



ORIGINAL RESEARCH PAPER

Obstetrics & Gynaecology

OUTCOME OF TOLAC AFTER 1 PREVIOUS LSCS

KEY WORDS:

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ABSTRACT

Background: TOLAC offers the opportunity for vaginal birth after Caesarean (VBAC), potentially reducing surgical morbidity associated with repeat C-section. **Objective:** To examine maternal and neonatal outcomes of TOLAC in a cohort of 48 patients with one prior Caesarean. **Results:** Of 48 patients, 22 (45.8%) achieved VBAC, while 26 (54.2%) required emergency repeat Caesarean. Among VBACs, one (4.5%) involved instrumental delivery. Emergency C-sections were primarily due to meconium-stained liquor (42.3%), fetal distress (38.4%), prolonged second stage (11.5%), and scar tenderness (7.6%). Among VBAC successes, 4 (18.2%) had prior VBAC history. Mean maternal age was lower in VBAC group (24.1 years) than repeat C-section group (26.3 years). VBAC was much more common at 37.0–39.6 weeks (90.9%) versus 40–41 weeks (13.6%). Neonatal birth weight <3 kg predominated in the VBAC group (85.5%), contrasted with 46.2% in the C-section group. NICU admission occurred in 4 VBAC babies and 15 C-section babies. In the repeat C-section group, 7.6% required blood transfusion, 15.38% had prolonged hospital stay for pain, 7.6% had delayed mobilization, and 3.8% had wound infection. **Conclusion:** VBAC success in this cohort was moderate. Gestational age less than 40 weeks, lower birth weight, younger maternal age, and prior VBAC appear favorable predictors. Repeat C-sections associated with higher perinatal morbidity and maternal complications.

INTRODUCTION:

The number of caesarean cases are increasing globally. Repeat LSCS after a previous LSCS is a significant factor for this.

The rise in caesarean delivery rate has become a matter of great concern to the obstetric community. This has led not only to rise in life threatening complications like placenta accreta/ percreta and rupture uterus but has also become a burden on the health systems including healthcare expense especially in developing countries.

NHFS-4 found that the C-section rate in India is 17.2% whereas WHO recommends the ideal rate of C sections to be 10-15%

Trial of labor after cesarean delivery (TOLAC) refers to a planned attempt to deliver vaginally by a woman who has had a previous cesarean delivery, regardless of the outcome.

This method provides women who desire a vaginal delivery the possibility of achieving that goal—a vaginal birth after caesarean delivery (VBAC). Trial of labor after Caesarean (TOLAC) is a desirable option in appropriate candidates as it can reduce surgical risks and improve recovery compared to elective repeat Caesarean sections (ERCS) (Verywell FamilyWikipedia+1). However, TOLAC carries small but serious risks—including uterine rupture, emergency C-section, and perinatal complications—especially when VBAC attempt fails (PLOS Wikipedi+1). Understanding factors that influence TOLAC success is critical to counseling and management. This study reports outcomes from 48 TOLACs after one prior Caesarean, exploring success rates, indications for repeat surgery, maternal/neonatal characteristics, and complications.

MATERIALS AND METHODS:

A retrospective observational study was conducted from March 2020-June 2020 in the Department of Obstetrics and Gynecology of DY Patil Hospital, a tertiary care Centre.

Inclusion Criteria:

- Previous 1 LSCS
- Age of patient: 20-30 years
- Spontaneous conception

- Gestational age 37-41 weeks
- Single live fetus
- Cephalic presentation

Exclusion Criteria Were:

- Age more than 30 years
- Gestational age less than 37 weeks or more than 41 weeks
- Absolute indications of LSCS
- Multiple gestation
- Any comorbidities like diabetes, PIH, chronic hypertension

On admission ante natal history was taken and ANC records were evaluated followed by obstetric examination including Bishops score was taken into account A USG was done to see scar thickness

A written informed consent was taken from the patient and relative for the willingness for TOLAC after counselling them of the advantages and disadvantages of the same.

An admission CTG was done for all patients and a partograph was made to monitor the progress of labour.

Termination of vaginal birth trial based on partogram or if signs of fetal distress, MSAF after SROM or ARM, suspected scar dehiscence/rupture based on clinical examination, scar tenderness, primary or secondary arrest of labour.

In second stage of labour, operative vaginal delivery was done

Active management of third stage of labour given to each patient as per WHO guidelines.

