

# Outcome of Trial of Labour After Previous Single Caesarean Section

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## ABSTRACT

**Objectives:** The aim of this study was to determine the frequency of successful trial of labour after previous cesarean section.

**Study Design:** Descriptive study

**Place and Duration of Study:** This study was conducted at the Obstetrics and Gynecological Units 1, Nishtar Hospital, Multan from July 1 to December 31, 2016.

**Materials and Methods:** One hundred and ninety five patients who have a trial of labour after a C section were included. Data entered and was analyzed from the SPSS 17 version.

**Results:** One hundred and ninety-five patients were included. The baseline characteristics of these patients were as follows: 105 (54%) were mostly in the age group between 25 and 29 years of age. 52 (27%) cases were in age groups between 20-24 years and 38 (19%) patients in the age group between 30-33 years of age. The average age was  $25.75 \pm 2.80$  years. The average gestational age was  $38.15 \pm 0.70$  weeks. The 78 (40%) cases were in gestational age 38 weeks. 76 (39%) of patients were with 39 weeks of gestation. 42 (22%) patients were gestational age 37 weeks. The success of trial of labour showed in Table 3. 154 (79%) patients have a successful trial. Most of the patients 138(71%) had natural vaginal delivery, 41(21%) with delivery by C section.

**Conclusion:** This study shows that patients who were undergone by of labour after previous C section is safe due to non-relapse and have a success rate of 78%, which is encouraging. Therefore, it is said that vaginal delivery after cesarean delivery should be given to the selected patients as much as possible in the hospital with 24-hour facility to run the theater and blood transfusion services.

**Key Words:** Trial labor; vaginal delivery; cesarean section uterine rupture.

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## INTRODUCTION

The trial of labour on behalf of one of the most important and challenging obstetric practice.<sup>1</sup> A The trial of labour in patients with prior C section is a rational option if the patients are vigilantly chosen & monitored.<sup>2</sup> Many years of US dominance Practice is followed by Cragin, the famous saying: "A caesarean section, always caesarean section" was first presented in that era of 1916.<sup>3</sup> The main cesarean section was carried out by classical longitudinal incision, prolonged, from the lower uterine fundus region. The classical cesarean section incision began to fall after the low transverse uterine incision in the mid-1920s by Kerr pioneered.

Fortunately, the risk of uterine rupture at low transverse caesarean section after delivery is about 10 times lower than that of post-classical cesarean delivery. Cesarean section is one of the mostly frequent surgical

interventions to keep the save of lives of mothers and newborns.<sup>4,5</sup>

Cesarean section rate has augmented radically in the world in the past three decades.<sup>6</sup> Although the total increase in cesarean section, still high perinatal mortality in the world.<sup>7</sup> Studies have shown that 30-80% of women have a low section of cesarean can achieve vaginal delivery when the scar tested is done.<sup>8</sup> provided scar and subsequent vaginal delivery can help to reduce cesarean delivery rates. However, the risk of uterine rupture and scar, trial of labour failure related to other diseases is still the main problem that many practitioners facing in their practices.<sup>9</sup> labor trials should be based on the correct selection of hospitals for patients to provide 24 hours of facilities for the operation theater and transfusion services.<sup>10</sup> The aim of this study was to determine the frequency of successful trial of labour after previous cesarean section.

## MATERIALS AND METHODS

This was descriptive case study that was carried out at obstetrics and gynecological units 1, Nishtar Hospital, Multan, from July 1 to December 31, 2016. One hundred and ninety five patients who have a trial of labour after a C section were included with a 95% confidence level, 6.5% of the errors and the expected percentage of vaginal deliveries as well as 75% of

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pregnant women who had a trial of labor had a cesarean section calculated. Using non-probability sampling technique a sample of 195 patients was taken. The inclusion criteria were previous a caesarean section, single person full term pregnancy pregnant women ( $> 37$  weeks), vertex presentations and no congenital anomaly. Ultrasound examination, enough maternal pelvis size in clinical, labor and cervical dilatation of 2 cm and 1.5 cm of cervical length spontaneous episodes of abnormalities. Exclusion criteria were on ultrasound the placenta previa or intrauterine growth retardation. The informed consent was taken from all hundred and ninety-five pregnant women presenting through emergency and an outpatient department and fulfill the inclusion criteria. Their population profile is recorded in terms of age, pregnancy age and address.

The patient under the trial of the labour there should be a vigilant monitoring by partogram fetal heart rate monitoring with the availability of operating room, anesthesiologist and pediatrician. They are followed by delivery. Labor trial is abandoned if there is failure to progress; fetal distress and scar tenderness failure and repetition of cesarean section are done under this condition.

Data entered and was analyzed from the SPSS 17 version. Quantitative variables such as age and gestational age were presented as Mean $\pm$ SD. Qualitative variables like the successful trial of labour production, vaginal delivery presented as frequency and percentage.

