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TRIAL OF LABOR;
SUCCESS IN WOMEN WITH PREVIOUS CAESAREAN SECTION

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ABSTRACT…Objective: To determine the frequency and types of vaginal delivery in women with previous one caesarean section and to observe the effect of women age on success of vaginal birth. **Method:** A descriptive study was carried out in the department of obstetrics & gynecology, Ziauddin University Hospital Kemari campus Karachi from January 2011 to January 2013. 200 patients with previous one caesarean section for a non recurrent cause were included in the study after fulfilling the inclusion and exclusion criteria. The women selected were evaluated and counseled for trial of labor. The frequency and mode of vaginal delivery was recorded in cases of successful trial of labor and caesarean section was performed in case of failed trial of labor. **Results:** Successful vaginal delivery was achieved in 67% of the patients and repeat emergency caesarean section was carried out in 33% of the patients. Leading indication for repeat caesarean section was failure to progress, fetal distress and scar tenderness. No maternal and fetal complication occurred. We also observed that patients of less than 30 years were more likely to have a successful vaginal delivery (82%) as compared to patients older than 30 years (18%). **Conclusions:** The trial of labor should be encouraged with vigilant monitoring in patients with previous one Caesarean section and is a safe and successful option if carefully selected and monitored.

Key wards: VBAC, Pakistan, women age.

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INTRODUCTION

Caesarean section is a surgical procedure to deliver a fetus through an incision in the uterus is the commonest obstetrical operation[1]. The rate of caesarean varies internationally from 10-25% .In the past three decades the ratio of caesarean section has dramatically increased. This increase is more due to repeat caesarean section in patients with previous one caesarean section. An estimated 40% of the 1.3 million cesarean deliveries performed each year in the United States are repeat procedures. The rate reaching around 83% in Australia[2], and almost 90% in the US[3]. Repeat caesarean now accounts for 28% of all births in the United Kingdom[4]. The current caesarean section rate is too high and unsustainable and according to WHO is not associated with any further improvement in perinatal outcome compared to caesarean section rate of 10-15%.

Vaginal birth after one caesarean section is one solution to limit rising caesarean section rate, with a positive impact on maternal health and obstetric care cost. Women with prior caesarean delivery needs special management antenatally and during labor and delivery and can have a safe and successful vaginal birth. The current evidence indicates that 60-80% of women can achieve a VBAC vaginal delivery following a previous lower uterine segment caesarean delivery[5].

Trial of labor (TOL) is the standard medical terminology to describe a labor following a previous caesarean section. Patient selection for trial of labor is an important aspect of management with prior caesarean delivery. The factors influencing the successful VBAC include singleton pregnancy, cephalic presentation, average size baby, previous caesarean section for non recurrent cause, adequate pelvis, prior vaginal delivery, TOL given in tertiary care hospitals and spontaneous onset of labor, are the selection criteria for candidates for trial of labour[6].

MATERIAL & METHOD

A descriptive study was conducted in the Department of Obstetrics& Gynecology of Ziauddin Hospital Kemari campus from January 2011 to January 2013(two years).A total of 200 patients were selected by non probability purposive sampling technique. The women selected were divided in two groups .Group 1 includes women with age less than 30 years and Group 2 includes women with more than 30 years.

The women selected were at term with previous one caesarean section, having a single fetus with cephalic presentation. The women selected had normal pregnancies with no complications such as diabetes mellitus, hypertension, cephalopelvic disproportion etc.

The selected patients were evaluated for risk factors and counseled by the consultant and if were eligible they were offered trial of labor. Data obtained regarding age, parity, duration of pregnancy, associated risk factors, and detail of previous caesarean section. The antenatal card was clearly marked for these patients as wanting to have TOL/VBAC. (Trial of birth/ vaginal birth after Caesarean section).

On admission abdominal examination was done to assess symphysio-fundal height, uterine contractions, lie and presentation of fetus and any scar tenderness. Vaginal examination was done to assess cervical dilatation, consistency, effacement, status of membranes and station of the presenting part. CTG performed and women willing for VBAC were allowed to have trial of labor with all preparation for emergency caesarean section if the need arises. Induction and augmentation of labor was avoided but amniotomy was performed when there is need for augmentation of labor.

On admission an intravenous line was inserted and one pint of blood was arranged. Anesthetist, operation theatre staff and pediatrician were notified about the trial with the aim to reduce the interval between decisions for caesarean to incision to 30 minutes. Patient consented for possible Caesarean section. Vaginal examination was performed at admission to confirm labor and then 4 hourly to assess progress of labor until 7 cms and then 2 hourly to relate progress of labor with uterine activity.

A careful watch was kept for any signs of impending uterine rupture such as fetal bradycardia or deceleration on CTG, slow progress of labor without any obvious cause vaginal bleeding and haematuria.

DATA ANALYSIS

The data analyzed by SPSS version 10. The mode of delivery and number of patients having successful vaginal delivery, ventouse delivery and failed trial were also calculated using qualitative and quantitative analysis.

