



STUDY OF OUTCOME OF SUBSEQUENT PREGNANCY FOLLOWING PREVIOUS CAESAREAN SECTION

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ABSTRACT

Introduction- The increasing primary caesarean delivery rate in recent decades has led to large numbers of women undergoing one or more repeat caesarean deliveries. Caesarean section should not be always followed by repeat caesarean section but patients must have hospital delivery in a well equipped hospital¹⁰.

Methodology- A cross sectional analytical study with prospective observations was performed in a total of 97 pregnant female patients, having previous caesarean section delivery, with the gestational age confirmed by ultrasound dating and with a singleton foetus and they were further followed up in postnatal maternity ward, and Maternal outcome was recorded.

Observation – Proportion of repeat CS (83.8%) was significantly higher among the patients with no previous VD in comparison to one VD (60.0%) and two VD (33.3%) ($Z=3.77; p<0.0001$).

Conclusion – Every case of post-caesarean pregnancy should be labelled as a high risk. One or more vaginal delivery intervene between previous caesarean section and present post-caesarean pregnancy, there is greater chances of vaginal delivery but in no way preclude the risk of scar rupture.

KEYWORDS : Elective repeat caesarean delivery(ERCD), Trial of labor after caesarean delivery (TOLAC), Vaginal birth after previous caesarean section(VBAC).

INTRODUCTION –

There are three possible outcomes for a pregnant woman who had a prior caesarean delivery: a successful trial of labour resulting in vaginal birth, a failed induction followed by emergency caesarean section or a planned elective repeat caesarean section. A successful TOLAC is associated with the lowest morbidity amongst the three and a failed TOLAC results in higher morbidity than the other two possibilities⁸.

Characteristics that increase the probability of successful TOLAC include: women with a history of successful vaginal delivery before or after their cesarean⁶, attending the labour room in active spontaneous labour at ≤ 40 weeks of gestation with an appropriately-sized fetus¹⁴ and prior caesarean section(s) for non recurring indication(s)¹².

We do not offer TOLAC to women with a prior low vertical uterine incision, multiple prior low-transverse uterine incisions⁵, presence of few maternal medical diseases, such as hypertension, diabetes, asthma, renal disease, and heart disease, unknown type of uterine incision, twin gestation, placenta previa, malpresentations etc. Studies have consistently observed that women who attempt TOLAC beyond 40 weeks of gestation are less likely to successfully deliver vaginally^{14,9}. Women with prior uterine rupture, prior classical cesarean delivery, or prior hysterotomy⁷ should undergo delivery by ERCD by 37 weeks of gestation.

As stated by American Society of Anesthesiologists (ASA) and the ACOG, TOLAC should be undertaken only in facilities with immediate availability of appropriate resources (obstetric anesthesia, nursing personnel, an obstetrician capable of monitoring labour and performing emergency caesarean delivery, personnel and equipments for neonatal resuscitation)^{11,1}.

The best answer for decision of mode of delivery in a given woman with a prior caesarean section is unknown. We agree with Scott (2011) regarding a “common-sense” approach¹⁰. Thus, the woman and her partner if she wishes-are encouraged to actively participate with her health-care provider in the final decision after appropriate counseling. Caesarean section should not be always followed by repeat caesarean section but patients must have hospital delivery in a well equipped hospital⁴, so that complications can be diagnosed earlier to prevent perinatal /maternal mortality and morbidity.

OBJECTIVE-

Study of various outcomes of post-caesarean pregnancies in a district hospital.

MATERIAL AND METHODOLOGY

- Study design- cross sectional.
- Study time period- 1.5 year.

• Inclusion Criteria:-

1. Singeton live intra-uterine pregnancy.
2. Term pregnancy.
3. Post caesarean pregnancies complicated by Anemia, PIH, Diabetes mellitus, APH etc in antenatal period.
4. Post caesarean pregnancies with previous history of vaginal delivery.
5. Previous single LSCS scar.

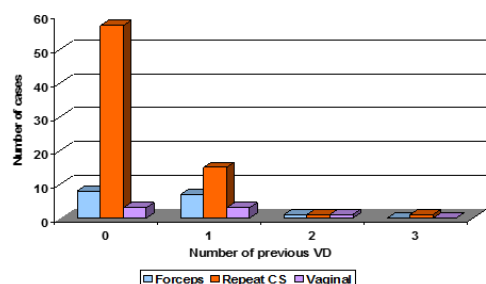
• Exclusion Criteria:-

1. Gestational age less than completed 37 weeks.
2. Multiple pregnancy.
3. Previously operated myomectomy or hysterotomy.
4. Previous more than one caesarean section.
4. Previous classical caesarean section.

OBSERVATIONS-

A) Number of previous vaginal delivery and mode of present delivery

Barchart -01



Proportion of repeat CS (83.8%) was significantly higher among the patients with no previous VD in comparison to one VD (60.0%) and

two VD (33.3%) (Z=3.77;p<0.0001). There was only one patients with three previous VD who was underwent CS.(Bar chart 01)

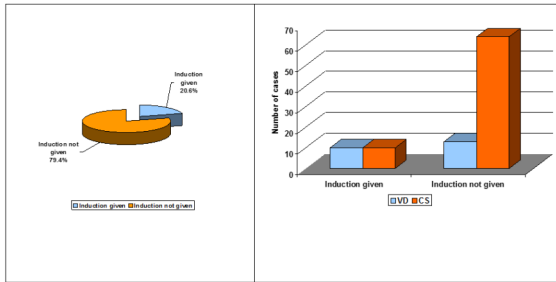
B): Study of trial of labour

Table-01

	No. of cases (n=97)	%	Scar Rupture	
			Number	%
Cases put for VD (n=51)	51	52.6	0	0.0
Ended CS	28	54.9	0	0.0
Ended in VD	23	45.1	0	0.0
Cases put directly to CS (n=46)	46	47.4	1	2.2

