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## The clinical study of vaginal birth after cesarean at tertiary hospital and it's perinatal outcome

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### Abstract

Nowadays because of liberalisation of cesarean section main focus is towards trial of labour after cesarean delivery. Earlier dictum once a cesarean always a cesarean has changed nowadays, but trial for cesarean depends on certain factors like type of previous Incision, indication for previous LSCS, patients consent and resources available. Our study is meant to study vaginal birth after cesarean delivery at a tertiary hospital.

**Methodology:** It was a prospective study done at a tertiary hospital over a Period of one year. 300 patients were included in this study. Inclusion criteria for repeat LSCS; patients with previous classical or inverted T shaped incision, contracted LSCS, previous history of rupture of uterus, Patient not giving consent for VBAC, medical or obstetric factors complicating Pregnancy. N Inclusion criteria for VBAC; Patients with singleton pregnancy with vertex presentation previous lower segment transverse incision Patient consent for VBAC.

**Results:** Out of 300 patients, 50 patients underwent repeat LSCS. Remaining 250 we're selected for VBAC. Prevalence of VBAC in our study was 40% maternal morbidity postpartal hemorrhage, uterine rupture, sepsis, Scar dehiscence was more in those who underwent LSCS after failed trial. NICU admission was more in failed trial group than in VBAC group.

**Conclusion:** Trial of labour after cesarean needs to be liberalised to decrease the burden of cesarean deliveries.

**Keywords:** Vaginal birth, tertiary hospital, trial of labour

### Introduction

Nowadays liberalisation of cesarean sections have increased number of pregnancies having a previous Scar. As the earlier dictum framed by Dr Edward Craigin in 1915" Once a Cesarean always a cesarean "Elective cesarean was done for previous scar in United States [1]. But with the use of modern anesthesia, blood transfusion facilities, antibiotic use this dictum has changed and patients are subjected for Trail of Labour. In women undergoing trail of labour (TOLAC) risk of rupture depends of the type and site of uterine incision. It is 4-9% in classical and T shaped incision, 1-7% with low vertical and 0.2-1.5% in low transverse [2]. Success of VBAC is approximately 60-80%. Maternal and neonatal morbidity is more in patients with unsuccessful Vaginal birth after cesarean. It is therefore important to select patients well for vaginal birth after cesarean (VBAC). Factors associated with unsuccessful VBAC are; induced labour, no prior vaginal birth, advanced age of mother, advanced gestational age>40weeks, increased body mass index (BMI), increased birth weight, Previous LSCS done for reoccurring indication.

Risk of rupture was increased when prostagladins were used for induction of labour and especially so when prostagladins were followed by oxytocin infusion [3]. Sequential use of prostagladins and oxytocin should be avoided and misoprostol should not be used in women with previous cesarean or other uterine surgery [4]. VBAC should be done in those centres only where 24 hour Cesarean facilities are available, blood transfusion facilities are available and continuous electronic fetal monitoring (EFM) in Labour is possible because a non-reassuring fetal heart rate is most consistent finding of uterine rupture. Unexplained fetal bradycardia was the most Common finding of uterine rupture [5]. Regarding anesthesia Epidural analgesia and anesthesia is not contraindicated in women undergoing VBAC.

### Methodology

This study was carried over a period of one year from January 2016- December 2017 at a tertiary hospital of SK ims soura. A total of 300 patients were included in this study.

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### Inclusion criteria for trial of labour

1. Patients with Singleton pregnancy with vertex presentation with 37 weeks with previous Scar.
2. Patient giving consent for VBAC.
3. Previous one lower tranverse incision only and no contraindication for vaginal delivery.

### Inclusion criteria for repeat elective section

1. Previous classical or inverted T shaped incision
2. Contracted pelvis
3. Patient not giving consent for VBAC
4. Previous history of uterine rupture.
5. Medical or surgical complications associated with pregnancy.

Among 300 patients, 50 patients were those that had reoccurring Indication for LSCS and were taken for repeat LSCS. Remaining 250 patients were subjected for trial of labour (TOLAC). Spontaneous onset of labour was prefered, however in those where spontaneous onset of labour failed to occur, artificial rupture of membranes (ARM) was done and oxytocin was started, Results were as;

**Table 1:** Distribution of patients according to mode of delivery whether taken for repeat lscs or selected for TOL

Total no. of patients	Those with repeat LSCS	Those selected for TOLAC
300	50	250

Thus 50 patients were those who had reoccurring indication for repeat lscs. 250 patients were selected for trial of labour (TOLAC).

**Table 2:** Distribution of patients with regards to successful trial or failed trial.

Trail of labour after cesarean	Vaginal birth after cesarean	Repeat LSCS after TOLAC
.250 patients	150 patients	100 patients

Percentage of patients with VBAC = 60%

Percentage of patients with lscs after TOLAC= 40%

**Table 3:** Maternal morbidity in two groups

Morbidity	VBAC		Lscs @ TOLAC	
	No. of pt's	Percentage	No. of pt's	percentage
PPH	5	3.3%	10	10%
Uterine rupture	0	—	1	1%
Sepsis	0	—	3	3%
Scar dehiscence	5	3.3%	7	7%
Total		6.6%	.	21%

**Table 4:** Nicu admission in babies with low apgar score

Type of delivery	No. of babies	Percentage
1. Vaginal birth after	4	2.67%
2. LSCS@TOLAC Cesarean	12	12%

**Table 5:** Age wise distribution of patients for vbac and LSCS@TOLAC

Age	VBAC		LSCS@TOLAC	
	No. of patients	%age	No. of patients	%age
<20 years	30	20%	10	10%
20-30years	100	66.67%	10	10%
30-40 years	20		80	80%
13.33%				

Thus VBAC was seen in age group of 20-30 years.

### Discussion

OF 300 patients in study 50 patients had indication for recurrent lscs. Out of 250 patients undergoing trial of labour after cesarean (TOLAC) 150 patients had successful vaginal birth after cesarean section (60%). Most of the studies showed success of 40-65% [7-10].

In relation to maternal morbidity it was seen that complications like postpartal hemorrhage, Sepsis, scar dehiscence and uterine rupture was more in trial of labour group (27.6%) compared to elective cesarean. A comparison with other studies is as.

In our study incidence of scar rupture was 1% only one case in lscs @TOL and none in vaginal birth after cesarean (VBAC). In study by Dickinson *et al.* [12] chances of scar rupture was 0.7% and Iyer *et al.* [10] it was 0.49%. Chances of scar dehiscence in VBAC was 3.3% and Lscs@TOL was 7%. Similarly in studies by Dickinson *et al.* [12] it was 1.10% and in Iyer *et al.* [10] it was 1.50%. This shows maternal morbidity increases in failed induction.

In our study NICU admission was 2.67% in VBAC and 12% in Lscs @TOL which means neonatal morbidity is more in failed Trail. Similarly NICU admission was 2.4% in Dickinson *et al.* Study [12] and 2.9% in Iyer [10] and 0.68% in Goedon *et al.* [15] in VBAC. All these observations show maternal and Neonatal morbidity in patients with previous lscs undergoing trial of labour is slightly more compared to those undergoing elective lscs, this morbidity is further increased in those with further increased in those with failed induction and taken for lscs after failure of induction.

### Conclusion

Because of liberalisation of lscs in present day obstetrics, our main focus should be to reduce the rate of lscs for previous lscs, which could be possible by encouraging vaginal birth after cesarean delivery (VBAC) in those cases with no associated complicated factors. Although our study shows that maternal and perinatal morbidity is more in cases with failed trial of labour, still we should encourage VBAC liberally in cases with previous lscs.

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