 cases) had patients had puerperal pyrexia, which was due to UTI and wound infection. 5.4% of the patients had gaping of the LSCS wound post operatively. Blood transfusion was required in 2.7% of the cases.

DISCUSSION

There is a widespread public and professional concern about the increasing proportion of births by caesarean section world-wide.[8] Increasing rates of primary caesarean section have led to an increased proportion of the obstetric population who have a history of prior caesarean delivery. Pregnant women with a prior section may be offered either a trial for VBAC or an Elective Repeat Caesarean Section (ERCS).

The proportion of women who decline VBAC, is in turn, a significant determinant of overall rates of caesarean birth.

New evidence is emerging to indicate that VBAC may not be as safe as originally thought.[9,10] But reports are conflicting and these factors along with medicolegal concerns have led to a decline in clinicians offering and women accepting trial for VBAC in various parts of the world.[5,11]

The sample size for the present study was 100 patients, the overall rate of vaginal delivery following previous caesarean delivery, as reported in literature, varies from 20% to 51%.

Landon et al. reported an incidence of 28.57% vaginal deliveries.[9] Our study is comparable to this, with 23.00% of the patients delivering vaginally.

The most common indication for an CS in the present study was the unwillingness of the patient for a VBAC inspite of being eligible for a trial for VBAC This is comparable to the study by Gonen and colleagues.

In the present study, the most common indications for a repeat emergency LSCS were fetal distress and non-progress of labour, together constituting about 80% of the total number of repeat emergency LSCS. This is comparable to other studies by Gonen and Colleagues.[9,12]

In the present study, perinatal morbidity was seen in 6.4% of the patients who delivered by a repeat caesarean delivery. The most common cause for morbidity, was Respiratory Distress Syndrome (RDS), followed by birth asphyxia. All of the 3 neonates were subsequently discharged healthy from the NICU.

There were no NICU admissions for babies born to the patients who had a successful VBAC in the present study.

These results are comparable to those in the study by Gonen & colleagues, where in perinatal morbidity was bit lower (4.3%) in the group of patients who had a repeat CS versus those who had a successful VBAC (2.4%) and this was of borderline significance.[12]

There was no neonatal mortality in the present study. In the present study, maternal morbidity was noted in 13.5% of the patients who had a repeat CS. Maternal morbidity in cases of repeat caesarean delivery was in terms of puerperal pyrexia (5.4%), need for blood transfusion (2.7%) and wound gaping (5.4%). Puerperal pyrexia was due to urinary tract infection (UTI) and LSCS wound infection in of the patients who underwent a repeat CS.

Mercer et al. in a 4 year observational multicentric study, concluded that an increasing number of prior successful VBACs is associated with a greater probability of VBAC

success as well as a lower risk of uterine rupture and perinatal complications in the current pregnancy. It has generally been accepted that vaginal delivery is associated with lower maternal morbidity and mortality rates than repeat CS. Our results are comparable to an earlier meta-analysis comparing ERCS vs. trial for VBAC.[14]

Current recommendations of the RCOG and ACOG include offering the option of a planned VBAC to women with a prior history of one uncomplicated

LSCS in an otherwise uncomplicated pregnancy at term, with no contraindication to vaginal birth.[15,16] Stress has been laid on proper antenatal counselling regarding the benefits and risks associated with a planned VBAC. A final decision for mode of birth must be agreed upon before the expected date of delivery (ideally at 36 weeks of gestation).[16] VBAC should always be attempted in institutions well equipped to respond to emergencies, with an OT facility and adequate trained personnel to provide emergency care.[15]

CONCLUSION

At the end of the present study the following observations were made. There is a rise in the number of patients presenting with a history of previous LSCS over the years.

A large number of patients declined a trial for VBAC in spite of being eligible for it. Hence, it is essential to counsel patients with a history of prior LSCS, ideally during the antenatal period, regarding the benefits and the risks (both maternal and perinatal) of a VBAC, enabling them to make an informed choice early and probably bring down the repeat caesarean rate.

In the absence of severe morbidity associated with scar dehiscence following a trial for VBAC and with a low maternal and perinatal morbidity, vaginal deliveries are a much safer outcome than repeat caesarean deliveries.

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