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"TO STUDY THE FETO-MATERNAL OUTCOME IN PATIENTS WITH HISTORY OF PREVIOUS CAESAREAN SECTION IN TERTIARY CARE HOSPITAL"

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ABSTRACT

The cesarean section is defined as the delivery of the fetus Vis laparotomy followed by hysterotomy after 28 weeks (24 weeks in western countries) of pregnancy and leaving the uterus in situ Caesarean section is performed in the patients due to varied maternal, fetal and fetomaternal indications. Lower segment caesarean section is performed nowadays. There is a shift towards performing caesarean section in lower segment compared to the earlier performed upper segment caesarean section because the intraoperative and postoperative benefits of lower segment caesarean section outweigh that of the upper segment caesarean section. Baring the following few indications, now a day, majority of the caesarean section performed are of lower segment variety.

KEYWORDS :

Primary indications of Caesarean section include:

Maternal[1]:

- ☐ Prior caesarean delivery
- ☐ Abnormal placentation
- ☐ On maternal request
- ☐ Prior classical hysterectomy
- ☐ Unknown uterine scar type
- ☐ Uterine scar dehiscence
- ☐ Prior full thickness myomectomy
- ☐ Genital tract obstructive mass
- ☐ Invasive cervical cancer
- ☐ Pelvic deformity
- ☐ HSV or HIV infection
- ☐ Cardiac or pulmonary disease.

Maternal-Fetal[1] :

- ☐ Cephalopelvic disproportion
- ☐ Placenta previa and placenta abruption

Fetal:

- ☐ Non reassuring fetal heart status
- ☐ Malpresentation
- ☐ Macrosomia

Intraoperative:

- ☐ Anesthesia related difficult intubation
- ☐ Hypotension
- ☐ Hemorrhage
- ☐ Adhesions
- ☐ Bladder, urethral, bowel injury
- ☐ Uterine scar dehiscence and rupture

Postoperative[1]

- ☐ Post partum hemorrhage
- ☐ Paralytic ileus/ intestinal obstruction
- ☐ Pulmonary complications

- ☐ **Infections:**
- ☐ Hematoma formation

Predictors of VBAC success[2]:

- Maternal age < 40 years
- Adequate pelvis
- Prior vaginal delivery particularly prior successful VBAC (93%)
- Spontaneous labor
- Inter pregnancy interval > 18 months (86%)

(B) Negative Factors:

- Increase in number of prior Caesarean section
- Gestational age > 40weeks
- Birth weight > 4kg
- Induced labor
- Previous Caesarean section for CPD, dystocia (40%)
- Presence of gestational diabetes mellitus or pre gestational diabetes
- Thickness of lower uterine segment <3.6mm

In this study, 130 women with previous Caesarean section were studied. This is a prospective observational study, carried out in tertiary health care setup.

Inclusion Criteria:

1. Patient having gestational age between 37 to 42 weeks with history of prior one LSCS
2. Asingle live intrauterine fetus
3. Cephalic presentation
4. Patients having no other medical and obstetric complication

Exclusion Criteria:

1. Preterm pregnancy (less than 37weeks)
2. Post term pregnancy (more than42weeks)
3. More than one caesarean section
4. Intrauterine death of Fetus
5. Previous classical C-section or any other uterine scar
6. Any medical comorbidities to the patient
7. Any other surgical complication to the patient
8. Uterine anomalies
9. Malpresentation
10. Malposition
11. Abnormally located placenta

OBSERVATIONS AND DISCUSSION

- This is a prospective observational study conducted in a tertiary care hospital over a period of one year.
- Following observations have been made from the study of 130 cases of patients with history of previous Caesarean section
- During this period total number of deliveries conducted were- 4821
- Out of which 1756 caesarean section were performed
- Data collection is affected due to Covid-19pandemic

Table 1: Outcome of present pregnancy in cases of one previous LSCS

Mode of delivery	Number of cases Total number of cases (n=130)	Percentage (%)
VBAC	60	46.1%

Repeat LSCS (both elective and emergency)	70	53.84%

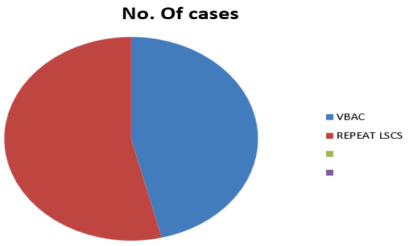

FIG 1: Outcome of present pregnancy in cases of one previous LSCS

Out of the 20 patients who were taken for elective LSCS, 9 patients (45%) were taken for LSCS on maternal request. This tells about the importance of counselling the patient about opting for the trial of scar.

5 patients (25%) were taken for LSCS due to cephalopelvic disproportion as the pelvis was not found to be clinically adequate.

5 patients were taken for the Indication of postdatism and oligohydraminos. 1 patient was posted for elective LSCS due to an estimated fetal weight to be 4.2kgs,

Complications
Table 2

	VBAC(n=60	Percentage (%)	LSCS(n=70)	Percentage(%)
Puerperal pyrexia	2	3%	4	5.7%
UTI	2	3%	4	5.7%
Wound discharge	-	-	3	4.2%
Wound gap	-	-	3	4.2%
Cervico vaginal tear	5	8.3%	-	-
Blood transfusion	2	3.3%	4	5.7%

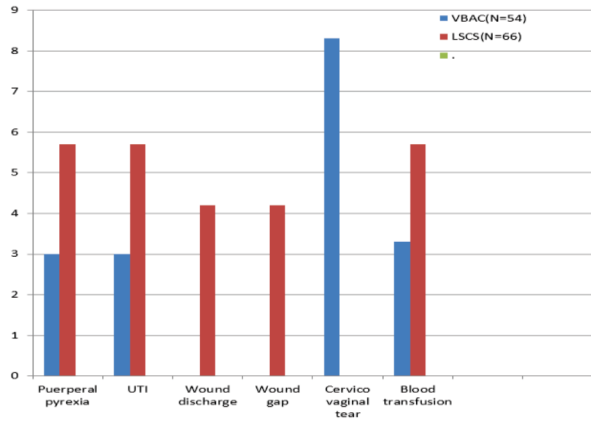

Fig 2: Maternal Complications

In the present study, maternal complications were more in the repeat LSCS group.

