TRIAL OF SCAR IN PATIENTS WITH PREVIOUS ONE CAESAREAN SECTION

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ABSTRACT

Objective: *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.*

Material and Methods: This descriptive study was conducted from July 2001 to June 2002, at Khyber Teaching Hospital Peshawar on 50 pregnant women with a history of previous one cesarean section and with no contraindication for vaginal delivery. Patients with more than one CS and those with medical disorders were excluded. A detailed history and examination of each patient was done. The clinical data was recorded in proformas and the results were tabulated.

Results: *Among 50 pregnant women with previous one CS, 36 (72%) patients were successfully delivered vaginally while 14(28%) had emergency lower segment CS. Out of 36 vaginal deliveries, 27 (75%) were normal vaginal deliveries while 9 (25%) were delivered with instrumental support i.e. 7 (19.4%) with outlet forceps and 2 (5.6%) by vacuum extraction. One patient (2%) developed scar dehiscence and lost her baby which resulted in one still birth (2%) in this study. One (2%) patient with imminent rupture underwent timely CS and baby was saved.*

Conclusion: *A trial of scar may be given to all pregnant women with previous cesarean section except those with absolute contraindications. A woman with one previous cesarean section delivery with a low transverse incision should be counseled and encouraged to attempt labor in her current pregnancy.*

Key Words: *Trial of Scar, Normal vaginal delivery.*

INTRODUCTION

Vaginal birth after Cesarean section (VBAC) is a vaginal delivery after one Cesarean section. Up to 80% of women will be able to have a VBAC. American College of Obstetricians and Gynaecologists (ACOG) recently updated their opinion on VBAC and stated that "VBAC is safer than repeat Cesarean".[1] ACOG strongly encourages women with a lower uterine incision to deliver vaginally. This is called "*Trial of Scar*". A woman can attempt to deliver vaginally provided that there are no clear cut medical/ obstetrical reasons which make it difficult.

The idea of giving *trial of scar* to a woman with previous Cesarean Section (CS) was presented by Riva and Teich in 1961.[2] Women who delivered their first child by cesarean delivery has increased risks for malpresentation, placenta previa, antepartum hemorrhage, placenta accreta, prolonged labor, emergency cesarean, uterine rupture, preterm birth, low birth weight, small for gestational age and stillbirth in their second delivery.[3] A Cesarean Section is a major surgery, and there are increased risks of complications including: damage to organs near the uterus (bladder, intestine, ureter), a greater blood loss (twice as much as vaginal delivery) with an increased chance for requiring blood transfusion, and a greater risk of developing a post-partum infection (twice the risk of a vaginal delivery).[4] The main concern by attempting a trial of scar after a Cesarean Section is to know whether the muscles of the uterus will with-stand the strong uterine contractions of labor and not rupture over the old scar. That's why the name of Trial of Labor is replaced by Trial of Scar.[5] The National Institute of Health (NIH) consensus committee on Cesarean Section recommends that hospitals with appropriate facilities, services and staff for prompt emergency Cesarean birth with proper selection of cases should permit a safe *trial of scar* and vaginal delivery for women who had a previous lower uterine segment Cesarean Section.[6]

OBSTETRICAL RECORD

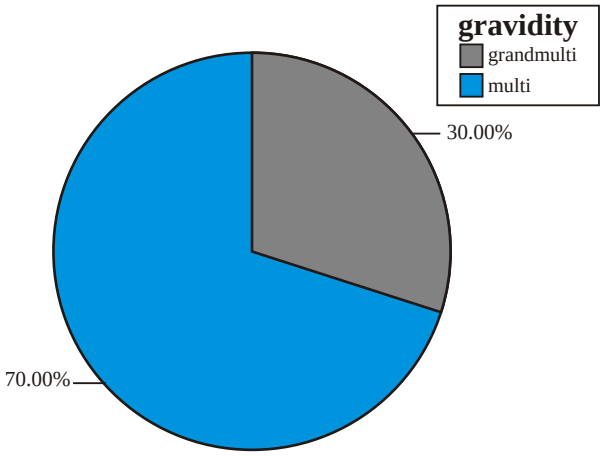

Fig-1

We conducted this study to assess the usefulness of trial of scar in case of previous one cesarean section and to know the frequency of vaginal delivery after caesarean section and the frequency of repeat caesarean section.

