

# Pregnancy Outcome in Women With Previous one Cesarean Section



## Medical Science

**KEYWORDS :** LOWER SEGMENT CESAREAN SECTION (LSCS), TRIAL OF LABOUR AFTER CESAREAN SECTION(TOLAC),VAGINAL DELIVERY AFTER CESAREAN SECTION(VBAC)

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### ABSTRACT

*Background : Women with previous cesarean sections constitute a high risk group in obstetrics ,with associated complications. The cesarean section carries 3 fold risk of mortality compared with vaginal deliveries. The study was conducted to determine the mode of deliveries after previous one cesarean section , maternal and fetal complication*

*Objective : To study the outcome of pregnancy in women with previous one cesarean section in relation to mode of delivery and maternal and perinatal complication*

*Material & Methods : A retrospective hospital based study was carried out in the Department of Obstetrics & gynecology of Yenepoya Medical College; a tertiary health care referral centre in Mangalore, Karnataka over a period of 21/2 years from January 2012 to May 2014. Statistical analysis was not used since it is a descriptive study.*

*Results : Out of the 480 pregnant women with history of previous 1 lscs who were subjected to this study,389 (80%) underwent elective LSCS commonest indication being short inter pregnancy interval(58%). 91(20%) underwent trial of labour after cesarean section, and 57(62.63%) had successful VBAC and 34(37.36%) underwent repeat emergency LSCS .Maternal complication were higher in LSCS group than in those had a successful VBAC(18%vs12%).Neonatal complications were also higher in LSCS group than in those had a successful VBAC(3.54%vs0).*

*Conclusion :With proper case selection, appropriate timing and close supervision trial of labour after prior LSCS is safe and often successful. Adequate inter pregnancy interval could be encouraged with good contraceptive measures*

### INTRODUCTION

Incidence of primary cesarean 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 pregnancy.[1,2,3]The cesarean section epidemic is a reason for immediate concern and deserve serious international attention. [4] Before 1970's the phrase "once a cesarean,always a cesarean" dictated obstetric practice.The introduction of Lower segment cesarean section(LSCS) gave a good and strong scar to the uterus ,to hold and safely deliver a subsequent pregnancy.It is now safe to say "once a cesarean section,always a hospital delivery. [4]In an appropriate clinical setting and properly selected group of women ,vaginal delivery after cesarean section(VBAC) is safe and effective

A trial of VBAC is considered safer than a routine cesarean section[4].VBAC offers distinct advantage over a repeat cesarean section since the operative risks are completely eliminated, the hospital stay is much shorter and expenses involved is much less. Both attempting vaginal birth and opting for an elective repeat cesarean section are associated with different risk for the mother and newborn;and,deciding a delivery plan involves a difficulty weighing of those case[5].

The main aim of our study were to determine the outcome of pregnancy in women with prior cesarean section in relation to mode of delivery,maternal and perinatal complications.

### MATERIALS AND METHODS

A retrospective hospital based study was carried out in the Department of Obstetrics & gynecology of Yenepoya Medical College; a tertiary health care referral centre in Mangalore, Karnataka over a period of 21/2 years from JANUARY 2012 to MAY 2014. Inclusion criteria for the study group was obstetric cases with history of previous one cesarean section.Exclusion criteria was obstetric cases with history of more than one cesarean section.

Women with inter delivery interval of less than 18 months, or pregnancy with an associated medical or obstetric complication underwent elective repeat cesarean section(ERCS). Those women with previous one LSCS for non recurrent indication and

those who fulfilled criterion according to the ACOG guidelines were given a trial of labour.

