

## A Retrospective Study of Trial of Labour After Caesarean Section (TOLAC)

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### Abstract

**Objective:** To determine how best to manage subsequent deliveries after one lower segment caesarean section and to examine the **advantages and disadvantages** involved in trial of labour after caesarean section.

**Method:** Retrospective study of Trial of Labour After Caesarean Section was conducted in Buraimi regional hospital under ministry of health, Sultanate of Oman from 1<sup>st</sup> January 2018 till 31<sup>st</sup> December 2018.

**Results:** There were total 278 patients who opted for TOLAC. Successful vaginal birth after caesarean (VBAC) was in 145 patients (52.1%) Out of 145 VBAC, 73.1% (106) patients were <35 years of age. 121 patients (83.4%) were < 41 weeks of pregnancy. 108 patients (74.4%) were with history of previous vaginal delivery. 94 patients (64.8 %) were with last childbirth > 2years. 84.1% (122) patients were with BMI (**Body mass Index**) of <30. Out of 145 VBAC, 136 (93.7%) patients were in spontaneous labour & 92 (63.4%) patients Bishop's score was >5 cm at admission.

Failure of TOLAC resulting in emergency repeat caesarean delivery was for 133 patients (47.8 %). Out of 133 failed TOLAC, 29 patients (21.8%) were > 35 years of age. 5.2% (7) patients had induction of labour. Bishop's score of majority of the patients 116 (87.2%) was < 5 cm & 58 patients (43.6%) received augmentation of labour. Non recurrent indications of caesarean section were seen in 101 patients (75.9%). No complications like uterine rupture, fetal demise etc. reported in the 278 women who opted for TOLAC.

**Conclusion:** TOLAC is a potential strategy for decreasing caesarean section rate if proper selection criteria are adopted.

**Keywords:** Trial of Labour After Caesarean Section (TOLAC); Lower uterine Caesarean Section (LSCS); Elective Repeat Caesarean Delivery (ERCD); Vaginal Birth After Caesarean Section (VBAC); BMI (Body mass Index)

### Objective

The rates of caesarean section are increasing steadily all over the world in the past two decades [1] Women undergoing cesarean section have a higher morbidity and mortality rate than those having vaginal birth, such as massive postpartum hemorrhage, need for blood transfusion, anesthesia-associated complications, surgical risks (intestinal obstruction, wound dehiscence, wound scars, infection, etc.) and obstetric complications in subsequent pregnancies [2] Current evidence suggests maternal and perinatal morbidity and mortality rates secondary to TOLAC are less than those of repeated cesarean sections [3].

Globally, TOLAC is considered safe and acceptable option for women with one previous cesarean section. Most women with one previous cesarean delivery and a low-transverse incision are candidates of TOLAC and should be counseled about TOLAC and offered a trial of labor [4].

The successful TOLAC is associated with less blood loss, significantly lower risk of neonatal respiratory morbidities, placenta previa, and a shorter hospital stay with a more rapid recovery [5-7] TOLAC should be considered among women with a uterine scar if there are no contraindications, and successful TOLAC can be safely achieved for both mother and infant in most cases [8]. Complications as-

sociated with TOLAC include scar dehiscence, hysterectomy and uterine rupture, but such risks can be prevented by close observation and adhering to the standard guideline of proper selection criteria.

**Method**

This study was conducted in Buraimi regional hospital under ministry of health, Sultanate of Oman from 1<sup>st</sup> January 2018 till 31<sup>st</sup> December 2018.

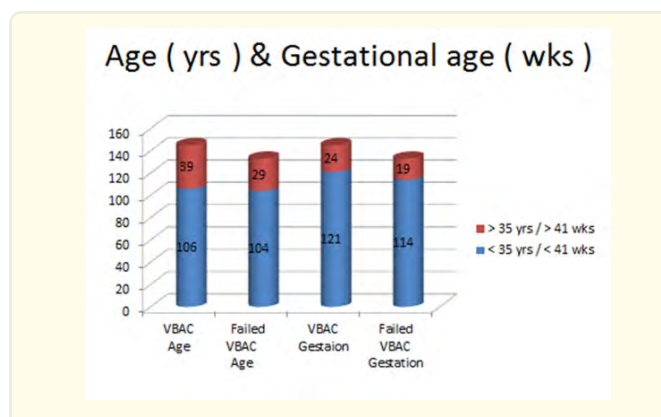
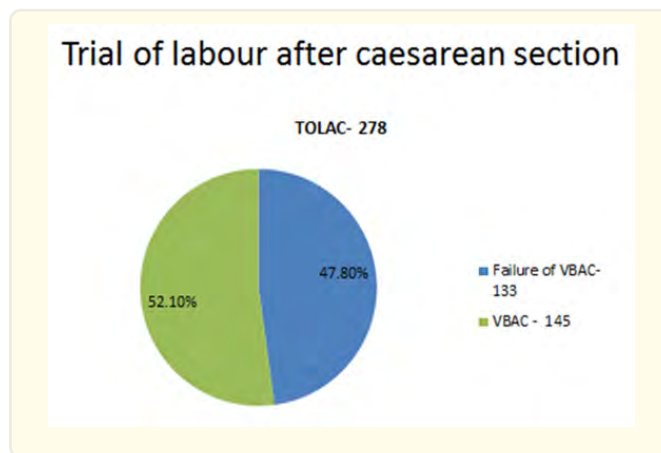
Trial of labour after caesarean section (TOLAC) is routinely offered at our hospital for women meeting the standard criteria for a TOLAC according to departmental protocol-Shared decision making. All the patients were given counseling and information leaflets in English or Arabic. Informed consent was obtained.

