

# Frequency of Successful Vaginal Birth after Previous One Cesarean Section in Low Risk Pregnant Women

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## Abstract

**Aims and Objectives:** determine the frequency of successful vaginal birth after cesarean section VBAC in low risk pregnant women.

**Study Design:** It was a descriptive study.

**Duration:** From 2010 to 2014.

**Material and Method:** A total of 130 cases who were at term (37)+ weeks of gestation, between 20 – 40 years of age with a single prior cesarean section, presenting in their next pregnancy (G<sub>2</sub>) with a single, live fetus in cephalic presentation and those who given the consent of trial of VBAC were included in the study while high risk cases e.g. hypertensive disorders, gestational diabetes mellitus, placental abruption etc were excluded from this review. All these cases were collected from Maternity and Children's hospital Hail, Kingdom of Saudia Arabia.

**Results:** In our study, 63.85% of the cases were between 20 – 30 years of age while 36.15% (n = 47) were between 31 – 40 years, mean  $\pm$  sd was calculated as

27.24  $\pm$  3.52 years, mean gestational age was 38.43  $\pm$  2.43 weeks while successful vaginal birth after cesarean section was recorded in 78.46% (n = 102) while 21.54% (n = 28) had failed trial of VBAC.

**Conclusion:** Higher success rate of vaginal birth after one cesarean section in low risk pregnant women is recorded while no significant adverse outcome in these cases is found. However, in our setup it is safe and cost-effective as well.

**Key Words:** Cesarean delivery, low risk, VBAC, success rate, safe, cost effective.

## Introduction

Worldwide, most common surgical procedure performed on women is cesarean section.<sup>1</sup> Recent rate of cesarean section in China was recorded in 46% while 25% in various Asian and European countries.<sup>2</sup> Previous concept “once a cesarean section always a cesarean” is not acceptable in new era. Various studies reveal that cephalopelvic disproportion (CPD), previous cesarean section and fetal distress are the most common causes of cesarean section and contributes 60 – 80% of cesarean sections.<sup>3-5</sup>

Deliberate efforts were made to re-examine the practice of elective cesarean section to reduce this higher rate and health care cost relating to cesarean section.<sup>6-7</sup> Women with prior cesarean section undergoing second cesarean section may have an increased risk of maternal morbidity and mortality.<sup>8-10</sup>

Trial of vaginal birth after cesarean delivery is considered to be safe and helpful to reduce the overall rate of cesarean section. If trial of labour is allowed by the patients, only 1 out of 3 cases require cesarean section. However, in women, the concern regarding increased maternal and perinatal morbidity has decreased

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the attempt of vaginal birth with prior cesarean section.<sup>9</sup>

It is clearly evident that significant and serious but not frequent risks are recorded in women with VBAC<sup>11-12</sup> and repeat elective caesarean section (CS).<sup>13</sup> The exact frequency of VBAC is not recorded properly and varies between medical health centers and different health clinics. History of vaginal birth especially VBAC is the only best tool to predict a successful VBAC and revealed in 80 – 90% planned VBAC success rate.<sup>13</sup>

We planned this study to evaluate the frequency of VBAC after one previous cesarean section so that our recorded frequency may be helpful for women while deciding repeat elective cesarean section or VBAC.

**Material and Methods**

A total of 130 cases who were at term (37)+ weeks of gestation, between 20 – 40 years of age with a single prior cesarean section, presenting in their next pregnancy (G<sub>2</sub>) with a single, live fetus in cephalic presentation and those who given the consent of trial of VBAC were included in the study while high risk cases e.g. hypertensive disorders, gestational diabetes mellitus, placental abruption etc were excluded from this review. All these cases were collected from Maternity and Children's hospital Hail, Kingdom of Saudia Arabia during 2010 to 2014.

A detailed information including patient name, age, gestational age, parity was recorded. As the labour started each patient was fully monitored by following standard protocols. Women who were having no fetal decent or cervical change (with adequate contractions 40 sec duration > 3 contractions/10 min) for more than two hours were considered as failed trial and cesarean section was done in these cases. The mode of delivery of each patient was recorded. All this information was collected on a pre-designed proforma.

We used SPSS version 14 for statistical analysis of the data. The demographic variable like age was recorded as simple descriptive statistics giving mean and standard deviation. Frequency and percentage was presented for mode of delivery i.e. normal vaginal delivery or cesarean section.

**Results**

All patients fulfilling the inclusion/ exclusion criteria

were enrolled to determine the frequency of successful vaginal birth after cesarean section.

In our study, 63.85% of the cases were between 20 – 30 years of age while 36.15% (n = 47) were between 31 – 40 years, mean ± sd was calculated as 27.24 ± 3.52 years, mean gestational age was 38.43 ± 2.43 weeks while successful vaginal birth after cesarean section was recorded in 78.46% (n = 102) while 21.54% (n = 28) had failed trial of VBAC.

**Table 1:** Age Distribution.

Age in Years	No. of Cases	Percentage
20 – 30	83	63.85
31 – 40	47	36.15
Total	130	100
Mean ± SD	27.24 ± 3.52	

**Table 2:** Frequency of Success VBAC.

Successful VBAC	No. of Cases	Percentage
Yes	102	78.46
No	28	21.54
Total	130	100

**Discussion**

The rate of cesarean section is increased dramatically in recent decades and justified the old myth that “once a caesarean always a caesarean” which is no more accepted. The recent data showing favour of successful VBAC in more than 80% of the cases.

In our study, 63.85% of the cases were between 20 – 30 years of age while 36.15% (n = 47) were between 31 – 40 years, mean ± sd was calculated as 27.24 ± 3.52 years, mean gestational age was 38.43 ± 2.43 weeks while successful vaginal birth after cesarean section was recorded in 78.46% (n = 102).

