

Vaginal birth after cesarean section: A retrospective study

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ABSTRACT

Objective: The rising number of women undergoing elective repeat cesarean has been one of the principal reasons for the steady increase in the cesarean delivery rate. This study aim was to assess vaginal birth rates after cesarean (VBAC) in an educational hospital at Khorramabad, Lorestan.

Methodology: A retrospective analysis was performed on the obstetric data from medical records of 685 deliveries that underwent cesarean section in their previous delivery.

Results: VBAC rate among women with previous cesarean section was 10.4% (71 cases). The most frequent normal vaginal delivery was seen in women with a previous Kerr uterine incision (74.6%) and a history of one previous cesarean (69%).

Conclusions: VBAC delivery rate is low in our set up and proper counseling for trial of labor and evaluation of the cases of women with prior cesarean section has been considered a key method of reducing the cesarean section rate.

KEY WORDS: Vaginal birth after cesarean, Low segment cesarean section, Trial of labor.

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INTRODUCTION

Delivery rate by Cesarean section varies internationally from 10-25%, and over last two decades vaginal birth has experienced considerable decline.^{1,2} A national study in the nineteen province of Iran in 1994 showed that the cesarean rate was 21% in governmental hospitals and 42% for non - governmental

hospitals.³ Similar data in year 2000 showed an increase in cesarean rate to 27% and 58% for governmental and nongovernmental hospitals respectively.⁴ Previous Caesarean delivery is the most frequent indication for Caesarean section, and the stimulus for interest in vaginal birth after caesarean section is probably the solution for the progressive rise in the caesarean section rate.^{1,2} Vaginal birth rates after caesarean (VBAC) is usually safer for the mother than a repeat caesarean especially if the wish for an additional pregnancy is estimated to be high, and although it does carry a very small risk of uterine rupture, the current guidelines state that this risk should neither dissuade women from choosing VBAC nor prevent service providers from offering trial of labor to women who choose this option. This study was carried out to determine the frequency of VBAC in our set up.

METHODOLOGY

After being approved by the ethical committee of the university, we investigated the frequency of vaginal child birth in 685 deliveries of women with

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previous cesarean section in Asalian Hospital, Khorramabad the capital city of Lorestan province.

RESULTS

Six hundred and eighty five patients who underwent caesarean section in the previous delivery were included in this study. VBAC rate among women with previous cesarean section was 10.4% (71 cases). Remaining had repeated cesarean delivery (89.6%).

Among women with vaginal delivery, 49 cases (69%) had a history of one previous cesarean, 18 (25.4%) and 4 cases (5.6%) had two and three sections, respectively. The most frequent normal vaginal delivery was seen in women with a previous Kerr uterine incision (74.6%), while 18 women (25.4%) had low transverse incision in previous cesarean section. The indications for previous caesarean section are shown in Table-I.

DISCUSSION

We found that, in our setup, only 10% of women who underwent caesarean section in the previous delivery had vaginal child birth which is lower compared with those reported currently from other nations and neighboring countries.^{1,2}

Previous Caesarean delivery is the most frequent indication for Caesarean section.^{1,2} During the half

of 20th century, a caesarean section implied that all subsequent pregnancies were very likely to be delivered the same way. This policy was the result from the fear of catastrophic uterine scar rupture of classical caesarean section, which persisted even after its replacement with low segment caesarean section. Rupture of the uterus is the major risk for women laboring after a prior caesarean section. Many studies have proved that scar dehiscence occurs far less frequently than what is thought in low segment caesarean section. Trial of labor increases slightly the risk of uterine rupture by 0.24%, with an incidence ranging from 0.4–1.2%.¹ The occurrence of this rare but potentially catastrophic event is minimized with appropriate patient selection and labor management.

Repeated caesarean delivery accompanies with increased risks of transfusion, fever, abnormal placentation in a subsequent pregnancy and hysterectomy and even maternal death as compared with a trial of labor. These risks may be less important in developed countries where many women have now only one or two children, but in developing countries family size is much larger, and some women may wish an additional pregnancy and this option may be the rule rather than the exception in developing countries. In addition, vaginal birth has physical as well as psychological benefits for both the mother and the baby; and labouring and giving birth – that is, giving birth ‘normally’ – is something that matters a lot to many women.⁵ These facts together with the lower reported incidence of uterine rupture and consequent maternal and fetal compromise strongly support for the trial of labor in carefully selected patients with previous caesarean section. The American College of Nurse-Midwives (ACNM) strongly supports the practice of vaginal birth after caesarean for women who are appropriately selected, counseled and managed.⁶ This position is consistent with current researches which report that successful VBAC results in significant benefits and fewer risks for women and infants than repeat caesarean delivery. The success rate of a trial of labor after Caesarean ranges between 50% and 85%.^{7,8} Predictors of successful VBAC include nonrecurring indication for Caesarean birth, such as malpresentation or gestational hypertension, and a previous vaginal delivery, where success rates are as high as 82%.⁹ When the previous Caesarean birth was for dystocia, failure to progress, or cephalopelvic disproportion, some studies found the rates of successful VBAC comparable⁹, while others reported lower-than-expected rates.¹⁰

Table-I: The indications for previous caesarean section among women with vaginal delivery.

<i>Indications for previous caesarean section</i>	<i>N</i>	<i>Percentage</i>
Breech presentation	19	26.8
Fetal distress	16	22.5
Failure to progress in labor	12	16.9
Twins	3	4.2
Pregnancy induced	1	1.4
hypertension		
Placenta previa	5	7.1
Placental abruption	2	2.8
Transverse lie	4	5.6
Undetermined	9	12.7

The policy of once a caesarean always a caesarean section must be abandoned and replaced by once a caesarean always a hospital delivery. In developing countries like Iran it is better to give trial of labour in patients who do not have absolute contra-indications for vaginal delivery. Departmental policy regarding the criteria for selection of case, for trial of labor should be analyzed in depth and reviewed in order to increase the percentage of cases, which could be enrolled for trial of labour. Well established and ongoing communication between midwifery and obstetric providers to facilitate transfer of care and surgical intervention is essential to promoting optimal outcomes. Surveys evaluating rates of neonatal and maternal mortality for vaginal births among women with previous cesarean in our country is needed.

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Authors' Contributions:

MG JM gave concept and designed the study and edited the manuscript.

MN: participated in data collection and statistical analysis.

HA: participated in data collection and wrote first draft of the manuscript. All authors read and approved the final manuscript.