All selected outcome variables were recorded and datas were analysed. Maternal outcomes were measured in terms of type of delivery(VBAC,ERCS,failed VBAC),occurrence of scar dehiscence,PPH with need for blood transfusion,uterine rupture,adherent placenta and hysterectomy

Perinatal outcome measured includes incidence of RDS,NICU admission and perinatal mortality. Statistical analysis was not used since it is a descriptive study

### RESULTS

480 cases with history of previous 1 LSCS were taken into consideration in this study

MODE OF DELIVERY	NUMBER OF PATIENTS	PERCENT
Elective LSCS	389	80%
TOLAC	91	20%

MODE OF DELIVERY	NUMBER OF PATIENTS	PERCENT
TOLAC	91	20%
SUCCESSFUL TOLAC	57	62.63%
FAILED TOLAC	34	37.36%

### DEMOGRAPHIC PROFILE

AGE	NUMBER OF PATIENTS
21-25	245
26-30	101
31-35	96
>35	38

### BOOKED AND UNBOOKED CASES

BOOKED CASES	463
UNBOOKED CASES	17

**PARITY DISTRIBUTION**

PARITY	NUMBER OF PATIENTS
Para 2	240
Para 3	164
Para 4	76

**PERIOD OF GESTATION**

PERIOD OF GESTATION	NUMBER OF PATIENTS
34-37 WEEKS	32
37-40 WEEKS	414
>40 WEEKS	34

**INDICATION FOR PREVIOUS CESAREAN SECTION**

INDICATON	NUMBER OF PATIENTS
Fetal distress	166
Failed induction	121
Non progress of labour	75
Malpresentation	31
CPD	36
Bad obstetric history	32
Antepartum hemorrhage	19

**INDICATION FOR ELECTIVE CESAREN SECTION**

INDICATION	NUMBER OF PATIENTS (n=389)	PERCENT
Short inter pregnancy interval	228	58%
Placenta praevia	21	5.39%
Overt DM	89	22%
Pre eclampsia	51	13%

**INDICATION FOR EMERGENCY LSCS**

INDICATION	NUMBER OF PATIENTS (n=37)	PERCENT
Fetal distress	14	37%
Scar tenderness	12	32%
Non progress of labour	8	21%

**MODE OF SUCCESSFUL TOLAC**

FTVD with episotomy	32 (56%)
Vaccum delivery	20(35%)
Forceps delivery	5(8%)

**MATERNAL COMPLICATIONS**

COMPLICATIONS	ELECTIVE LSCS	EMERGENCY LSCS	VBAC
Pyrexia	6	24	0
PPH	2	6	5
Wound gaping	4	8	0
Cervical/vaginal tear	0	0	2
Blood transfusion	8	16	0
Adherent placenta	3	0	0
Peripartumhysterectomy	4	0	0

**NEONATAL COMPLICATIONS**

COMPLICATIONS	LSCS	VBAC
Perinatal mortality	0	0
RDS	7	0
Jaundice	8	0

**HISTORY OF PREVIOUS VAGINAL DELIVERY**

Successful TOLAC	36
Cesarean section	12

**DIFFICULTY ENCOUNTERED DURING REPEAT CESAREAN SECTION**

DIFFICULTIES WHILE DOING REPEAT CS	NO OF CASES	PERCENT
Difficulty in opening abdomen due to adhesions	198	43%
Adhesions between omentum, peritoneum and bladder	176	38%

**CONDITION OF SCAR**

CONDITION OF SCAR	NO OF CASES	PERCENT
Normal scar	468	97.5%
Dehiscence of scar	10	2.08%
Silent rupture of uterus	2	0.41%

Out of 480 patients with history of previous 1 LSCS 80%(n=389) underwent elective cesarean section and 20%(n=91) TOLAC was given. Out of 91 patients who underwent TOLAC 62.63%(n=57) had successful VBAC and 37.36%(n=34) needed emergency LSCS. The commonest indication for ERCS was short inter pregnancy interval(58%). Among 57 patients who had successful VBAC 32 (56%) had FTND with episotomy,20(35%) had vaccum delivery. Ventosewere mainly used to cut short the 2nd stage of delivery and 5(8%) had forceps delivery.

Out of 91 patients who underwent TOLAC 34 patients underwent emergency LSCS. Fetal distress 14 (37%) was commonest indication for emergency LSCS.

