

Factors Affecting the Pregnancy Outcome in Patients with Previous One Caesarean Section

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Abstract

This case series study was designed to determine the factors affecting the pregnancy outcome in patients with previous one caesarean section.

The study was conducted at Marie Stopes Clinic Primium-1 Dhanmondi from July 01, 2012 to January 31, 2013.

A total of 150 patients with previous one caesarean section who presented at term were included in the study. The data were collected through proforma and subjected to statistical analysis.

Out of 150 patients, 81 (54%) patients had trial of scar and the remaining 69 (46%) patients underwent repeat elective caesarean section. Among those who had trial of scar only 35 (43.2%) patients achieved successful vaginal delivery and remaining 46 (56.8%) had emergency caesarean section. Common indication for repeat emergency caesarean section was non progress of labour (47.8%). It was frequent in women who reported late to hospital after the onset of labour and in women who did not seek antenatal booking in pregnancy. Maternal complications like post partum hemorrhage, scar dehiscence, wound infection and febrile illness were more in those who had emergency caesarean section. There was no maternal mortality in the study. Perinatal outcome was not affected by the mode of delivery. There were two perinatal deaths which occurred in non-booked patients who underwent emergency caesarean section.

Most of the women in our study had repeat caesarean section for failed progress. Regular antenatal check up and early report to hospital after the onset of labour can reduce the rate of repeat caesarean section.

Key words: *Caesarean Section, Vaginal birth after caesarean section.*

Introduction

The rising incidence of caesarean section all over the world has been of great concern both to the patients and obstetrician¹. Repeat caesarean section is one of the major reasons which have contributed greatly to high caesarean section rate². Cragin's once section always caesarean section must be abandoned and replaced by once a caesarean always a hospital delivery. Vaginal birth after caesarean section should be practiced in properly staffed and well equipped

hospitals. Pitkin RM³ aptly stated, "Many women with previous caesarean can be delivered vaginally and thereby gain substantial advantage, but neither the decision for trial of labour nor management during labour should be arrived at in a cavalier or superficial manner³."

Vaginal birth after caesarean section has been recommended, however, there are variations in patient's characteristics, which limit this practice. Trial of scar depends on the appropriate selection criteria, which include non-recurrent previous indication, known uterine incision and good maternal and foetal health in ongoing pregnancy. The present study was undertaken to identify factors which are responsible for the repeat caesarean section in our population.

Materials and Methods

This case series study was undertaken at Marie Stopes Clinic, Primium-1, Dhanmondi from July 01, 2012 to January 31, 2013. Convenient sampling was done. All multiparous women with previous one lower segment caesarean section who presented at term (37 completed weeks to 42 weeks) were included in the study. All women with history of previous classical caesarean section were excluded.

The data were recorded through proforma. It described the patient's characteristics including age, parity, booked, non-booked status, past obstetric medical and surgical history, history of present pregnancy and complication.

Patients selected for trial of labour were strictly monitored. Maternal and foetal condition including progress of labour was recorded on partogram. Mode of delivery was specifically recorded. In case of vaginal delivery it was recorded whether it had spontaneous vaginal delivery, forceps or ventouse extraction. Maternal complications developed during or after the labour were noted for example, Scar Tenderness, Scar Dehiscence, PPH, Wound Infection and Febrile Morbidity.

Statistical Analysis the data were analysed through SPSS version 10 and various descriptive statistics were used to calculate frequencies, percentages, means and standard deviation.

Results

150 cases were included in the study that fulfilled the inclusion criteria. Numbers of booked cases delivered vaginally, through emergency caesarean section and elective caesarean section were 20 (57%), 10(21%) and 37 (56%) respectively. Numbers of non-booked cases delivered vaginally, through emergency caesarean section and elective caesarean section were 15 (42%), 36(78%) and 32 (46.3%) P-Value<0.000, <0.000, <0.051 respectively.

Repeat emergency caesarean section was performed in 46(56.8%) cases. Majority (78%) were non-booked and 22% were booked. There were 69(46%) cases of elective caesarean section and 46 (30.7%) cases of emergency caesarean section. The remaining 35 (23.3%) cases were delivered vaginally.

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Table I: Indications for Elective Caesarean Section in the Study

Indications	Number	%
Cephalo Pelvic Disproportion	21	30.4
Bad Obstructed History	12	17.3
Breech	09	13.0
Post Date	08	11.5
Diabetes	06	8.6
IUGR	05	7.2
Twins	04	6.0
Repaired 3rd Degree Tear	02	3.0
Pre-Eclampsia	02	3.0
Total	69	100

Table I shows indications for elective caesarean section. There were 21 (30.4%) patients who underwent elective caesarean section for cephalo-pelvic disproportion, 12(17.3%) for bad of obstetric history and 9(13%) for breech presentation.

Table II: Indications for Emergency Caesarean Section in the Study (n=46)

Indications	Number	%
Non-Progress of Labour	22	47.8%
Foetal Distress	07	15.2%
Premature Rupture of Membranes > 12 hours	05	11.0%
Poor Biophysical Profile	04	8.6%
Scar Tenderness	03	6.6%
Twins in Labour	02	4.2%
Placenta Previa	01	2.2%
Abruption	01	2.2%
Deep Transverse Arrest	01	2.2%
Total	46	100.00%

Table II Shows indication for emergency caesarean section in study group (n=46). There were 22(47.8%) patients underwent emergency caesarean section for non-progress of labour.