Only 1 (2.2%) case of scar rupture was found for the cases put directly to CS. Out of 51 subjects chosen for trial of labour, 45.1% delivered successfully vaginally. (Table-01)

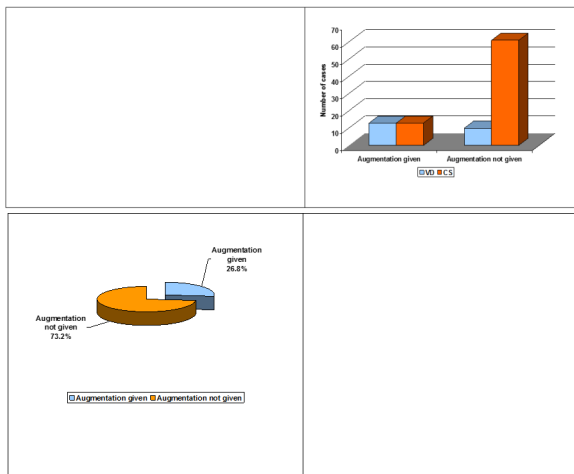
C)Result of induction of labour



Bar chart-02

50.0% of the cases in which induction was given delivered vaginally. Proportion of CS (83.1%) was significantly higher than that of VD (16.9%) for induction the group in which induction was not given (Z=6.66;p<0.001).(Bar chart-02)

D) Result of augmentation of labour



Bar chart-03

50.0% of the cases in which augmentation was given, delivered vaginally.

E)Association between Scar rupture/dehiscence and outcome of pregnancy

Table-02

Outcome of pregnancy	No. of cases (n=97)	%	Scar Rupture or Dehiscence	%
RS	74	76.3	5	6.76
VD	23	23.7	0	0.0
Hysterectomy	1	1.0	1	100.0

There was no scar rupture or dehiscence for VD. 5 cases of scar dehiscence were observed in RS group (6.76%). There was one case of scar rupture which required caesarean hysterectomy (1.03%).

DISCUSSION-

Jarrell et al (1985) showed that patient who had got successful vaginal delivery was admitted 26% more often in active phase of labour than whose trial of labour ended in repeat caesarean section. Adequacy of the pelvis and the improvement in quality of uterine contractions with each successive pregnancy are the possible factors responsible for increased incidence of vaginal deliveries. For successful outcome of trial of labour, specific guidelines have been established by ACOG, News letter, 1982.

The increased forceps delivery rate was due to greater readiness on the part of obstetrician to cut short the second stage of labour. But routine application of forceps was not applied in all of the cases as it was thought unnecessary and would not prevent rupture of the scar all the times. Wilson (1926), Duckering (1946) and Riva and Breen (1958) advocated routine practice of forceps application in such cases, while Lawrence (1953) did not advice prophylactic forceps in all the cases.

Harris (1953) warned that with each additional pregnancy and vaginal delivery the probability of a spontaneous rupture of old caesarean scar increases. Schmitz and Baba (1949) mentioned that successful vaginal delivery on one occasion following a previous section does not guarantee against rupture of uterus on a future occasion. Schmitz and Gajewski (1951) stated that, greater the number of vaginal deliveries the less the likelihood of rupture. Thus it is apparent that, there is a considerable difference in opinion regarding vaginal delivery following a previous caesarean section. Proper selection, meticulous care and close supervision of cases throughout labour and delivery in a well-equipped obstetric unit ready to respond to acute obstetric emergencies is therefore highly essential.

Paul et al quoted an incidence of 2.35% of scar dehiscence in their study; whereas there was 0.67% incidence of scar dehiscence in the study of Landon and colleagues. McGarry (1969) made an important observation that the incidence of scar rupture increased in patients allowed to attempt vaginal delivery after a previous section for disproportion 7. Indian figures of incidence of scar rupture are higher than those reported for western countries because of the lack of antenatal care and tendency of home delivery in cases of post-caesarean pregnancies.

CONCLUSION-

Every case of post-caesarean pregnancy should be labeled as a high risk case and should be admitted at least two weeks prior to the expected date of delivery.

When one or more vaginal delivery intervene between previous caesarean section and present post-caesarean pregnancy, there is greater chances of vaginal delivery but in no way preclude the risk of scar rupture.

For the fear of increasing incidence of scar rupture, it is advisable to always think before opting for primary caesarean delivery.

When vaginal delivery is allowed, labour should not be unduly prolonged and correct intervention at appropriate time is essential to have successful outcome. Routine application of forceps is not necessary but it can help obstetricians to curtail second stage of labour.

There is no definite way of assessing the integrity of uterine scar. Clinical assessment can sometimes proved to be fallacious and performing repeat section on the basis of these findings alone is often erroneous.

ABBREVIATIONS

ACOG	: American College of Obstetricians and Gynaecologists
APH	: Ante-Partum Haemorrhage
CS	: Caesarean Section
ERCD/ERCS	: Elective repeat caesarean delivery/ Elective repeat Caesarean Section.
FHR	: Foetal heart rate
LSCS	: Lower uterine Segment Caesarean Section
NIH	: National Institutes of Health
PIH	: Pregnancy Induced Hypertension
RCOG	: Royal College of Obstetricians and Gynaecologists
RS	: Repeat section
TOLAC	: Trial of labour after caesarean delivery
VBAC	: Vaginal Birth After Caesarean section
VD	: Vaginal delivery

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