

Experience of VBAC in A Private Hospital

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Abstract:

Background: Vaginal birth after cesarean section (VBAC) for a non-recurring indication has been described by several authors as safe & having a success rate of 60-80%. VBAC increases the possibilities of subsequent vaginal deliveries & reduces the rate of repeat cesarean section with associated postoperative morbidity.

Objective: To estimate the success rate & risks of an attempted vaginal birth after one cesarean delivery (VBAC).

Materials & Methods: The study was conducted as a private hospital based cross sectional descriptive study from July 2021 to December 2021. Total 176 patients were admitted with history of prior CS in this study. Among these cases common indications of primary CS were caesarean delivery on maternal request (CDMR), fetal distress, less fetal movement etc. All cases with previous one cesarean section who delivered vaginally within the study period comprised the study population. Women with 1 previous cesarean section, singleton pregnancy, cephalic presentation & term gestation were included in this study. However, women with history of 2 or more C/S, previous uterine surgery like myomectomy & classical C/S were excluded.

Result: Out of 37 cases enrolled in the study, 24 (64.86%) successfully delivered vaginally without any complication. 11 (29.73%) cases needed repeat cesarean section and 2 (5.41%) cases had to undergo emergency cesarean section for scar tenderness, those were found to be uterine scar rupture.

Conclusion: This study suggested that trial of labour after cesarean section (TOLAC) was effective in decreasing CS in this study population. TOLAC and VBAC can be offered to pregnant women without contraindication. To establish the finding definitively, large multicenter prospective studies are required.

Introduction:

A trial of labor after cesarean (TOLAC) is a planned attempt to labor by a woman who has previously undergone one caesarean delivery and desires a subsequent vaginal delivery. A VBAC is a "successful" trial of labor resulting in vaginal birth and a TOLAC may result in either a "successful" VBAC or a "failed" trial of labor resulting in a repeat caesarean delivery.¹⁻³ Vaginal birth after cesarean section (VBAC) is one of the strategies developed to control the rising rate of cesarean section (CS)⁴. It is a trial of vaginal delivery in selected cases of a previous CS, which is based

upon the assessment of scar integrity, fetal wellbeing and improved facilities of emergency CS.⁵ With present techniques and skill, the incidence of cesarean scar rupture in subsequent pregnancy is very low. The rate of successful vaginal delivery after prior CS is found to be 60%-80%.⁶ Women with prior vaginal delivery are found to have higher success rates.⁷⁻⁸ The American college of obstetrician and gynecologist (ACOG) estimated that the risk of uterine rupture in women with a previous CS and concluded that the lower segment caesarean scar has a minimum risk (0.2-1.5) of rupture during vaginal delivery.⁹ Women

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entering labor spontaneously have higher success rates as well, compared to women undergoing induction of labor.⁵ The present study was undertaken to estimate the success rate & risks of an attempted vaginal birth after one cesarean delivery (VBAC).

Methods:

The study was conducted in a private hospital. It was a cross sectional descriptive study from July 2021 to December 2021. 37 eligible cases were enrolled. Inclusion criteria were :women with previous 1CS, Singleton pregnancy, Cephalic presentation and Term gestation. Exclusion criteria :were history of 2or more CS and previous uterine surgery eg. myomectomy & classical CS.

All cases and their close relatives were explained about the advantages of VBAC over elective CS. Also explained about the risk of scar dehiscence and the need of emergency CS. Monitored carefully during labor by continuous electronic fetal monitoring.

The trial was terminated by emergency CS, if there was partograph based evidence of unsatisfactory progress, scar tenderness and fetal distress.