Our findings correspond with Rabeea Sadaf and colleagues<sup>14</sup> who conducted a study to assess the usefulness of trial of scar in patients with previous one cesarean section and to know the frequency of vaginal delivery and repeat caesarean section (CS) in these patients, they recorded that out of 50 pregnant women

with previous one CS, 36 (72%) patients were successfully delivered vaginally while 14 (28%) had emergency lower segment CS.

Another study<sup>15</sup> conducted between 20 – 34 years of age in the year 1997 with the history of cesarean section and successful vaginal birth after cesarean section was recorded in 67.9%.

Some – other studies recorded that 60 – 80% of women can achieve a normal vaginal delivery following a previous LSCS,<sup>16-18</sup> these findings also support our results. Brattele and co-workers recorded 65.6%.<sup>19</sup>

Birgisdottir BT and co-workers<sup>20</sup> evaluated the frequency of different modes of delivery after one previous cesarean section and those factors which may influence mode of delivery and recorded that Trial of labor (TOL) was initiated for 564 women of which 61% were successful.

In our study, very few cases completed with use of vacuum extractor. It is also important to mention more than 3 years of interval between two births was recorded in majority of the cases, while in 88% women had no complications while giving vaginal birth. The risk of uterine rupture is increased in women giving trial of vaginal birth after cesarean section. However, some studies are of the view that proper application of Sintoicin at birth after caesarean section reduces this risk while spontaneous vaginal delivery after cesarean section do not have higher risk of uterine rupture, similar in our study.

Finally, our study shows a higher frequency of successful VBAC which is safe and cost effective in low risk cases.

## Reference

- Dodd JM, Crowther CA, Hiller JE, Haslam RR, Robinson JS. Birth after cesarean study-planned vaginal birth or planned elective repeat cesarean for women at term with a single previous cesarean birth; protocol for a patient preference study and randomized trial. *BMC Pregnancy Childbirth*. 2007; 7: 17.
- Hafeez M, Yasin A, Badar N, Pasha IM. Prevalence and Indications of Caesarean Section in a Teaching Hospital. *JIMSA*, 2014; 27: 15-6.
- Qazi GR, Akhtar S. Obstetrical correlates of the first time cesarean section, compared with the repeated cesarean section. *J Coll Phys Surg Pak*. 2007; 17: 611-4.
- Gonen R, Tamir A, Degani S, Ohel G. Variables associated with successful vaginal birth after one cesarean section: a proposed vaginal birth after cesarean section score. *AmJ Perinatol*. 2004; 21: 447-53.
- Liang WH, Yuan CC, Hung JH, Yang ML, Yang MJ, Chen YJ. Effect of peer review and trial of labour on lowering cesarean section rates. *J Chin Med Assoc*. 2004; 67: 281-6.
- Socol ML, Gancia PM, Paeceman AM, Dooley SL. Reducing cesarean births in a primarily private university hospital. *Am J Obstet Gynaecol*. 1993; 168: 1748-1754.
- Cowan RK, Kinch RAH, Ellis B, Anderson R. Trial of labor following CS. *Obstet Gynecol*. 1994; 83: 933-936.
- Wall LL. Cost effectiveness of elective CS after one prior low transverse cesarean. *Obstet Gynecol*. 2000; 96: 482.
- Grobman WA, Peaceman AM, Socol ML. Cost – effectiveness of elective cesarean delivery after one prior low transverse cesarean. *Obstet Gynecol*. 2000; 95: 745-751.
- Walker R, Golois E, Turnbull D, Wilkinson C. Why choose CS. *Lancet*. 2001; 357: 635-636.
- Women’s Hospital Australasia Clinical Practice Guidelines. Vaginal birth after cesarean (VBAC) or repeat elective caesarean. [online]. 2005 [cited 2009 July 7]: 1-11.
- Dodd JM, Crowther CA, Huertas E, Guise JM, Horey D. Planned elective repeat cesarean section versus planned vaginal birth for women with a previous cesarean birth. *Cochrane Database Syst Rev*. 2004; (4): CD004224.
- Royal College of Obstetricians and Gynaecologists. Birth after previous cesarean birth. Guideline, No. 45. 2007.
- Sadaf R, Nasreen A, Zahid M. Trial of scar in patients with previous one cesarean section. *JPMI*. 2007; 21: 21-4.
- Saeed M, Rehan N, Riaz L. Trial of labour after caesarean section. *Mother. Child*, 1997; 35: 110.
- Bais JM, Vander Borden DM, Pel M, et al Vaginal birth after cesarean section in a population with a low overall caesarean section rate. *Eur J Obstet Gynaecol Reprod Biol*. 2001; 96 (2): 158-62.
- Chanrachakul B, Herabutya Y. Epidemic of cesarean section at the general, private and university hospitals in Thailand. *J Obstet Gynaecol Res*. 2000; 26 (5): 357-61.
- Avery MD, Carr CA, Burkhardt P. Vaginal birth after cesarean section: a pilot study of outcome in women receiving midwifery care. *J Midwifery Women Health*, 2004; 49 (2): 113-7.
- Bratelle F, Cravello L, Shojai R, et al. Vaginal birth following two previous cesarean section. *Eur J Obstet Gynaecol Reprod Biol*. 2001; 94: 23-26.
- Birgisdottir BT, Hardardottir H, Bjarnadottir RI, Thorkelsson T. Vaginal birth after one previous cesarean section. *Laeknabladid*. 2008; 94 (9): 591-7.