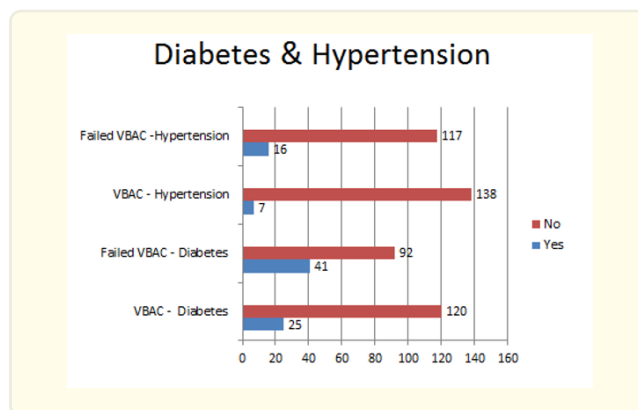
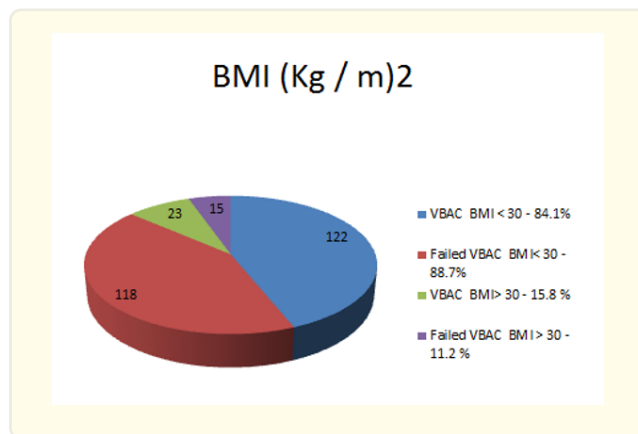
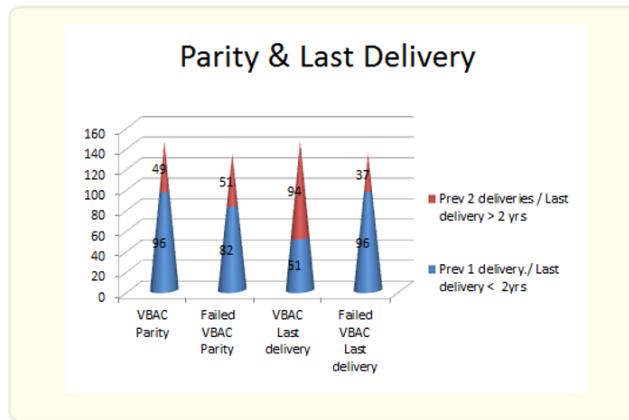
All women with history of previous one lower segment caesarean section who went into labour either spontaneous or induced were included in the study. Women with previous one lower segment caesarean section that underwent elective repeat caesarean delivery & patients who refused for TOLAC were excluded.

