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A Clinical Study on Prospect of Vaginal Birth in Post Caesarean Pregnancy.

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ABSTRACT

Background: To identify the obstetrical parameters that influence the success of vaginal birth after caesarean (VBAC) and maternal and fetal outcome in failed VBAC as compared to successful VBAC. **Methods:** Prospective observational study was carried out over a period of one year, 50 women with one low transverse cesarean delivery were included. Complete history including indications of PCS intra and post operative complications of PCS , details of present pregnancy , fetal size, amount of liquor , scar tenderness, pelvic adequecy and any other disorders were recorded. **Result:** Out of 50 women who met the inclusion criteria with previous LSCS, 35 had normal delivery while 15 had repeat LSCS for failed VBAC. **Conclusion:** Induction is safe in selected cases. In properly selected cases VBAC can constitute the safe form of management.

Keywords: Caesarean Section, Vaginal Birth.

INTRODUCTION

Before 1970s the phrase “once a cesarean, always a cesarean” dictated obstetric practice. Later because of escaltating rates of cesarean section (CS) suggestions were made that vaginal birth after CS (VBAC) might help in reducing the rates of CS. So trial of labour in cases of previous CS (PCS) has been accepted as a way to reduce the rates of overall CS. Their is evidence of safety of trial of labour, with or without induction of labour, with reduction in iatrogenic prematurity, and maternal morbidity and mortality. Recently trials of labour after ceserian have become less frequent, as an increasing number of studies that have focused on adverse outcomes such as uterine rupture and perinatal morbidity have been published.[1]

One factor that has been associated with increased risk of uterine rupture and increasesd maternal and neonatal morbidity has been labour induction, a practice that has become increasingly common.[3-9] Yet, although the relative risk for neonatal morbidity associated with trial of labour may be increased in relation to elective cesarean, the attributable risk remain small, and many patient and physician believe that an attempt at vaginal delivery, particularly if the risk of vaginal delivery are substantial, is a worthwhile endeavor. hence it becomes imperative for Obstetricians to be able to predict the factors governing the success of trial of labour.

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Aim

To identify the obstretrical parameters that influence the success of “Vaginal birth after cesarean” (VBAC), and maternal and fetal outcome in failed VBAC as compared to succesfull VBAC.

MATERIALS AND METHODS

The present, prospective observational study was carried out over a period of one year. 50 women admitted with one low transverse ceaserean delivery during study period were included in the study to start.

Complete history including indications of PCS, intra and post operative complications of PCS, the details of present pregnancy, fetal size, amount of liquor, scar tenderness, pelvic adequacy, and any other disorder were recorded.

Inclusion Criteria

1. Singleton pregnancy
2. Vertex presentation
3. Single lower segment Caesarean section

Exclusion Criteria

1. Two previous caesarean section , Scar of other uterine surgery
2. Medical disorder

3. Previous classical caesarean section.
4. Cephalo Pelvic Disproportion
5. Malpresentation
6. Placenta Previa

All patients were admitted in the hospital on their due date or if they went in to spontaneous labour. An informed consent was taken for VBAC, one unit crossmatched blood was reserved. In cases with unfavorable Bishop score 0.5mg PGE2 gel was instilled, intracervically, augmentation was done if required with ARM or Oxytocin2.5mg. The progress of labour was monitored by continous electronic fetal monitoring, portograph, uterine conytactions, hourly pulse and blood pressure recording was done for early recognition of signs of scar dehiscence. Attempts of VBAC was abandoned in cases of suspicious scar dehiscence, or if there were signs of fetal distress or if unsatisfactory progress of labour.

RESULTS

Out of 50 women with prior LSCS who met the inclusion criteria 35 women had successful vaginal delivery and 15 women had repeat LSCS for failed VBAC.

Table 1: Distribution of cases according to outcome of trial of labour.

Groups	Number of Patients	Percentage
Successful VBAC	35	71%
Failed VBAC	15	29%
Total	50	100%

Table 2: Details of labour in successful VBAC.

Details of labour	Number of patients	Percentage
Spontaneous Labour	25	71.5%
Augmented Labour	08	22.8%
Induced Labour (PGE2 gel)	02	5.7%
Total		

Four patients were admitted for Induction of Labour with PGE2 gel (max. 2 doses) at 40-41 weekswith singleton baby, cephalic presentation and interpregnancy interval of more than 18 months. Out of which two were delivered vaginally, others were taken up for emergency LSCS for failed induction, scar dehiscence or fetal distress.

11patients augmented in active labour (3cm,80% effaced cervix), out of which 8 were delivered vaginallywithiot any augmentation.

35 patients came in labour, partogram was maintained, and labour was augmented with oxytocin, out of them 25patients delivered vaginally and rest went for emergency LSCS.

The patients who had previous LSCS for non – recurring indications like fetal distress, mal presentations, eclampsia had more successful outcome with TOLAC rather than those patients with recurrent indications like CPD in previous pregnancy.

Table 3: Indication of Previous LSCS versus outcomes in present pregnancy.