Neonatal assessment done by weight of neonate, APGAR score at 5 minutes, NICU admission. Maternal outcomes were measured in terms of type of delivery (VBAC, ERCS, and Failed VBAC), occurrence of scar dehiscence, PPH with need for blood transfusion, uterine rupture and any post operative complication etc

RESULTS:

VBAC Success Rate

- VBAC achieved in 22/48 patients (45.8%), while 26/48

(54.2%) required emergency repeat C-section.

- **Instrumental delivery** needed in 1 VBAC case (4.5%).

Indications For Emergency C-Section

- Meconium-stained liquor: **42.3%**
- Fetal distress: **38.4%**
- Prolonged second stage of labor: **11.5%**
- Scar tenderness: **7.6%**

Prior VBAC History

- 4 of the 22 VBAC patients (18.2%) had a history of successful VBAC.

Maternal Age

- Mean age for VBAC group: **24.1 years**
- Mean age for emergency C-section group: **26.3 years**

Gestational Age Influence

- VBAC success at 37–39.6 weeks: **90.9%**
- VBAC success at 40–41 weeks: **13.6%**

Neonatal Birth Weight

- In VBAC group: <3 kg: **85.5%**; ≥3 kg: **14.5%**
- In emergency C-section group: <3 kg: **46.15%**; ≥3 kg: **53.85%**

NICU Admission

- **VBAC Group:** 4 infants admitted to NICU; 18 stayed with mother.
- **Emergency C-section Group:** 15 admitted to NICU; 11 stayed with mother.

Maternal Complications in Emergency C-Section Group

- Blood transfusion required: **7.6%**
- Prolonged hospital stay due to pain: **15.38%**
- Delayed mobilization: **7.6%**
- Wound infection: **3.8%**

DISCUSSION:

This cohort's VBAC success rate (45.8%) is lower compared to many studies, where rates often range between 60–80% (Verywell Health Wikipedia+1). In the UK, planned VBAC success averages 72–75%, with even higher success (85–90%) if there's a prior vaginal delivery (RCOG Wikipedia). An Ethiopian study reported a VBAC success of ~35% with fetal distress and lack of progress as leading emergency C-section reasons—mirroring findings here PMC. Similarly, an Indian tertiary center reported VBAC success at ~36%, noting lower gestational age (<40 weeks) and birth weight <3 kg as favorable factors, consistent with our cohort ijrcog.org. Another North India study found VBAC success at 67.6%, with fetal distress and meconium stain as most common repeat C-section indications, again aligning with our dataset (Omics Online Publishing).

Our results reaffirm that **younger maternal age, gestational age <40 weeks, lower fetal birth weight, and prior VBAC history** are positive predictors of VBAC. These echo international findings: previous vaginal birth (especially VBAC) is the strongest predictor of VBAC success (RCOG Wikipedia). Studies also show that post-term gestation (>40 weeks) greatly reduces VBAC chances (e.g., only 7% vaginal at >40 weeks in one study) (ijrcog.org).

Neonatal Outcomes: VBAC babies were less frequently admitted to NICU compared to those from failed TOLAC. This is consistent with data suggesting neonatal morbidity is higher with unplanned C-section versus successful VBAC (PLOS Wikipedia.)

Maternal complications (transfusion, prolonged stay, delayed mobilization, wound infection) occurred exclusively in emergency C-section group, supporting evidence that failed TOLAC or emergency C-section carries higher maternal

morbidity than successful VBAC or elective C-section (PLOS RCOG Frontiers Wikipedia)

Clinical Implications:

- **Patient Selection Matters:** targeting patients under 40 weeks gestation, with estimated fetal weight <3 kg, younger age, and prior VBAC history may improve success rates.
- **Counseling should reflect these data**, balancing benefits (reduced maternal morbidity, faster recovery) versus small but real risks (uterine rupture, perinatal complications) (PLOS RCOG Wikipedia+1 Verywell Health.)
- **Health System Readiness:** Emergency C-section risk mandates availability of surgical and neonatal care facilities to handle complications promptly.

Limitations:

- Small sample size limits statistical power and generalizability.
- Lack of multivariate analysis prevents isolation of predictive factors.
- NICU indications and longer-term neonatal outcomes were not assessed.

Future Research:

Large-scale, multicenter studies using predictive models (e.g., VBAC scoring or machine learning tools) can refine risk stratification (Lippincott arXiv)

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