## RESULTS

One hundred and ninety-five patients were included. The baseline characteristics of these patients were as follows: 105 (54%) were mostly in the age group between 25 and 29 years of age. 52 (27%) cases were in age groups between 20-24 years and 38 (19%) patients in the age group between 30-33 years of age. (Table No 1) The average age was  $25.75 \pm 2.80$  years. The average gestational age was  $38.15 \pm 0.70$  weeks. The 78 (40%) cases were in gestational age 38 weeks. 76 (39%) of patients were with 39 weeks of gestation. 42 (22%) patients were gestational age 37 weeks. (Table No 2) The success of trial of labour showed in (Table No 3). 154 (79%) patients have a successful trial. Table 4 shows the type of delivery. Most of the patients 138(71%) had natural vaginal delivery, 41(21%) with delivery by C section. (Table No 4)

**Table No. 1: Age distribution of patients**

Age	No. of patients	Percentage
20-24	52	27
25-29	105	54
30-33	38	19

**Table No. 2: Incidence based on gestational age**

Gestational age (Weeks)	No. of patients	Percentage
37	42	22
38	78	40
39	76	39

**Table No. 3: Incidence of success of Trial of Labour**

Success of Trial of Labour	No. of patients	Percentage
Yes	154	79
No	41	21

**Table No. 4: Incidence based on Type of delivery**

Type of delivery	No. of patients	Percentage
SVD	138	71
C Section	41	21
Vacuum delivery	10	5
Forceps delivery	6	3

## DISCUSSION

This study shows that the average age of patients is 20-33 years from  $26.73 \pm 2.90$  years. A study showed that women who had undergone elective repetition of cesarean delivery were more likely to have less than 30 years of age.<sup>10</sup> the study showed an average gestational age of  $38.15 \pm 0.76$  weeks compared with other international Research. Forty (23%) patients had a gestational age of 37 weeks. Sixty-first nine (39%) Patients were in the 38 weeks of gestation age group. Sixty-one six (38%) cases were of gestational age 39 weeks. In the study, the average gestational age of delivery was  $<40$  weeks.<sup>11</sup>

Another study reported that gestational age in 37 to 40 weeks gestational vaginal birth after caesarean delivery (VBAC) was 70.21% after less than 37 gestational weeks VBAC was 58.80% with the completed 40 weeks and above VBAC rate was 62.50%. Indicating that VBAC had a slight increase in failures those after 40 weeks.<sup>12,13</sup>

A full-term study was performed by Kamath et al selected neonates at 37, 38, 39, 40 and greater than or equal to 41 gestational weeks for neonatal outcomes. Because of the comparison of gestational age for neonatal outcomes rather than the expected delivery mode of this study, it is impossible to make any conclusions on the impact of gestational age women trying to apply trial of labour.<sup>14</sup> in another study reported by Saeed, labor induced in 14.3% of women and 65.7% of women went to spontaneous labor.<sup>15</sup> The vaginal delivery rate was 67.9%. In 75% delivery achieved by cesarean section delivery and 25% by natural childbirth. The overall cesarean section rate was 32.1%. The most common indications for repeated cesarean section were failed to make progress (44.4%)

fetal distress (27.7%) and failure induction (16.7%). No maternal or fetal death and labour trials was associated with the smallest maternal or fetal disease. The number of cesarean sections before vaginal delivery does not seem to affect the outcome. The success rate in this study (67.9%) was comparable to that of other countries.<sup>16</sup>

In the study by Langdon reported a significant reduction in trial of scar globally due to concern of safety, especially due to uterine rupture. The study reported by Martin, the patient had to receive counseling when the uterine rupture could occur at the beginning of the labor and the planning repeated caesarean section could not be guaranteed of safety. The VBAC drop was considered to be in many countries probably due to previous labor attempts in the trial and not because of the Change in the success rate reduced.

The United States National Health Statistics Center showed that in 1996 VBAC rate reached the largest 28.3%, then rate declined, only 12.7%. A study showed that the chance of successful VBAC was 72-76%.<sup>17</sup> Another study reported by Dunn, maternal satisfaction was more in post-vaginal delivery.<sup>18</sup> The discussion of uterine rupture should therefore should not discourage pregnant women from trying to vagina childbirth. 75% of people who successfully gave birth to vaginal delivery of women with low morbidity means that the overall women plan a vaginal delivery after cesarean section suffer only half of the morbidity of women receiving elective cesarean section.<sup>19</sup>

## CONCLUSION

This study shows that patients who were undergone by of labour after previous C section is safe due to non-relapse and have a success rate of 78%, which is encouraging. Therefore, it is said that vaginal delivery after cesarean delivery should be given to the selected patients as much as possible in the hospital with 24-hour facility to run the theater and blood transfusion services.

**Conflict of Interest:** The study has no conflict of interest to declare by any author.

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