Result

Table-I
Patient profile of the Study (N=37)

Parameters	Vaginal delivery n ₁ =24 n ₁ (%)	Cesarean section n ₂ =13 n ₂ (%)	P-value
Age (years)			
20-30	21 (87.50)	8 (61.50)	0.10*
31-40	3 (12.50)	5 (38.50)	
Parity			
1	17 (70.83)	11 (84.61)	0.446*
2	7 (29.17)	2 (15.39)	
Gravida			
2 nd	17 (70.83)	8 (61.54)	0.816
3 rd	6 (25.00)	4 (30.77)	
4 th or more	1 (4.17)	1 (7.69)	

*Fisher's exact test and Chi square test were done to get the p value

Table-IV
Association of types of onset of labor with mode of delivery (N=37)

Type of onset of labor	Mode of Delivery		P-value
	Vaginal delivery n ₁ (%)	Cesarean section n ₂ (%)	
Spontaneous onset of labor	14 (58.3)	4 (30.8)	0.109
Induction of labor	10 (41.7)	9 (69.2)	
Total	24 (100.0)	13 (100.0)	

Chi square test was done to get the p value

Table 1 is presenting the patient's profile participated in this study. Majority of the patients were within the 20-30 years age group in both vaginal delivery (87.50%) and in cesarean section (61.50%) group. Distribution of the patients in different age group was not significantly different (p value: 0.10). Distribution of patients in vaginal delivery and cesarean section group according to parity (p value: 0.446) and gravidity (p value: 0.816) was statistically similar.

Table-II
Mode of delivery following trial of VBAC-TOLAC (N=37)

Mode of delivery	Frequency	Percentage
Spontaneous vaginal delivery	14	37.83
Vaginal instrumental delivery	10	27.02
Repeat LSCS	13	35.13

Table-2 is showing the mode of delivery following trial of VBAC-TOLAC. Spontaneous vaginal delivery was done in majority of the cases (37.83%), whereas vaginal instrumental (ventose) delivery was done in 27.02% cases. Repeat Lower segment cesarean section was done in 37.13% cases.

Table-III
Indication of repeat LSCS in cases of failed trial of VBAC (n=13)

Indications	Frequency	Percentage
Fetal distress	5	38.5
Scar tenderness	3	23.1
Failed progress of labor	2	15.4
Persistent occiput posterior	2	15.4
Cervical dystocia	1	7.7

Indications of repeat LSCS is shown in Table 3. In 38.5% cases repeat LSCS was done because of fetal distress. Scar tenderness, failed progress of labor, cervical dystocia were the indication of repeat LSCS in 23.1%, 15.4% and 7.7% cases, respectively.

Association of type of onset of labor with mode of delivery is presented in table 4. No significant association was found between type of onset of labor and mode of delivery (p value: 0.109)

Figure 1: Outcome of trial of vaginal birth after cesarean section (VBAC) (n=37)

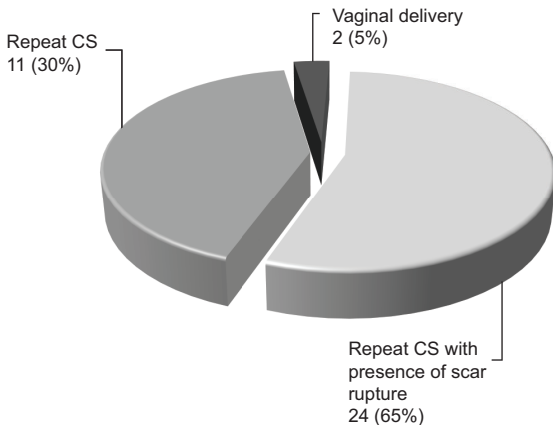


Fig.-1: Outcome of trial of vaginal birth after cesarean section (VBAC) (n=37)

Figure-1 is showing that majority (64.86%) of the cases vaginal delivery was done successfully. In 11 (29.73%) cases repeat LUCS was done and in another 2 (5.41%) cases of repeat CS there was evidence of scar rupture.

