

Vaginal Birth After Caesarean Section (VBAC)

J IQBAL F NAUSHEEN F A BHATTI S SHEIKH

Department of Obstetrics & Gynaecology, Jinnah Hospital/Allama Iqbal Medical College, Lahore
Correspondence to Dr. Javed Iqbal, Senior Registrar E. mail: dawoodee@hotmail.com

Aims & Objective: To find out the rate of vaginal delivery after one caesarean section **Study Design:** Non-interventional, descriptive study **Study Setting:** Department of Obstetrics & Gynaecology, Allama Iqbal Medical College and Jinnah Hospital, Lahore. **Materials and Methods:** A trial of vaginal delivery was carried out on 100 patients with previous one caesarean section. Selection criteria were subjects with normal pregnancy, adequate maternal pelvic dimensions vertex presentation and spontaneous onset of labour with previous one uncomplicated LSCS. Patients with classical caesarean section, medical complications, multiple pregnancy, IUGR, placenta previa and extensive myomectomy were excluded from the study. Informed consent was taken from all patients; trial of scar was given with vigilance. Maternal and fetal monitoring was carried out with facility of operation theatre, anaesthesia and paediatrician. **Results:** Majority of patients was between 20–24 years of age. 58% of the patients were primipara. Successful vaginal delivery was achieved in 72% and rate of repeat section was 28%. Leading indications for repeat section were failure to progress, (50%), fetal distress (28.5%) and scar tenderness (21.43%). No maternal & fetal mortality occurred. **Conclusion:** Trial of scar after one LSCS should be encouraged with vigilant monitoring provided no obstetric contraindication exists.

Key words: VBAC, Scar tenderness, maternal mortality

Caesarean delivery is a surgical operation to deliver a baby through an incision in the uterus. Its rate varies internationally from 10 – 25%. During the 1st 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 LSCS without the same basis¹. When uterine rupture occurred with a previous LSCS, it was not as disastrous event as with USC. These observations heralded the era of the trial of scar or vaginal birth after caesarean delivery (VBAC). VBAC is becoming more and more common. The stimulus for interest in vaginal birth after CS was probably the progressive rise in CS rate^{2,3,4}.

A trial of labour after one LSCS should be encouraged in most women who are willing to attempt it, provided no obstetric contraindication exists^{5,6} but under supervision to reduce caesarean delivery rate⁷. Many studies proved that scar dehiscence occurs far less frequently what is thought in LSCS. Labour after previous caesarean section has a 75% success rate with the risk of uterine rupture of less than 1%^{8,9,10,11,12}. Trial of labour increases slightly the risk of uterine rupture by 0.24%¹³.

In developing countries like Pakistan it is better to give trial of labour in patients who do not have absolute contraindications for vaginal delivery. The policy of once a caesarean always a caesarean section must be abandoned and replaced by once a caesarean always a hospital delivery¹⁴. Healthcare personnel should be trained regarding management of the cases with previous section. Departmental policy regarding the criteria for selection of case, for trial of labour should be analyzed in depth and reviewed in order to increase the percentage of cases, which could be enrolled for trial of labour.

There is now increasing emphasis on the need for patients to be involved in medical care, with higher level of motivation and satisfaction. Not only the risk of maternal mortality is 2–4 times higher with repeat section than that of vaginal delivery but the maternal morbidity is also very high¹⁵. This study was based on the same idea of giving trial of vaginal delivery after one LSCS when there is no maternal and fetal contraindication to vaginal birth, after detailed discussion with patients regarding the risk, benefits, complications and alternatives to the trial of labour.

Subjects and methods:

One hundred patients were selected from Department of Obstetrics & Gynaecology, Jinnah Hospital, Lahore for trial of labour with normal pregnancy, clinically adequate pelvic dimensions, vertex presentation and spontaneous onset of labour. Patients with previous classical caesarean section, unknown caesarean section, macrosomia and women with additional obstetrical and medical complication like diabetes, hypertension, multiple pregnancy, malpresentation, intrauterine growth restriction and placenta previa were excluded from the study. After admission, detailed history, thorough examination, baseline investigations were carried out, informed consent was taken and trial of labour was given to the patient under vigilant monitoring with the facility of operation theatre, anaesthesia and paediatrician. Maternal and fetal monitoring was accomplished under close supervision by one on one care.

Results:

Rate of caesarean section was 19.27%. Out of these patients one hundred patients with previous caesarean were selected according to the criteria already mentioned and the cases were managed according to the set protocol.

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Most of the patients were in age group 20-24 years (Table I). The parity of the patients undergoing study is shown in Table II.

Table I Distribution of women according to age

Age (Years)	n=	%age
15-19	10	10.0
20-24	52	52.0
25-29	26	26.0
30-34	12	12.0

Table II Parity of patients

Parity	n=	%age
01	58	58.0
02	18	18.0
03	06	06.0
04	08	08.0
≥ 05	10	10.0

72 patients delivered vaginally and repeat caesarean section was carried out in 28 patients as shown in figure I. Indications for previous caesarean section are shown in figure II among them most frequent indication was fetal distress 44%, failure of progress of labour 32%, placenta previa 8%, breech presentation 5%, hypertensive disorders of pregnancy 6%, abruptio placentae 2%, cord prolapse 2% and transverse lie were 1%. Causes of failure of trail of labour in our study are shown in figure III. In 14 (50.0%) cases it was due to failure of progress, in 8 (28.57%) cases fetal distress and scar tenderness in 6 (21.42%) cases.