No significant association was observed between the indication for previous cesarean section and outcome of trial of scar(TOS)

There was a significant association between previous vaginal delivery and outcome of TOS.VBAC rate was 63% among those women with previous vaginal delivery compared to 36% in those who did not have a prior vaginal delivery All women who had successful VBAC in this study had spontaneous onset of labour.

Out of 453 patients who underwent repeat cesarean section 43%(n=198) had difficulty in opening abdomen due to adhesion and 38%(n=176) had adhesion between omentum, peritoneum and bladder.

Scar dehiscence was seen intraoperatively during repeat emergency cesarean section in 10 patients On analyzing maternal complications,out of 453 patients who underwent repeat cesarean section 30 had pyrexia,8 had PPH,12 had wound gaping and 24 patients required blood transfusion and there were 5 cases of adherent placenta who had underwent peripartum hysterectomy.

In VBAC group 5 had PPH and 2 had cervical tear.No other major complications were noted On analyzing perinatal outcome there were 15 NICU admission in patients who underwent repeat LSCS for RDS and jaundice

**DISCUSSION**

Women with previous one LSCS require special management, both antenatally and in labor. The decision for a trial of labor or the elective repeat LSCS is an individual one that should be based on careful selection and thorough counseling[6].

Several studies suggest that for appropriately selected cases with previous one LSCS , a trial for vaginal delivery is safe. Published literature shows that there has been a 60-80% success in VBAC[4,6,7]. Our success rate is (62%) is comparable to this

studies. VBAC success were comparable to the studies of OC Ezechi et al(2005)[8], Tripathi JB et al (2006)[7], Bhat BPR et al(2010)[9]Pramod Kumar et al (2012)[10].

The most common indication for the ERCS in our study was short inter pregnancy interval(58%),overt diabetes mellitus(22%),pre eclampsia(13%) and placenta previa(5.39%)

In our study ,37 cases underwent emergency LSCS,maximum 14 cases (37%) had indication of fetal distress followed by scar tenderness in 12 cases(32%) and non progress of labor in 8 (21%) of cases. Fetal distress was the commonest indication for emergency repeat caesarean section which was evident in different studies like VardhanShakthi et al(2006)[11] , Iqbal Begum et al (2004) [12] , Bhat BPR et al (2010)[9],Shah Jitesh Mafatlal et al (2010) [13],Shruthi s Goel et al (2012)[14]

There is a consistent evidence to show that a prior vaginal delivery are associated with a higher rate of successful trial of labor compared with patients with no prior vaginal delivery. Our results are comparable with reported studies of Landon et al(2005) [15] ,Shah Jitesh Mafatlal et al (2010)[13]

Neither repeat caesarean delivery nor trial of labor is risk free. Maternal morbidity in terms of pyrexia ,atonic PPH,need for blood transfusion,superficial wound gap are more common in repeat caesarean group while cervical and vaginal tear,traumatic PPH and uterine scar problems are more common with trial of vaginal delivery.Incidence of complication in caesarean group was 18% in our study compared to 12% in VBAC group.The difference in maternal morbidity rate is not statistically significant in studies of Shah SR et al[6],Dodd J et al[16],Mozurkewich EL et al[17]

Most of the neonates ,who were delivered by emergency caesarean section ,were taken to NICU for observation, as most of the emergency caesarean sections were done in view of fetal distress and failure to progress. Our study was well comparable with studies of Shah Jitesh et al [13]andShruthi s Goel et al[14] who concluded that infants born after successful VBAC had the lowest rates of NICU admission and those born by failed VBAC had highest NICU admission

## CONCLUSION

With proper case selection, appropriate timing and close supervision trial of labour after prior LSCS is safe and often successful. A prior vaginal delivery,particularly a prior VBAC are associated with a higher rate of success compared to patient with no prior vaginal delivery. Adequate inter pregnancy interval could be encouraged with good contraceptive measures.

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