Table-V

Association of history of vaginal delivery before LSCS with outcome of VBAC-TOLAC

History of vaginal delivery before CS	Mode of Delivery		Total	P-Value
	Vaginal delivery n ₁ (%)	Cesarean section n ₂ (%)		
Yes	5 (20.8)	2 (15.4)	7 (18.9)	>0.99
No	19 (79.2)	11 (84.6)	30 (81.1)	

Fisher's exact test was done to get the p value

Table 5 is showing that no significant association was observed between of history of vaginal delivery before LSCS with outcome of VBAC-TOLAC (p value: >0.99).

Discussion:

Planning a trial of labor after CS requires typical prenatal care with additional counseling regarding the option of TOLAC versus (planned repeat caesarean section) PRCD. Additionally, early USG to confirm gestational age can be helpful if CS is scheduled. CS should only be conducted when medically necessary.

Since 1985, the international healthcare community has considered the ideal rate for CS to be between 10% and 15%. Since then, CS have become increasingly common in both developed and developing countries. When medically justified a CS can effectively prevent maternal perinatal morbidity and mortality. However, there is no evidence showing the benefits of CS for them who do not require the procedure. On the other way CS is associated with short- and long-term risks which can extend many years beyond the current delivery and affect the health of the women, her child and future pregnancy.¹⁰

This study represents observations for a period of 6 months. The selection of women for VBAC is influenced by women's desire and conditions favorable for vaginal delivery In this study primarily 37 women were admitted with previous 1 CS, where elective CS were performed in 13 (35.13%) cases which corresponds with Akter¹¹ study in Bangladesh, in that study vaginal delivery was 68% and caesarian delivery was 32%. The most important factor that prevents obstetricians from allowing women to undergo vaginal delivery following CS has been the fear of uterine rupture or silent scar dehiscence. In the present study most of the women of vaginal delivery 24(64%) and caesarian section 11(29.73 %) had intact uterine scar. Rupture was detected only in 2 (5.41%) during CS. Similar observation was found in the study of Akter¹². The incidence of scar rupture was 0.5% in Parveen et al.³ In sultana's study rate of scar rupture was 4.5%, per operatively 2 cases of scar rupture were found (5.41%).¹²

According to patient profile majority of patients were within 20-30 age group in both vaginal delivery (37.50%) and caesarian section 61%) group.¹² In current study women belonging to higher socioeconomic status were very much keen for VBAC, which is not similar to the study of Rahman et al¹⁴.

Regarding maternal and fetal outcome in all 24(64.86%) women of successful vaginal birth group, there was no mortality. In the present study, suitable women were selected for VBAC with adhering to strict inclusion and exclusion criteria, as mentioned earlier. Of the 37 women 24 (64.86%) delivered vaginally and 11(29.73%) underwent emergency LSCS for various indication as given in table 3. Among 7 women who had one previous vaginal delivery, 5 delivered vaginally in the present study and 2 underwent LSCS. Wheres in the study of Rahman¹³ all with history of prior vaginal

delivery cases delivered vaginally. It means that the history of normal vaginal delivery is the single most important predictor for a successful VBAC. Patient with prior CS needs special management both antenatal, in labor and delivery. We know that many women can safely and successfully have a VBAC. Current evidence indicates that 60-80% women can achieve a vaginal delivery following a previous lower uterine segment CS.⁷

Recommendation:

Selection of cases for VBAC should be accurate. Spontaneous entry into labor is preferred. Continuous fetal heart rate monitoring is essential. Repair of undetected dehiscence of uterine scar is not required unless there is ongoing bleeding.

Conclusion:

The study shows TOLAC was effective in decreasing CS. An attempt for VBAC is well justified for post caesarean pregnancy with non-recurrent indication and TOLAC, VBAC can be offered to pregnant women without contraindication. With respect to maternal and fetal safety, success rate and adverse effects of VBAC the results of this study are promising and compatible with global data. To establish the finding definitively, large multicenter prospective studies are required. National policy & guidelines are necessary in this regard.

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