

Labour outcome of pregnancies with previous lower segment Cesarean section

Swathi Bhat^{1,*}, Ambika HE², Savitha CS³, Lepakshi BG⁴

¹Assistant Professor, ²Associate Professor, ³Senior Resident, ⁴Professor, Dept. of Obstetrics & Gynecology, Shimoga Institute of Medical Sciences, Shimoga

***Corresponding Author:**

Email: swathinandakishore@gmail.com

Abstract

Introduction: To evaluate safe mode of delivery for patients with previous lower segment Cesarean Section.

Methods: A prospective study conducted on 100 women with previous lower segment Cesarean section during the period from June 2015 to Dec 2015. Women enrolled for trial of scar were closely monitored for evidence of either maternal or fetal distress.

Results: In the present study of the 100 patients, 24 (24%) delivered vaginally. Commonest indication for repeat Cesarean was previous Cesarean followed by CPD & Fetal distress.

Conclusion: Spontaneous onset of labour, prior vaginal delivery, non-recurrent indication for previous Cesarean, weight of the baby less than 3.5Kg are predictors of successful vaginal birth in women with one previous Cesarean Section.

Keywords: Vaginal birth after Cesarean, Trial of scar, Emergency Cesarean.

Introduction

A large number of Cesarean sections are done for women who have undergone Cesarean section earlier. Once a Cesarean section need not always be a Cesarean section if the prior Cesarean was done for a non-recurrent cause.^(3,5) In properly selected cases a trial of labor may be safer than elective Cesarean as the patient has less surgical risk, shorter hospital stay, lower risk of infection, less blood loss and less risk of prematurity or transient tachypnoea of new born.^(1,2,3)

Material & Methods

This is a prospective study done on registered patients between June 2015 and Dec-2015.

Inclusion criteria: All patients with previous Cesarean section

Exclusion criteria

- Previous Cesarean section during which T-Shaped incision, extension of the incision.
- Previous history of myomectomy, hysterotomy.
- Anomalous uterus.
- Medical complication during the current pregnancy like Pregnancy induced hypertension, Gestational Diabetes Mellitus, Anemia.
- Estimated fetal weight at term of more than 3250g.

The discharge summary of the previous cesarean is looked in to for operative details, diagnosis, complications if any. At the time of admission detailed history is taken, general & systemic examinations in addition to obstetric examination is done. The gestational age, lie, presentation, position, presenting part & engagement of presenting part are noted.

FHS is counted, scar tenderness is elicited.

If in labor, per vaginal examination with strict asepsis to know the effacement, dilatation, presence and absence of membranes & station of the presenting part

is assessed. CPD is ruled out. Relevant lab investigation if any needed are sent for.

The patients were divided in to two groups

Patients needing repeat Cesarean either emergency or elective:

For instance

1. Those with more than one previous cesarean, mal presentation / mal position
2. Scar tenderness
3. Premature rupture of membranes.
4. Fetal distress

Patients who may be considered for vaginal delivery^(4,8):

1. No cephalo pelvic disproportion
2. Single fetus in vertex presentation.
3. Patient has undergone only one Cesarean earlier.
4. Non complicated previous Cesarean section

Management during labor:

1. Only those who went into spontaneous labor were allowed for the vaginal birth trial
2. Non stress test was done
3. Written informed consent taken⁽⁸⁾
4. 18 g IV line secured, fluids started. Patient was kept nil orally
5. Fetal monitoring
6. Progress of labor noted using partogram
7. Maternal pulse
8. Fetal heart rate was monitored.
9. Signs of scar tenderness

Per vaginal examination was done every four hours & after rupture of membranes to know color of liquor, station of head dilatation & effacement and to rule out cord prolapse.

If there were features of fetal distress, maternal distress, scar tenderness, in-coordinate uterine action patient was immediately posted for Cesarean.

Second stage progress was constantly monitored

Second stage was cut short with vacuum.

Active management was practiced.

In third stage the placenta was allowed to separate on its own & delivered by controlled cord traction.

Routine exploration of the scar was not done after delivery of fetus & placenta.

In fourth stage two hours of patient monitoring was done. Bladder was emptied. TPR, BP chart was maintained. Whether uterus was well contracted was observed.