Table III: shows Perinatal Outcome in the Patients (n=150)

Perinatal	Vaginal delivery	Emergency (n=35)	Elective C/S (n=46)	P-value
Outcome			C/S (n=60)	
Mean Birth Weight	3.2 kg	3.0 kg	3.0 kg	0.051
Jaundice	4 (11.4%)	6 (13.0%)	2 (2.9%)	0.00
Neonatal Sepsis	5 (14.2%)	9 (19.6%)	3 (4.3%)	0.00
Perinatal Death	--	2	--	0.00

In vaginal deliveries, there were 4(11.4%) cases developed jaundice, 5(14.2%) cases developed neonatal sepsis. In emergency C/S 6(13%) cases developed jaundice, 9(19.6%) cases developed sepsis, perinatal death occur in 2 cases. In elective C/S 2(2.9%) cases developed jaundice, 3(4.3%) cases developed sepsis.

Table IV: Postnatal Complications

Vaginal delivery	Emergency C/S	Elective C/S
Primary PPH	2(5.7%)	5(10.9%)
Febrile illness	1(2.8%)	4(8.7%)
Wound infection	--	3(6.5%)

In vaginal deliveries, there were 2 (5.7%) cases of primary PPH and only 1(2.8%) case of febrile illness. In emergency caesarean section, there were 5(10.9%) cases of primary PPH, 4(8.7%) cases of febrile morbidity, 3(6.5%) cases of wound infection. In elective caesarean section there were 2(2.9%) cases of primary PPH, 1(1.5%) cases of febrile illness, 2(4.3%) cases of wound infection.

Discussion

There is widespread public and professional concern about the increasing proportion of births by caesarean section⁴. Many factors have been put forward in international journals for the upward trend of caesarean section, like reduced parity, older primipara, use of electronic foetal monitoring, delivery of breech by caesarean section, less use of forceps, fear of litigation and high socio-economic status^{5,18}. The percentage of women undergoing caesarean section is rising.

In our study, only 81(54%) case were chosen for trial of scar, which is lower than the compared data, which is 62% in a study at Agha Khan University, Karachi and another study it was 80% from UAE^{6,7}. In a study in India 27.7% had successful vaginal delivery while 72.3% had a repeat caesarean section. Maternal morbidity and perinatal mortality were both significantly higher in the vaginal delivery group (P = 0.00211 and P = 0.0426, respectively)⁸.

The discrepancy reflects the inherent differences in the obstetric population and criteria used for selection of cases. In our study 46(56.8%) had repeat emergency caesarean section and only 35(43.2%) achieved successful vaginal delivery. In another study from UK, success rate of vaginal birth was as high as 60% with no foetal or maternal complication⁹. While in other studies, it was quoted as 65%, 77% and 81%¹⁰⁻¹². Among VBAC candidates who have had a prior vaginal delivery, those who attempt a VBAC trial have decreased risk for overall major maternal morbidities, as well as maternal fever and transfusion requirement compared with women who elect repeat caesarean delivery¹³.

In different studies risk factors for unsuccessful VBAC are: induced labour, no previous vaginal birth, body mass index greater than 30 and previous caesarean section for dystocia¹⁴⁻¹⁶.

Main indication for the repeat emergency caesarean section was non – progress of labour in 22(47.8%) cases followed by foetal distress 7(15%), premature rupture of membrane 5(11%), scar tenderness 3(6.5%) etc (Table 2). It is comparable to other data in which failure to progress was the main reason for the repeat scar¹⁷.

Maternal complications were the same irrespective of the route of delivery. These included primary post-partum hemorrhage, febrile morbidity, wound infection and scar dehiscence (Table 4)¹⁸. The complications were however more in cases of repeat versus elective caesarean section¹⁹.

In a study of trial of labour versus elective caesarean section, major complications were more in women undergoing trial of scar¹¹. There was no case of maternal mortality in our study. Maternal mortality rate has been cited in other study as 0.37/1000 in 1982 – 1984²⁰.

Mean birth weight of babies was not different in the patients delivered either through vaginal or abdominal route (Table 3). Foetal weight had greater influence on the route of delivery in a study but in another study 50% UK obstetrician did not see a clinically big baby as contra indication to a trial of labour²¹. There is generally a non-consensus that clinically or ultrasonic evidence of macrosomia affects the choice of delivery. In this study foetal complications were not much affected by the route of delivery. Apgar score at 0 minute and 5 minutes were same in patients whether delivered through vaginal or abdominal route. In another study similar to our own emergency cesarean section was more likely than elective to result in a perinatal loss. While in a study the respiratory morbidity was higher in infants delivered by elective caesarean section before the onset of labour⁹, because these fetuses do not have physiological stress of labour however our study did not substantiate these events.

Success rate of vaginal birth after caesarean section in our study is very low compared to other studies. We associated it with the large numbers of non-booked patients who present in established or advanced labour with associated foetal medical or obstetric problems, which lowered the threshold for repeat caesarean section by the consultant obstetrician. Majority of them are already being mismanaged and cannot be subjected to trial of scar without further jeopardizing maternal/foetal condition

In this study most of the women had repeat caesarean section. The reasons in most cases were late referral to Clinic. Majority of them were in established or advanced labour with associated foetal, medical and/or obstetric problems. This lowered the threshold for repeat caesarean section by consultant obstetrician. This situation limited the number of the cases which could be subjected to trial of labour. Mode of delivery also depends upon the suitability of cases chosen for trial of scar. Regular antenatal check-up and early report to hospital after the onset of labour can reduce the rate of repeat emergency caesarean section. Patients and their families with primary caesarean section must be counseled during their stay in hospital and during follow up visits for the need of regular antenatal check-up in pregnancy.

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