

Predictors of TOLAC Success: Insights from a Multi-Ethnic Perspective

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INTRODUCTION

The rise in Caesarean section (CS) rates globally has led to a focus on promoting the Trial of Labour After Caesarean (TOLAC) to decrease the number of repeat Caesarean deliveries. Vaginal birth after Caesarean (VBAC) is linked to lower complication rates such as hemorrhage, infection, and respiratory issues for newborns compared to repeat Caesarean sections. VBAC can also facilitate quicker recovery, and shorter hospital stays for mothers, supported by multiple studies validating its safety and effectiveness in appropriate candidates.

OBJECTIVES

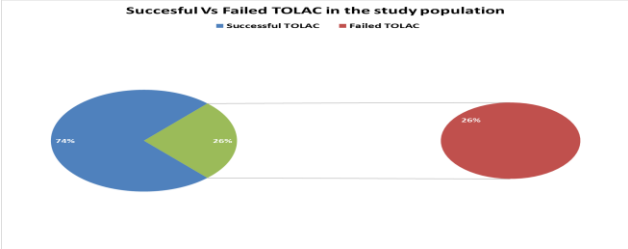
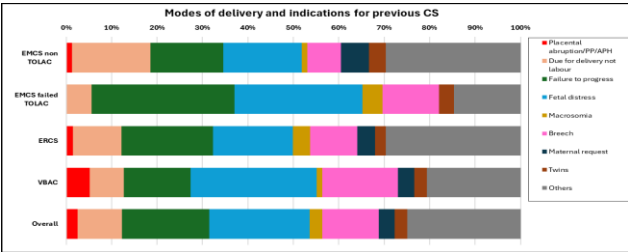
This study aimed to evaluate the success rate of TOLAC, identify risk factors for its failure, and analyze maternal and neonatal outcomes for women undergoing TOLAC at a maternity unit in Qatar.

DESIGN: Retrospective cohort study

METHODOLOGY

This investigation involved 341 pregnant women with a previous Caesarean section who attempted TOLAC at Al Wakrah Hospital, Qatar, from November 2022 to October 2023. The women were categorized into successful and failed TOLAC groups based on delivery outcomes. Data were collected from electronic medical records and analyzed to assess the success rate of TOLAC and the outcomes for women in both groups. Risk factors linked to TOLAC failure, as well as maternal and neonatal outcomes, were evaluated through statistical analysis.

RESULTS



	COR	95% CI	p-value
Ethnicity			
Arabs	ref		
Non-Arab	2.43	(1.4 - 4.21)	0.002
Parity			
Para 1 (no VD)	5.99	(3.4 - 10.56)	<0.001
Parity >=2	ref		
Delivery interval			
>=2yrs	ref		
< 2yrs	4.46	(1.23 - 16.21)	0.023
Macrosomic baby			
<4kg	ref		
>=4kg	5.88	(1.06 - 32.69)	0.043

RESULTS

- ✓ The overall success rate of TOLAC was 73.9%, with a failure rate of 26.1%.
- ✓ Five participants experienced scar rupture during the process, yet all maintained favorable maternal and neonatal outcomes.
- ✓ Women in the failed TOLAC group exhibited higher rates of scar rupture, neonatal intensive care unit (NICU) admissions, and complications such as significant postpartum hemorrhage and low Apgar scores.
- ✓ Multiple regression analysis identified non-Arab ethnicity, absence of previous vaginal delivery, an inter-delivery interval of less than 2 years, induction of labor, and birth weight over 4000 grams as significant risk factors for TOLAC failure ($P<0.05$).

CONCLUSIONS

This study indicates that TOLAC is a safe and effective approach to reducing repeat Caesarean delivery rates within a multi-ethnic population. Nonetheless, TOLAC failure is associated with a heightened risk of maternal and neonatal complications. Timely recognition of failure to progress and fetal distress, followed by swift intervention, is crucial for minimizing the adverse effects of TOLAC failure.

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