RESULT

A total of 200 patients were selected for the trial of labor. 134 (67%) were successful in achieving vaginal delivery and 66 patients (33%) required repeat caesarean section. Among the vaginal delivered 106 (79%) had spontaneous vaginal delivery and 28 (20%) had assisted vaginal delivery (Table I). The patients were divided in two groups on the basis of their ages. Group 1 had ages less than 30 years and group 2 had patients with ages more than 30 years.

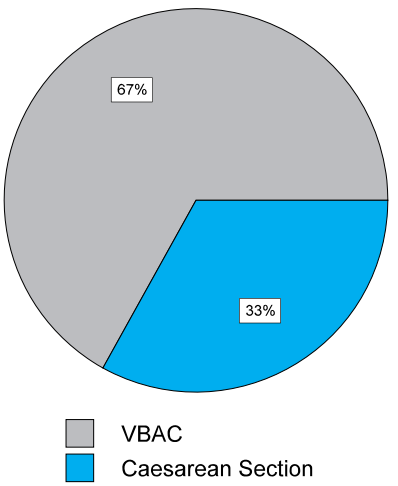

Fig. Pattern of labor in patients with previous caesarean section (n = 200). Values given in percentages.

Type of vaginal delivery	No. of cases	%age
Normal vaginal delivery	106	79.10%
Assisted vaginal delivery	28	20.89%

Table-I. Type of vaginal delivery (n=134)

The group less than 30 years had 135 patients (67%) while the group more than 30 years had 65 patients (32%). In the less than 30 years group 82 patients (60.70%) had successful VBAC and 53 (39.25%) had repeat Caesarean Section. The women with age more than 30 years was 65 among them 20 (30%) patients had a successful VBAC and 45 (69%) patient had repeat Caesarean Section. Table II

Less than 30 years	164	82%
More than 30 years	36	18%

Table-II. Age distribution in patients having VBAC

DISCUSSION

There were two main reasons for this study. First is the rise in the caesarean section rate in the last few years in our country and secondly the increased morbidity and mortality associated with caesarean section as compared with vaginal delivery as clearly born out in the literature[7].

According to the American College of Obstetricians and Gynecologists (ACOG) guidelines concerning vaginal delivery after previous caesarean section it states "woman with one previous caesarean delivery with a low transverse incision should be counseled and encouraged to attempt labor in her current pregnancy[8]. One of the main reason of increase in Caesarean section rate is that in majority of cases patients are not counseled for trail of labor.

The rate of normal vaginal delivery after previous one caesarean section was 67% in our study. This is comparable to most of the studies, which indicate that 60-80% of women can achieved a normal vaginal delivery following a previous LSCS[9,10,11]. However recent data from England and USA shows a downward trend in VBAC during the last few years[12].

In our study we included only those women who went into spontaneous labor and avoid induction and augmentation of labor. Though there is no contraindication for the use of oxytocin for induction and augmentation of labor, however, the role of prostaglandin is controversial. The main reason was fear of previous caesarean section scar separation the incidence of which is significantly higher in the induced group (7%) than in elective repeat caesarean group (1.5%)[13].

Maternal age is one factor that affect the outcome in patients with previous caesarean section. As described by other authors[14-15]. Our study also proved that increase maternal age is associated with failed VBAC as most of the younger women had vaginal delivery compared with women with age more than 30 years.

In the literature to date, the overall risk of uterine rupture for women undergoing a trial of labor after caesarean delivery has been reported to be between 0.2% and 0.1%.

There was only one case of scar dehiscence in our study and that was detected during caesarean section done in emergency for fetal distress No major complication occurred in our study during trial of labor. There were no cases of uterine rupture.

Rageth et al[16] disclosed an elevated risk of uterine rupture in patients who had a history of caesarean delivery and were undergoing a trial of labor versus elective repeat caesarean. We could say that trial of scar after previous caesarean delivery is safe for patients who are managed in tertiary care centers and in those hospitals where intensive surveillance, expertise and facilities for emergency caesarean section and exploratory laparotomies are available.

In our study we also founded young maternal age as a positive predicator for successful VBAC as majority of women who delivered vaginally age below 30 years .Similar findings have also been reported by other authors[17,18]. There was no maternal mortality or fetal death in our study.

CONCLUSIONS

Patients with previous one caesarean section can have a successful vaginal delivery provided regular and intensive antenatal surveillance is provided. The key method is to provide proper counseling, evaluation and monitoring for trial of labor. Our study showed that trial of labor is relatively safe procedure but it is not risk free and should not be under taken in casual manner and should be taken place in a well equipped set up with facilities of immediate caesarean section. We also found that younger age of women is an important factor for success of vaginal birth.

We recommend a randomized controlled trial among women undergoing a Trial of labor and a longitudinal cohort study among women with previous cesarean to evaluate adverse outcomes, with focused attention on both mother and the infant.

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