This is mainly due to operative interference.

5 patients (8.3%) out of the total 60 patients who underwent VBAC, on exploration were found to have cervicovaginal tears which were repaired.

3(4.2%) patients had full length wound gaps which was sutured under local anaesthesia.

In the patients who underwent repeat LSCS, 4 patients (5.7%) were given blood transfusion due to blood loss. 2 patients were given blood transfusion in the VBAC group.

According to NICHD study the rate of blood transfusion was more in repeat caesarean section as compared to successful VBAC cases.(3)

8 patients, on opening the abdomen had adhesions, wherein adhesiolysis was done.

In our study, 3 patient had bladder injury, wherein intraoperatively bladder repaired using vicryl number 2-0.

Out of the 15 patients who were taken for emergency LSCS for the Indication of scar Tenderness, 5 patients (7.1%) were found to have scar dehiscence.

In the present study 1 patient was given trial of scar and was taken for Emergency LSCS due to tachycardia and hypotension and was found to have uterine rupture intra operatively.

This is comparable with the risk of rupture uterus of 0.2-0.9 % in a previous one low transverse caesarean section as found by the ACOG.[4]

Table 3: Neonatal Outcome

	VBAC (n=60)	Percentage (%)	LSCS	Percentage (%)	Total no of cases
Neonatal mortality	1	33.3	2	66.6	3
NICU admission	2	33.3	4	66.6	6
Total	3		6		9

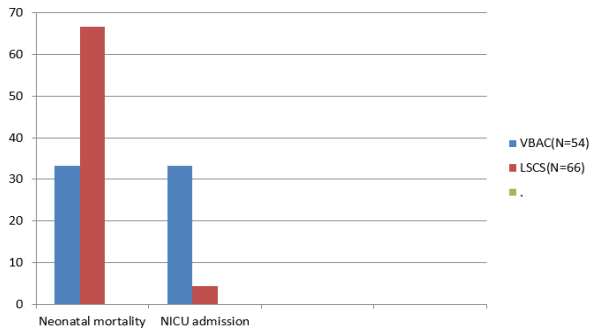

Fig 3: Neonatal Outcome

Out of the total 130 patients, 3 Neonatal deaths occurred. 1 was due to rupture uterus and the other was due to meconium aspiration syndrome and one was due to septicemia.

Out of the total 6 neonates admitted in the NICU, 2 were after VBAC and 4 patients were admitted after LSCS.

4patients admitted in NICU post CS, one was due to transient tachypnea of newborn, 2 were due to meconium aspiration and 1was admitted due to grunting post CS which was taken for observation.

2 patients admitted in NICU after VBAC were taken for observation due to grunting.

All neonates were discharged from the NICU. Neonatal morbidity was higher in the CS group.

Cochrane review suggest that there are benefits and risks associated with planned ERCS and planned induction of labor in women with prior caesarean delivery. There is paucity of randomized controlled trials that would provide the most

reliable evidence. [5] The absolute risk of delivery related perinatal death associated with VBAC is low (4 per 10000) (0.04%) which is comparable to the risk for nulliparous women in labor.[6]

CONCLUSION

- A prospective observational study of 130 patients with previous History of Caesarean section was carried out in a tertiary care center.
- Study was carried out with respect to age, parity, whether booked or emergency.
- Detailed history taken regarding type and Indication of previous C section and details regarding puerperium.
- Out of the 130 patients, 60 underwent VBAC, 50 delivered by Emergency LSCS and 20 underwent elective LSCS.
- Out of the 110 patients who were given trial of labor, 60 underwent VBAC. The rate of VBAC was 54.5% in the present study.
- Neonatal mortality was 3. One due to rupture uterus and the other was due to meconium aspiration syndrome. 3rd was due to septicemia.
- Neonatal morbidity was more in the LSCS group.
- The average birth weight in LSCS group was 2.8 kilograms, while that in the VBAC group was 2.5kilograms.
- Average duration of hospital stay for VBAC was 4 days while that in repeat LSCS was 8 days.
- The cost of hospital stays and expenditure was reduced for the patients as well as the hospital in case of VBAC. The patients after VBAC could go back to their routine work early than that of the repeat LSCS group.

SUMMARY

- Pregnancy in patient having previous caesarean section creates challenges to Every obstetrician.
- Repeat caesarean section of such patient seems safe but it has its own hazards And further creating difficulties such as morbidly adherent placenta in future Pregnancies.
- Vaginal delivery in patient having previous cesarean section is safe when carried out under proper supervision. These patients should be managed at hospitals which are well equipped with Emergency facilities, which can be required by both baby and mother.
- My study shows that in carefully selected patients with previous C- section, vaginal delivery is safe and a better alternative to repeat C-section.
- Careful assessment of each case decreases the number of dreaded complications like scar rupture and increase the number of successful vaginal delivery.
- Patients with previous C-Section for non-recurrent indication and without any ofobstetric complication in present pregnancy should be given trial of scar.
- Successful VBAC is associated with fewer complications, less expense and increases the chances of VBAC in future pregnancies.
- Doctors should be vigilant and have patience for carrying out successful VBAC.

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