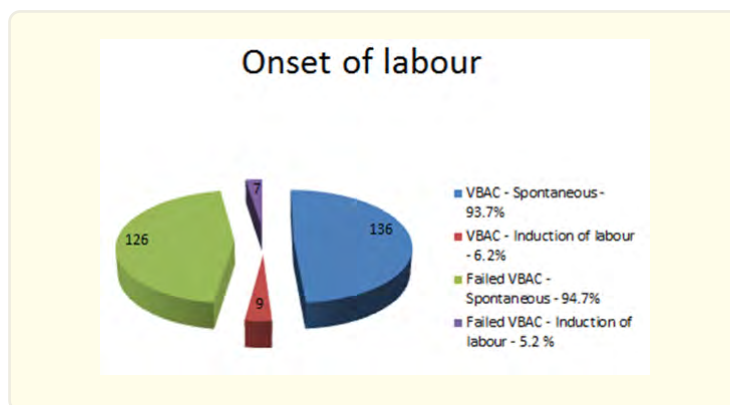
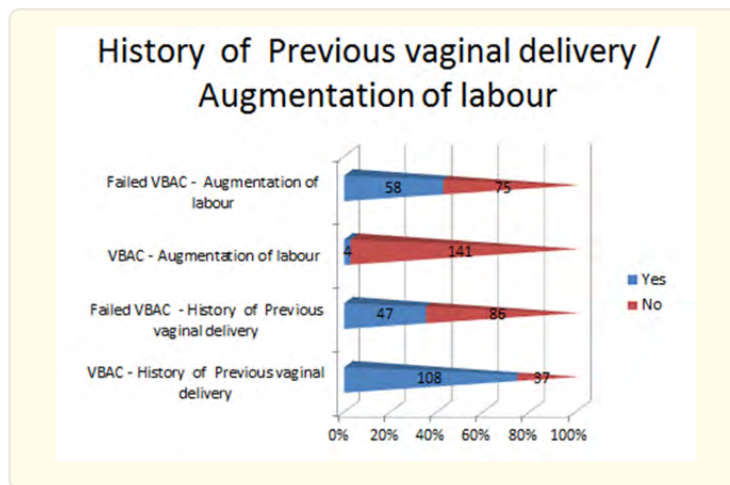
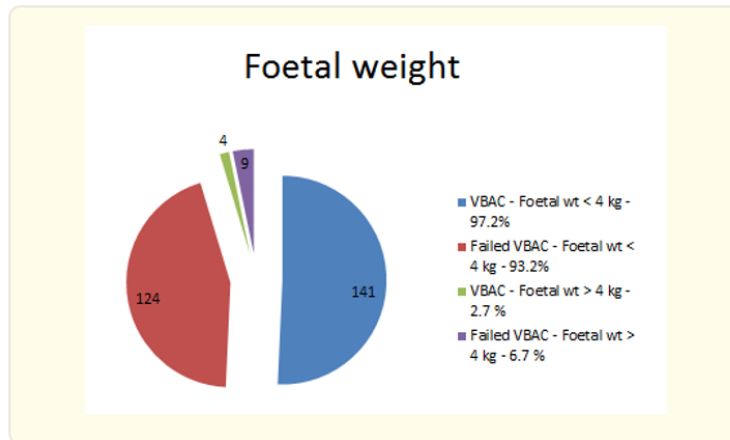
Demographic profile like Age, Parity, BMI & associated co morbidities (Diabetes, Hypertension etc.) were noted from antenatal card, delivery register & electronic data system.

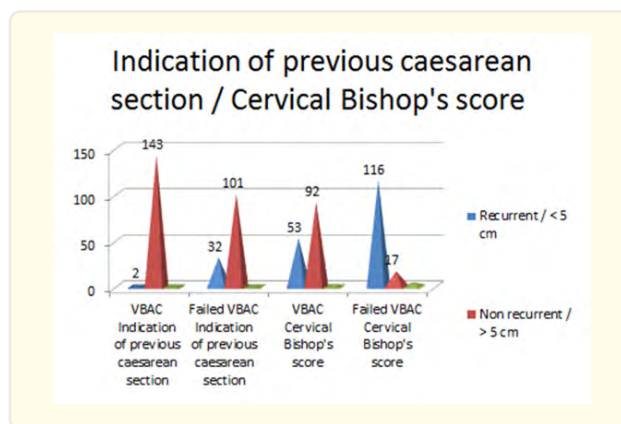
**Results**

There was total 278 patients who opted for TOLAC. Successful vaginal birth after caesarean (VBAC) was in 145 patients (52.1%) & Failed TOLAC was in 133 women (47.8%).









## Discussion

It is noteworthy that our success rate of TOLAC was 52.1 %, when compared to a success rate of 60%–80% reported in most high resource countries [4]. But in our study there were no serious complications, which imply the potential benefit of TOLAC among women with a uterine scar.

Younger the women higher the chance of VBAC [9]. In our study, 73.1 % (106) women with successful VBAC were < 35years of age while failed VBAC was for 21.8% (29) were > 35years of age. Late gestational age was significantly associated with a higher failure rate [9, 10] 121 women who had VBAC were < 41 weeks of gestation. 94 women (64.8 %) were with last delivery > 2years. 108 (74.4%) patients were with history of previous vaginal delivery.

Higher the BMI, higher is the risk of failed TOLAC [10, 11] in our study, VBAC in women with BMI >30 were 15.8% as compare to VBAC in women with BMI < 30 was 84.1%.

Lower estimated birth weight has a greater chance of having a successful VBAC [10]. In our study 97.2% of women who had VBAC were with fetal weight < 4 kg.

Women with prior vaginal birth were more likely to achieve success of TOLAC [10, 12] In our study, 108 women with previous vaginal birth had successful VBAC.

Spontaneous onset of labor was more likely to have successful VBAC [13] In our study 126 women were in spontaneous labour who had VBAC. Cervical Bishop's score is directly proportionate to successful of VBAC [12, 14]. In our study 92 women who had VBAC was with Bishop's score of > 5

TOLAC has a minimal risk of uterine rupture with a rate of 0.2–0.8% [4], in our study there was no uterine rupture.

## Conclusion

TOLAC is a potential strategy for decreasing caesarean section rate. The new insight gained from this study is that the most powerful factor associated with a successful TOLAC is the adoption of proper standard criteria - Shared decision making. Other minor factors include prior vaginal birth, gestational age and fetal weight, which also impacted on the outcomes.

## Acknowledgement

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