Indication for previous lscs	Successful VBAC	Failed VBAC
Fetal distress	19 (54.28%)	1 (6.66%)
Malpresentations	10 (33%)	2 (13.3%)
Eclampsia, antepartum h'ge	5 (14.28%)	4 (26.6%)
CPD	1 (2.85%)	8 (53.3%)

Maximum number of cases taken for LSCS (failed VBAC) were due to failed induction and fetal distress.

Table 4: Indication of present LSCS.

Indications	Number	Percentage
Non progress of labour	1	6.6%
Arrest of Descent	1	6.6%
Fetal distress	5	33.3%
APH	0	
Scar tenderness	2	13.3%
Failed induction	6	40%
Total	15	100%

Table 5: Composite neonatal morbidity from successful VBAC and failed trial of labour after previous LSCS

Neonatal Risk	Successful VBAC %	Failed VBAC%
Antepartum Stillbirth	0	0
HIE	0	0
Neonatal Death	0	0
Perinatal Death	0	0
Neonatal Admission in NICU	10	12
Respiratory Morbidity(RDS)	8	5
Transient Tachypnoea	12	6
Hyper Bilirubinemia	15	1

There was no neonatal death in this study with increased incidence of RDS, Transient Tachypnea in failed VBAC

Table 6: Composite maternal outcome from Successful VBAC and trial of labour after LSCS

Maternal Outcome	Successful VBAC	Failed VBAC
Endometritis	1	8
Operative Injury	0	4
Hystrectomy	0	0
Uterine Rupture	0	0
Scar Dehiscence	0	1
Maternal Death	0	0
Haemorrahage (Accreta)	0	2

No Case of Uterine rupture and Maternal death in the study.

DISCUSSION

Several studies have suggested that for appropriately selected women with PCS, a trial of labour is safe, even safer than elective repeat CS. Published literature shows that there has been a 60%-80% success in at veginal birth after a cesarean section.[2] We had 71% success in those who had trial of labor. Dhall etal have reported that around 76% of women with PCS undergoing trial of labor have vaginal delivery.[20] Singh et al reported 65% VBAC.[21] Mc mohan etal have reported vaginal delivery in 66% of those with dystocia , 84% of those with mal presentation and 75% of those with fetal distress as indication of PCS.[22]

Factors that negatively influencethe likely hood of successful VBAC are believed to be a case of labour augmentation and induction, maternal obesity, gestational age beyond 40 weeks, birth weight greater than 4000gm, and inter delivery interval of less than 19 months.[10]

T0 date several groups have attempted to identify characterdtics associated with successful trial of labor outcome,[11-17] however none of these studies have focused exclusively on patient undergoing labor induction. Induced labor is known to have different characteristics than spontaneous labor and results in higher rate of cesarean section.[18] Therefore it is not clear that the predictive variable identified in prior studies apply to trial of labor patients undergoing labor induction. we found several significant predictors that were associated with vaginal delivery. Specifically history of vaginal delivery, non recurring indication for prior cesarean delivery, induction before estimated due date, a ripe cervix on admission, and no maternal history of diabetes all increased the chances of vaginal delivery after an induced trial of labor.

Nevertheless, if an induction of labor is indicated in a patient with one prior cesarean, the available literature including data from our study support a reasonable likely hood of successful vaginal delivery particularly when certain characteristics are taken in to account. Induction of labor in this setting may not be contraindicated provided that close patient monitoring and the ability to perform emergency cesarean delivery are available.[23]

The patients who were admitted in a spontaneous labor delivered vaginally(more than 90%) out of those who were augmented 70% delivered vaginally, out of those induced only 54% of patients delivered vaginally. There was no incidence of uterine rupture in our study. The risk of uterine rupture in cases of PCS is believed to be significantly higher with an induced labor than with a spontaneous labor with trial. In a study when authors have excluded prostaglandins E2 (PGE2) exposure, however, the risk was only 0.74% which was not significantly higher than that associated with spontaneous labor. More than six fold increase in uterine rupture with PGE2 induction compared to spontaneous trial of labor has been reported.[24] Nonsignificant trends towards higher rupture rates with the use of PGE2 have been reported by others.[25] But in some other reports no increased risk.[26,27] Oxytocin has also been reported as a cause of small but significant increase in the rate of uterine rupture by some but others did not experience this.[28] Induction of labor was labor was done in 4 or 5.8% of our cases. There was no scar rupture and there was no trial or induction related perinatal loss. We believe that induction of labor could be carried out for usual reasons because if one allows the uterous to contract with spontaneous labour, one should be willing to stimulate it with exogenous oxitocics, however one has to be aware of hyperstimulation. Neo natal morbidity in terms of RDS and TTN was more in LSCS due to failed VBACK (long trial of labor with non progress of labor). Endometrisis and PPH was associated with repeat emergency LSCS due to non progress of labor.

CONCLUSION

Induction is safe in selected cases. Oxytocin is effective and is recommended in response to standard obstetric indications .However prostaglandin induction / augmentation needs much caution. In properly selected women, VBAC can constitute safe form of management. Non recurrent indication for PCS bears little influence as it relates to the success of achieving vaginal delivery in current pregnancy. The key is the discerning selection of women to be allowed a trial of vaginal delivery with or without induction.

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