Results

Observation & discussion

95% of the patients were in the age group of 20 – 30 years.⁽⁷⁾

Table 1: Gravidity distribution

Gravidity	Numbers of patients	Percentage
Gravida - 2	60	60%
Gravida - 3	35	35%
Gravida - 4	5	5%
Total	100	100%

60% of the patients were second gravida.

Out of 100 patients 40 were selected for trial of scar, remaining 60 underwent repeat Cesarean section.^(10,11)

Table 2: Indication for present Cesarean section

Indication	Number	% age
CPD	15	19.73%
Previous 2 or more CS	17	22.36%
Fetal distress	13	17.10%
Malpresentation	5	6.57%
Malposition	3	3.94%
Non progress of labor	5	6.57%
Scar tenderness	3	3.94%
PIH	10	13.15%
Twins	1	1.31%
Abruptio placenta	2	2.63%
Placenta previa	2	2.63%
Total	76	

Note: Of the 100 patients, 60 were the ones posted for repeat Cesarean section. 16 were taken up for emergency Cesarean section from the 40 people who were initially considered for trial of scar.

In the present study previous two Cesareans (22.36%) was the most common indication followed by cephalo pelvic disproportion & fetal distress.

Table 3: Relationship between previous vaginal deliveries and vaginal birth after Cesarean

		Vaginal Deliveries	
		Number	Percentage
H/o Prior Vaginal delivery	25	15	60%
No history of previous Vaginal delivery	75	9	12%
Total	100	24	

In the present study 40 patients were selected for trial of scar and carefully monitored during labor. Out of this 16 were taken up for repeat emergency Cesarean section: indication being fetal distress, scar tenderness, non-progress of labor.⁽⁹⁾

Table 4: Indication for abandoning trial of scar and doing emergency Cesarean section

Cause	Number (N=16)	Percentage
Fetal distress	08	50%
Scar tenderness	04	25%
Non progress of labour	04	25%
Total	16	100%

Table 5: Mode of delivery in successful trial of scar

Mode of delivery	Number	Percentage
Full term vaginal delivery with episiotomy	10	42%
Vacuum extraction with episiotomy	14	58%
Total	24	100%

Patient with successful trial of scar who delivered vaginally were 24 (60%)

All women who had a vaginal birth after Cesarean had received either episiotomy or vacuum extraction.

Table 6: Indication of previous Cesarean section and outcome of labor

	100	vaginal deliveries		Repeat Cesarean	
		No	%	No	%
Recurrent indication	40	00	00	40	100%
Non Recurrent indication	60	24	40%	36	60%

Studies by Miller DA et al (1983-1992) Marlin JN et al 1997 showed that the number of times the woman has undergone Cesarean section has significant influence on the outcome of labor. The more the number of Cesarean sections less if the chance of vaginal delivery. Patients with non-recurrent indications for previous Cesarean section were selected on the basis of ACOG 2004 criteria for VBAC, out of which 24 (60%) had successful VBAC.⁽¹²⁾

So this study shows that in properly selected cases of previous one Cesarean section the chances of having a successful vaginal delivery could be as high as 60%.

Discussion

Without doubt, Cesarean section is of great value in saving many mothers and neonates from mortality and morbidity. Of late the incidence of repeat Cesarean section is increasing drastically. This not only increases the medical expenses but also surgery associated morbidity.

The RCOG & ACOG have repeatedly recommended that most women with one previous Cesarean delivery with a low transverse incision and with adequate pelvis are candidates for vaginal delivery and should be offered a trial of labor.

Number of Cesarean sections in the past has an important effect on the outcome of labor in women who have undergone previous Cesarean section. Risk of rupture is 5 times more for previous 2 cesarean deliveries compared with one Cesarean delivery in the past.

In the present study of the 100 patients, 24 (24%) delivered vaginally. Commonest indication for repeat cesarean was previous Cesarean followed by cephalo pelvic disproportion & fetal distress.

Vaginal delivery is more likely when there is past history of vaginal delivery before and after Cesarean section.

In the current study 95% of women were in the 20-30 age group comparable to a study carried out by Flamm & Geiger.

Abandoning of a trial was mainly due to fetal distress & non progress of labor in majority of the cases.

Conclusion

1. For successful vaginal delivery after a previous Cesarean section the obstetrician requires to have expertise to carefully select patients for trial of

vaginal birth because rupture of scar could have farfetched consequences to the mother & child.

2. Vaginal birth after Cesarean section can be considered in cases of previous one lower segment Cesarean section done for non-recurrent indication.

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