MATERIAL AND METHODS

This descriptive study included 50 pregnant women who had a previous one caesarean section and this time with a subsequent pregnancy admitted in Gynae "A" ward of Khyber Teaching Hospital. The target population for the study was selected on the basis of each consecutive case admitted in the unit who had not committed to a delivery method for the subsequent birth, and who had no contraindications to a Trial of scar. The clinical data of each case was recorded separately in a proforma. At the end of study, the results were tabulated and frequency of the successful trial of scar was calculated against those where cesarean section was performed.

Protocol for trial of scar in patients with previous one Cesarean Section:

Trial of scar was given to all those pregnant ladies who fulfilled the devised inclusion and exclusion criteria. The following investigations were done to exclude certain conditions in the presence of which trial of scar could not be instituted, these included: Full blood count, Blood Sugar, Routine Urine examination, Obstetrical Ultrasonography and Clinical Pelvimetery. Clinical examination and investigations helped whether Trial of scar could be given or not.

Inclusion Criteria

Any patient with previous one cesarean section. (elective or emergency), and who has got clinically adequate pelvis, singleton fetus with vertex presentation, and normal estimated fetal weight on ultrasonographic examination.

Exclusion Criteria

Any precious pregnancy (second baby after a very long duration of infertility, male baby after many female babies or vice versa), baby's position (like breech presentation), multiple gestations (like twins, triplets), pregnancy associated problems (as placenta previa, polyhydromnia, oligohydromnia), maternal medical problems (like Hypertension, Cardiac patient, Diabetes mellitus, Blood dyscrasias, or other metabolic disorders), a prior caesarean section with a vertical uterine incision or anomalies or previous rupture, ante-partum heamorrhage, bad obstetrical history (like multiple abortions), an active genital herpes infection, fetal congenital anomalies as detected by ultrasonographic examination, operative complications at the time of the first abdominal delivery (i.e. extensive cervical lacerations), when estimated weight of the fetus is more than 8 lbs, and moderate degree of cephalo-pelvic disproportion.

Statistical Analysis:

SPSS windows version 10 was used for analysis. Frequency of successful trial of scar and of previous one caesarean section was calculated.

RESULTS

A total of 50 pregnant women were included in the study on the basis of inclusion and exclusion criteria for trial of scar. Out of the total cases, 35 patients were multigravida and 15 were grand multigravida as represented in Fig-1.

All the previous caesareans were performed as emergency cases and were of low transverse type with no elective or classical caesarean section as shown in Table-1. The number of spontaneous labor was 43 compared to only 07 in the case of induced labor. The high rate of spontaneous labor is because most of the patients were referred to this tertiary care hospital in a state of clinical labor. The results are illustrated in Table-2. Among 50 pregnant women with previous one CS, 36 (72%) patients were successfully delivered vaginally while 14(28%) had emergency lower segment CS. Out of 36 vaginal deliveries, 27 (75%) were normal vaginal deliveries while 9

DETAILS OF PREVIOUS CAESAREAN SECTION

Type of Caesarean Section	Frequency (n=50)	%age
Emergency	50	100
Elective	0	0
Low Transvese	50	100
Classical	0	0

Table 1

LABOUR AND MODE OF DELIVERY IN PATIENTS WITH PREVIOUS ONE CAESAREAN SECTION UNDERGOING TRIAL OF SCAR

Characteristics		Frequency (n=50)	%age
Spontaneous labor		43	86
Induced labor		7	14
Successful vaginal delivery	Total	36	72
	Normal vaginal delivery	27	54
	Instrumental delivery	9	18
Emergency lower segment Caesarean Section		14	28

Table 2

(25%) were delivered with instrumental support i.e. 7 (19.4%) with outlet forceps and 2 (5.6%) by vacuum extraction.