No major complications occurred in our study. There was no uterine rupture but scar dehiscence was noted in one case. There was no intrapartum and early neonatal death in the study. 17(23.61%) neonates after vaginal delivery were shifted to nursery for low APGAR score. 15 neonates were kept under observation for 2-3hrs and remaining two were kept for 3 days due to respiratory problem and suspicion of meconium aspiration. Eight neonates after repeat caesarean section were shifted to nursery for low APGAR score. Among these five neonates had meconium aspiration and three neonates without meconium aspiration were shifted back after 2-3 hrs (Fig. IV).

Figure One patient with previous caesarean section & mode of delivery

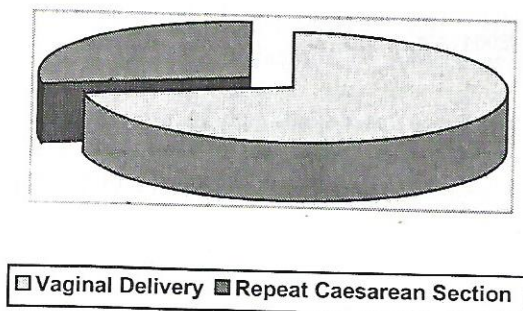


Figure II Indications for previous caesarean section

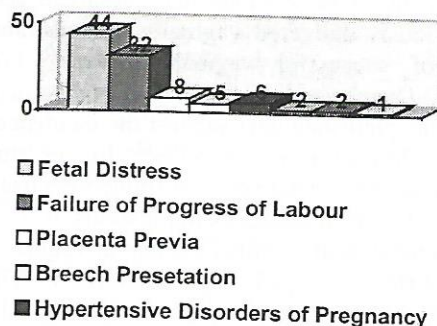


Figure III Causes of failed trail of labour

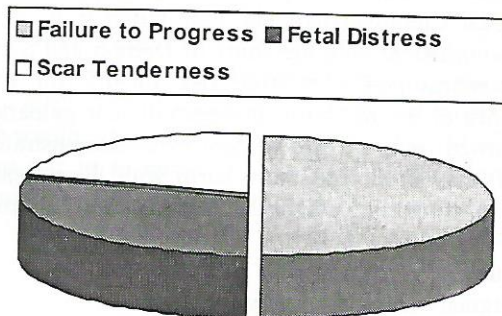
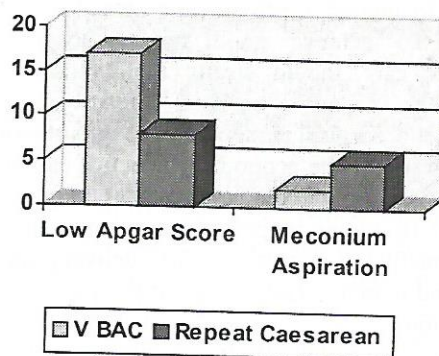


Figure IV Neonatal Outcome



Discussion:

Each delivery method has its advantages and disadvantages. It is ultimately the responsibility of the obstetrician to ensure that the delivery plan is appropriate for each individual case. The stimulus for interest in vaginal birth after caesarean section was probably the progressive rise in the caesarean section rate.

The increased morbidity and mortality associated with caesarean section as compared to vaginal delivery is clearly born out by the literature¹⁶. This fact together with the lower reported incidence of uterine rupture and consequent maternal and fetal compromise strongly argues for the trial of labour in carefully selected patients with previous caesarean section⁵. The rate of normal vaginal delivery after previous one caesarean section was 72% 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^{9,10,19}. In our study patients with previous one caesarean section, who had previously delivered vaginally demonstrated a better chance of successful vaginal delivery¹⁷ (76.19% vs 68.96%). There was no maternal mortality in this study. Most of the published data suggest the incidence of uterine rupture following LSCS is <1%¹². In our study six C-section was carried out for scar tenderness but there was no case of scar rupture. Complications were two times higher in patients after failed attempt at vaginal delivery as compared to successful vaginal delivery. The greatest morbidity occurred in women who attempted a vaginal delivery after a previous C-section and failed to achieve that mode of birth¹⁸. The perinatal morbidity was higher in the repeat caesarean patients after failed trail of labour. This is consistent with the study of Demott and Sand-mile also demonstrated a relative risk of 4.5 for transient tachypnea of the newborn. Postpartum scar palpation was not carried out, no study has ever demonstrated any benefit, may in-fact do more harm with the potential for infection, converting a dehiscence into a larger rupture.

Conclusion:

The vaginal birth after a lower segment caesarean section is advantageous to the mother and has no adverse effect on the fetus. A trail of labour after one lower segment caesarean section should be encouraged in women who are willing to attempt it, provided no obstetric contraindication exists. To achieve good results hospitals providing obstetric care should ensure the availability of blood, operating rooms, neonatal resuscitation, nursing, anaesthetic, surgical personnel and vigilant monitoring.

To justify the economic impact of caesarean delivery includes longer length of hospital stay, use of more medical resources longer convalescence and higher cost. The benefits of normal vaginal delivery out weight the risks and is more economical for the patient as well as the poor nation.

We need education efforts and peer review to encourage Vaginal Birth after Caesarean and restricting Caesarean section for labour dystocia meeting defined criteria. Such efforts, along with increased understanding of the proper use and limitations of EFHRM, may further reduce in appropriate caesarean delivery.

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