Table 3 is showing fetal and maternal out come. There was a single accident during trial of scar i.e. one still birth happened due to scar dehiscence while 49 were delivered with good Apgar score. There were 23 (46%) male babies and 27 (54%) were female babies. All new born were of average weight (2.6-3.9Kg). The maternal outcome of trial of scar was judged as complications which were seen in the context of scar dehiscence, imminent rupture and rupture of the uterus. Unfortunately, one case suffered scar dehiscence which was paid with loss of a baby but in time rescue caesarean saved the mother. Another case was observed of having imminent rupture but emergency caesarean efforts were fruitful for the mother as well as the new born. There was no case of rupture uterus or maternal mortality.

DISCUSSION

Cesarean section is one of the major obstetrical surgical procedures that can be avoided in patients with previous one cesarean section by trial of scar. In our study, out of a total of 50 patients with previous one cesarean section, 36(72%) were delivered successfully vaginally.

A comprehensive review and meta-analysis of the literature were conducted to determine outcomes, costs and women preferences by method of delivery. More than 75% of the patients with previous one caesarean section for non-recurrent cause can be successfully delivered vaginally.[7] In 7 prospective cohort series involving 8899 patients, analysed by Enkin,[8] 6097 women (68.5%) were permitted a trial of labor, of whom 79.9% (4874) delivered vaginally and 20.1% (1223) by Cesarean section. Flamm et al[9]. studied 7299 women with previous cesarean deliveries and reported a 75% vaginal delivery rate in the 5022 women agreeing to a trial of labor and Miller et al.[10] Retrospectively reviewing 12707 trials of labor in a single institution over a 10-year period reported an 82% successful vaginal delivery rate. Enkin[8] analyzed six eligible studies and reported on their maternal morbidity statistics. These data reveal a uterine dehiscence/rupture rate of 1.5% for elective repeat cesarean section cases and 1.7% for all women undergoing a trial of labor (irrespective of eventual delivery mode), i.e. no significant difference. Flamm et al [9] reported a uterine rupture rate of 0.8% in their trial of labor cohort (39/5022). Miller et al reported a uterine rupture rate of 0.7% in women undergoing a repeat cesarean delivery, and McMehon et al. 0.3%.[11] The published data, therefore, would suggest that the incidence of uterine rupture during labor following a lower uterine segment cesarean section is less than 1%.

Najmi RS, et al[12] carried out a study at Sir Ganga Ram Hospital Lahore during 1999, to determine the mode of delivery following one C-section and to establish significance of different factors influencing the outcome. 50.32% (236) were subjected to trial of scar of which 59.75% (141) delivered successfully vaginally.

Saeed M et al[13] during 1997 studied 56 women, aged 20 to 34 years, who had previous Cesarean births. They were given a trial of scar. The rate of vaginal delivery was 67.9%.

A prospective study was under taken by Asaf KH, et al[14] during 1997 to evaluate the application of Rana's risk scoring system' for prediction of vaginal delivery in women who had a single previous lower segment Cesarean section for non-recurrent reasons. A total of 110 patients were

FETAL AND MATERNAL OUTCOME OF THE TRIAL OF SCAR

	Outcome	Frequency (n=50)	%age
Fetal Outcome	Alive	49	98
	Still born	1	2
Maternal Outcome	Scar dehiscence	1	2
	Imminent utrine rupture	1	2

Table 3

evaluated and 76 patients (69.1 %) delivered vaginally.

The success rate in our study (72%) compares favourably with reports of other studies. Therefore, it is concluded that a trial of scar after a prior low transverse Cesarean section in women without ongoing contraindications is safe for most women.

The benefits of trial of scar far overweigh the associated risks.

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